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# *The* Primary Program

## A Framework for Teaching

BRITISH COLUMBIA Ministry of Education

# The Primary Program

## A Framework for Teaching


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# *The Primary Program*: Framework

## Key Points in This Chapter

- *The Primary Program* builds upon the philosophy of the 1990 Primary Program document, taking account of changing contexts: societal, policy, curriculum, and assessment and evaluation.
- There are three goals of education, the primary one being students' intellectual development. The other two are human and social development and career development. Human and social development is especially important during the primary years.
- *The Primary Program* adopts the three principles of learning set forth in *The Kindergarten to Grade 12 Education Plan*:
  - Learning requires active participation of the student.
  - People learn in a variety of ways and at different rates.
  - Learning is both an individual and a group process.
- The Program's foundation is the five areas of development that together address the development of the whole child. The five areas of development are as follows:
  - aesthetic and artistic
  - emotional and social
  - intellectual
  - physical development and well-being
  - social responsibility
- Foundation statements in *The Primary Program* are based on these five areas, whose importance is outlined in the text.

## Mission Statement

**The purpose of the British Columbia school system is to enable all learners to develop their individual potential and to acquire the knowledge, skills and attitudes needed to contribute to a healthy, democratic and pluralistic society and a prosperous and sustainable economy.**

THIS DOCUMENT REVISES AND REplaces the *Primary Program: Foundation Document* (CG0279) released by the British Columbia Ministry of Education in 1990. Like the earlier document, *The Primary Program* is a guide to effective practices for primary educators. This role is recognized by Minister's Order #M283/98, which identifies *The Primary Program* as an educational program guide. As such, it is an approved resource whose use by educators is recommended, though not prescribed.

*The Primary Program* provides a comprehensive, general overview for primary educators. It does not duplicate in detail material available elsewhere (for example, in the performance standards). Cross-references appearing within this document will indicate sources of further information about topics that are discussed here in broad terms. *The Primary Program* describes and exemplifies the first four years of *The Kindergarten to Grade 12 Education Plan* (B.C. Ministry of Education 1994). Building on the philosophy introduced in the 1990 document, it incorporates information on how policies and provincially prescribed curriculum can be interpreted and implemented.

*The Primary Program* integrates current knowledge and research on learning and teaching. Research information is woven throughout the text and encapsulated in Research Directions boxes to address issues of particular importance. References are provided in Appendix A.

*Throughout this document the term "parent" refers to any person who has care and/or custody of a child. This may include any combination of adult caretakers and family members whose involvement may be important for the child.*

# The Primary Program and Goals of Education

There are three goals of education which identify the contributions that schooling should make to students' development.

**Intellectual development** is supported by the family and community as the prime goal of public schools. The goal is summarized, as follows:

*To develop the ability of students to analyse critically, reason and think independently, and acquire basic learning skills and bodies of knowledge; to develop in students a lifelong appreciation of learning, a curiosity about the world around them and a capacity for creative thought and expression*

**Human and social development** and **career development**, as outlined below, are goals shared among schools, the family, and the community:

*To develop in students a sense of self-worth and personal initiative; to develop an appreciation of the fine arts and an understanding of cultural heritage; to develop an understanding of the importance of physical health and well-being; to develop a sense of social responsibility and an understanding and respect for the ideas and beliefs of others*

*To prepare students to attain their career and occupational objectives; to assist in the development of effective work habits and the flexibility to deal with changes in the workplace*

The relative emphases on human and social development and career development vary according to students' ages and levels of schooling.

In the primary years, human and social development is especially important because it supports and enhances children's intellectual development. For this reason, the Primary Program focuses on the development of the whole child, integrating the following areas of development:

- aesthetic and artistic
- emotional and social
- intellectual
- physical development and well-being
- social responsibility

Career development takes on increasing importance as students progress through school. By addressing the development of the whole child, the Primary Program provides for the development of traits and attitudes that contribute to career awareness and development, such as taking pride in one's work, working effectively with others, and understanding the relationship of work to everyday life. In this way, the Program helps teachers to prepare students to attain their career and occupational objectives and to assist in the development of effective work habits and the flexibility to deal with changes in the workplace.

In the primary years, human and social development is especially important because it supports and enhances children's intellectual development.

# The Primary Program and the Principles of Learning

These principles, while fundamental at all levels of education, are central to the Primary Program.

As noted earlier, *The Primary Program* builds on the principles of learning set forth in *The Kindergarten to Grade 12 Education Plan* (1994). These principles, while fundamental at all levels of education, are central to the Primary Program:

- Learning requires the active participation of the student.
- People learn in a variety of ways and at different rates.
- Learning is both an individual and a group process.

# Philosophy of the Primary Program

THE PRIMARY PROGRAM PROVIDES A FRAMEWORK for educators to foster the continuing growth of children's knowledge and understanding of themselves and their world. It affirms the need for a safe, caring, stimulating environment where learning flourishes ❧

CHILDREN ARE INDIVIDUALS AND EVERY CHILD is unique. The Program accommodates the broad range of children's needs, their learning rates and styles, and their knowledge, experiences, and interests to facilitate continuous learning. It accomplishes this through an integrated curriculum incorporating a variety of instructional models, strategies, and resources ❧

THE PROGRAM ADDRESSES THE DEVELOPMENT of the whole child. It reflects an understanding that children learn through active engagement and play, and that children represent their knowledge in a variety of ways. It is based on a recognition of the individual and social nature of learning and the essential role of language in mediating thought, communication, and learning ❧

THE PROGRAM AFFIRMS THE IMPORTANCE OF the early years as the foundation for lifelong learning and the significance of literacy, numeracy, and social responsibility for success in school and beyond. It acknowledges the benefits of developmentally appropriate practices in enhancing children's learning and focuses on early identification and intervention for children who are experiencing learning difficulties ❧

ASSESSMENT AND EVALUATION ARE INTEGRAL components of the teaching-learning process. In the Primary Program, assessment and evaluation support the child's learning; they assist the teacher in making appropriate educational decisions and communicating with parents ❧

TEACHERS AND PARENTS ARE PARTNERS IN THE child's education. They consult and collaborate to create for the child a climate of respect, success, and joy necessary for lifelong learning ❧

# Rationale for *The Primary Program*

*The Primary Program* reflects current knowledge about early childhood development and learning along with new understandings of developmentally appropriate practice, and an increasing sensitivity to learner diversity.

Since the original Primary Program documents were issued, many changes have occurred in society and in education. For example:

- **the societal context**
  Changes include a more diverse student population, globalization, and an expansion of information and communication technologies.
- **the policy context**
  *The Kindergarten to Grade 12 Education Plan*, 1994, clarifies the responsibilities of the school system and outlines requirements and options for students at all grade levels.
- **the curriculum context, K–12**
  Prescribed learning outcomes identify what schooling is to focus on during the K–1 and Grades 2–3 years (i.e., the attitudes, skills, and knowledge students are expected to acquire, now presented in Integrated Resource Packages).
- **the still evolving assessment and evaluation context**
  Criteria-based performance standards and material on early intervention help teachers identify and respond to student strengths and student areas of difficulty. Four core learning areas have been identified: reading, writing, numeracy, and social responsibility.

*The Primary Program* takes account of these changes. This revision is designed to bring clarity and coherence to the many different types of information available for primary teachers.

## The research base

Ongoing research into learning and teaching is making an important contribution to current understanding of effective practice. *The Primary Program* reflects current knowledge about early childhood development and learning along with new understandings of developmentally appropriate practice, and an increasing sensitivity to learner diversity. The advice put forward in this document is generally supported by a wide and comprehensive research base to provide direction for teachers as they engage in

- interpreting and implementing the provincially prescribed curriculum;
- designing learning environments;
- planning learning experiences and instruction;
- undertaking assessment, evaluation, and reporting; and
- collaborating with other school personnel, parents, families, and communities in ways that are developmentally appropriate and culturally sensitive.

In establishing the research base for the Primary Program, the following criteria were used (Allington 1997):

- **convergence of evidence**
  Similar conclusions are drawn by a number of research studies conducted in multiple sites, by multiple investigators, and using a variety of methodologies.
- **quality of evidence**
  The research has met rigorous criteria, for example, in the blind, peer review process used in well-established journals. Site reports and monographs or non-reviewed

journals may not meet this criterion. "Research" cited in promotional materials for published programs may be suspect so this is read critically.

- **comparability**
  Conclusions from research findings are appropriately generalized to similar contexts and populations. Research findings from studies of specific populations (e.g., children with learning disabilities) must not be applied to other populations (e.g., ESL students) or to more typical learners.
- **persuasiveness**
  The degree to which the evidence is convincing is critical. For example: Are the claims logically deduced from the research design and results? Were the studies on which the findings were based rigorously designed and carried out? Are the claims reported honestly or are they exaggerated?

Naturally, although there are areas of broad consensus, real differences of approach and opinion exist within the research community. In the area of learning theory, for example,

The advice put forward in this document is generally supported by a wide and comprehensive research base.

## SUPPORTING POSITION STATEMENT

### Principles That Guide Practice

- Children construct their own understanding of concepts, and they benefit from instruction by more competent peers and adults.
- Children benefit from opportunities to see connections across disciplines through integration of curriculum and from opportunities to engage in in-depth study within a content area.
- Children benefit from predictable structure and orderly routine in the learning environment and from the teacher's flexibility and spontaneity in responding to their emerging ideas, needs, and interests.
- Children benefit from opportunities to make meaningful choices about what they will do and learn and from having a clear understanding of the boundaries within which choices are permissible.
- Children benefit from situations that challenge them to work at the edge of their developing capacities and from ample opportunities to practice newly acquired skills and to acquire the disposition to persist.
- Children benefit from opportunities to collaborate with peers and acquire a sense of being part of a community and from being treated as individuals with their own strengths, interests, and needs.
- Children need to develop a positive sense of their own self-identity and respect for other people whose perspectives and experiences may be different from their own.
- Children have enormous capacities to learn and almost boundless curiosity about the world, and they have recognized, age-related limits on their cognitive and linguistic capacities.
- Children benefit from engaging in self-initiated, spontaneous play and from teacher-planned and -structured activities, projects, and experiences.

— National Association for the Education of Young Children (1996), p. 1

Besides research findings, *The Primary Program* takes account of position statements of professional organizations that share an interest in the education of young children.

there is ongoing debate about the view proposed in this document that children actively construct knowledge and understanding as they seek connections to help them make sense and create new meaning (see "Constructing Meaning" in Chapter 2, Learners and Learning). Thus, while this "constructivist theory" enjoys strong support among education researchers, readers are reminded that this remains a theory, not an established fact, and that there exist other equally valid points of view.

Besides research findings, *The Primary Program* takes account of position statements of professional organizations that share an interest in the education of young children. Many of these position statements have been cited throughout the document. Research and position statements are drawn from Canadian sources, where possible (e.g., the Canadian Association for Young Children and the British Columbia Association of Mathematics Teachers). Of particular importance, however, are principles of developmentally appropriate practices adopted by the National Association for the Education of Young Children (1996). This organization is international in scope, with more than 100,000 early childhood educators and researchers as members, including many Canadians.

Position statements featured in this document are based on research from differing perspectives and methodologies. All are consistent with the principles of learning in *The Kindergarten to Grade 12 Education Plan*, 1994.

# Areas of Development in the Primary Program

The five areas that together address the development of the whole child provide the foundation on which the Primary Program is built.

The five areas that together address the development of the whole child provide the foundation on which the Primary Program is built. For each area, foundation statements elaborate the intentions for student learning. The chart below provides an overview of the statements and following pages describe each of the areas.

The foundation statements encompass all of the prescribed learning outcomes set out in the Integrated Resource Packages for Kindergarten to Grade 3. The statements are cross-curricular organizers educators may use to plan experiences that will promote the development of the young learner. Their purpose is to enable teachers to work toward the goals of education by addressing children's development and the curriculum in an integrated way that is meaningful for young children. All three goals of education can be addressed through activities related to each area of development. The application and use of the foundation statements are discussed in Chapter 3, Curriculum and Context.

## AESTHETIC AND ARTISTIC DEVELOPMENT

**A variety of experiences enable the child to**

- develop enthusiasm and appreciation for the arts
- communicate through the arts
- respond to the arts in imaginative ways

## EMOTIONAL AND SOCIAL DEVELOPMENT

**A variety of experiences enable the child to**

- develop a positive and realistic self-concept
- develop independence
- share, co-operate, and learn from others

## INTELLECTUAL DEVELOPMENT

**A variety of experiences enable the child to**

- develop strategies to facilitate thinking and learning
- develop an awareness of the nature and purposes of language and literacy
- develop listening and speaking abilities
- develop reading and viewing abilities
- develop writing and representing abilities
- develop information processing abilities
- develop number sense
- develop spatial sense
- develop statistical sense
- develop a sense of relationships and patterns
- develop an understanding of the world around them

## PHYSICAL DEVELOPMENT AND WELL-BEING

**A variety of experiences enable the child to**

- learn and practice safety
- take care of and respect her or his body
- develop an appreciation and enjoyment of movement

## DEVELOPMENT OF SOCIAL RESPONSIBILITY

**A variety of experiences enable the child to**

- value and respect diversity and the contributions people make to the community
- contribute to a collaborative environment
- develop an awareness of the roles and responsibilities of a member of a community

# Aesthetic and Artistic Development

In the Primary Program, the arts are more than subject areas; they are important tools children can use to learn across the curriculum.

The arts are an essential part of a child's development. In the Primary Program, they are more than subject areas; they are important tools children can use to learn across the curriculum. When children engage in dance, drama, music, or the visual arts, they express and communicate a personal response to a stimulus or idea. Arts education in the primary years provides students with rich sensory and aesthetic experiences and opportunities for artistic expression. It also involves using the various arts as a means to learn and to express learning in other subject areas.

Through the arts, children learn through all their senses. Aesthetic development begins by learning to attend to sensory experiences, and then learning to identify qualities of those experiences. In visual aesthetics, these experiences might include colour, light, and shape; in musical aesthetics, the experiences might include rhythm, natural sounds, timbre, and pitch. For kinesthetic and dramatic aesthetics, experiences might include the various ways in which human and non-human bodies move through space, and encouragement to observe the shape and motion of their own and others' bodies. Young children are very interested in exploring their sensory and kinesthetic worlds.

Teachers can provide opportunities and guidance to help children transform their initial interest in sensory and kinesthetic activities into an ability to sustain awareness on the objects of their experience.

They can also enhance children's artistic appreciation by exposing them to the performance of a rich variety of art forms. Such activities will enable children to translate their own experiences into aesthetic expressions more readily.

Focused attention, discussion, and reflection allow children to extend their understanding of art forms and the realities underlying the artistic content. When children express themselves artistically, they learn to solve problems as they think critically, clarify, and express ideas, feelings, and imaginings based on their experiences of the world. Arts education becomes an important avenue for teaching creative thinking and problem solving in children. It can also enhance children's confidence in their own expressive abilities.

Dance, drama, music, and visual arts provide children with important learning and expressive tools to use in diverse subject areas and activities. Each of the fine arts has its own form of "literacy" that can also be used effectively to enhance children's interest in language and creative language use. Literature, particularly stories, rhymes, and poems, reflects the artistic and aesthetic dimension of language and thus is integrally related to the arts.

Observing and expressing in visual arts build important bridges to reading and writing. For example, they call upon students to think and express symbolically. Likewise, when students are able to express themselves through dance, drama, or music, they can construct understandings in a tangible way and make them personally meaningful. Enhancing children's awareness of elements such as pattern, line, and symmetry in various art forms also helps children appreciate the aesthetic dimension of mathematics and fosters their numeracy development.

Students who are visual or kinesthetic learners, who are learning in a second language, or who have special learning needs, are supported in language-mediated activities when they have access to the fine arts. Aesthetic and artistic development complements and fosters learning in all areas of the Primary Program. Because the arts are intricately related to culture, learning through and about the arts helps children develop an awareness of their own and others' cultures. Since the fine arts and literature call for thinking and communicating, they can be readily integrated with each other and with instruction related to other curriculum areas.

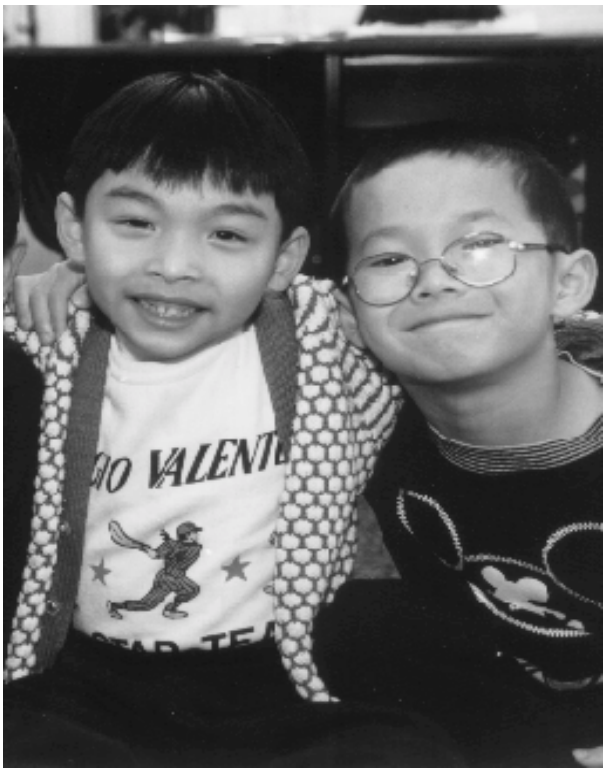
Observing and expressing in visual arts build important bridges to reading and writing.

# Emotional and Social Development

Emotional well-being determines the way we feel, think, and act; it is essential for optimal development, and learning.

**Emotional intelligence**, the ability to understand, express, and manage one's emotions appropriately, and s**ocial intelligence**, the ability to empathize, communicate, and interact effectively with others, are central to children's success in and out of school. Loving, nurturing, and playful relations between children and adults contribute much to children's emotional and social development. Teachers and parents working together for children's benefit do also. Primary teachers have a special role to play in creating nurturing and loving spaces for children as they adapt to formal schooling.

Children learn best when they feel secure and valued. When they are accepted and appreciated, they feel free to take risks in their learning, to make mistakes, and to learn from both difficulties and successes. Emotional well-being determines the way we feel, think, and act; it is essential for optimal development, and learning. Feelings are an important component of co-operation, interest, and motivation.



The emotional well-being of children largely determines whether they develop to their full potential. The child who has a positive, realistic self-concept is more likely to feel secure and be capable of making thoughtful and appropriate choices and decisions. The child who is confident is ready for new experiences. Successful learning both enhances self-esteem and promotes intellectual development.

When children grow and develop in a positive, supportive environment, they are more enthusiastic, more willing to accept challenges, more persistent in the face of difficulties, and better able to set and achieve their goals. Support and guidance allow them to develop emotionally and socially in healthy ways. If given opportunities to make choices and decisions, and if learning to work in a self-directed way, they will learn to become independent. At the same time, children need to strengthen their ability to function as part of a community and learn how to make and maintain friendships. In the primary classroom, learning to co-operate and co-operating to learn promote academic growth, build self-esteem, enhance interpersonal relationships, and advance the concept of a community of learners.

# Intellectual Development

Children are curious and enthusiastic learners who want to explore the world around them. They have a natural interest in new experiences and in developing ways of understanding and communicating those experiences. Intelligence is multidimensional, reflecting the varied ways human beings experience the world and the diverse ways people construct and communicate meaning.

Children develop preferences for certain ways of thinking, learning, and communicating as a result of biological, cognitive, and environmental factors. Such preferences can develop into specializations in certain subject areas or disciplines, but they also tend to reflect a student's optimal learning style across subject areas and disciplines. The multidimensional nature of children's intellectual development is supported by environments rich both in experience and in opportunities to think, learn, and communicate in a variety of ways.

As they experience their world directly, children construct meaning by conceptualizing, defining, classifying, making connections, discovering and creating patterns, and using their imaginations to build knowledge. They experiment, make discoveries, and form hypotheses that they then apply to new experiences and explorations. These processes, which are common to all forms of intellectual development, depend on enriched experiential and cognitive environments. Experiential environments include social, emotional, and sensory experiences. Cognitively enriched environments enable children to use both verbal and non-verbal language to clarify and extend their thinking and to communicate with others.

Language and thought are interrelated and interdependent. Language, a tool for making meaning, is, therefore, an integral part of intellectual development. Oral language is especially important in the primary years, since it is critical for communication. It also enables children to build bridges to their emerging literacy and numeracy. Drawing continual connections between concrete experiences and representations allows children to ease into the more abstract world of literacy and numeracy. The arts aid this transition into abstract thought and representation. As children draw, sing, move, measure, sort, count, read, and write, they learn to use progressively more abstract representations to enable them to think, to learn, and to communicate more effectively.

Language can be extended beyond the verbal to include non-verbal forms of representation: these include pictures, models, manipulatives, numerical expressions, patterns, musical notations, gestures, and facial expressions. Teachers plan experiences and guide learners in making connections, but to gain deeper understanding, learners need the time and encouragement to experience and then to talk about, represent, reason about, and reflect upon their experiences in the ways they prefer. Learning to be attentive, to engage actively, and to think critically, co-operatively, and creatively about meaningful experiences are as important to students' development as the particular skills and information acquired through completing any given task.

Teachers plan experiences and guide learners in making connections, but to gain deeper understanding, learners need the time and encouragement to experience and then talk about, represent, reason about, and reflect upon their experiences in the ways they prefer.

Children need to engage in activities and experiences that have value and relevance to the world beyond the classroom.

Children need to engage in activities and experiences that have value and relevance to the world beyond the classroom. Such tasks enhance students' motivation, self-direction, divergent thinking, and capacity to solve problems critically and creatively. It is important to make connections between the classroom and the broader community to enable children to learn the social value of learning and knowledge. Inquiry- or problem-based approaches to instruction effectively foster an appreciation of the interconnectedness of learning. Successful learners enjoy inquiring, solving problems, and making connections both independently and with others. Engagement in such activities can help children develop an awareness of their own thinking and learning processes, self-regulation, and an appreciation that learning is both an individual and a social process.

# Physical Development and Well-Being

For children, learning involves whole-body experiences, participation, and play.

For children, learning involves whole-body experiences, participation, and play. They need experiences that extend their ability to lead safe, active, healthy lives. Regular school activities for physical development, including the large and small muscles and gross and fine motor skills, will promote the development of all children.

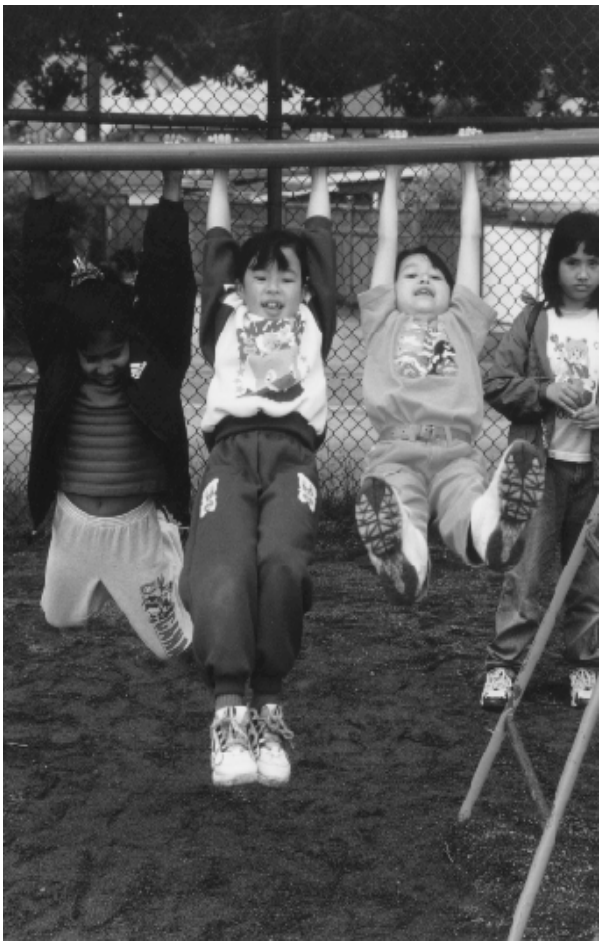
In addition to many opportunities for physical activities, games, and play, primary children need experiences to help them learn about

- their growth and development;
- the importance of the interrelationships between physical activity, nutrition, safety, health, and recreation; and
- their own role in maintaining a healthy lifestyle.

Although young children have varying degrees of control over their health, nutrition, and safety, they need to learn about what they should do where they do have choices. In the primary grades, children build on the personal habits and attitudes established in the home in their early years. They learn about issues that affect their well-being so that they may make informed and responsible decisions about health, nutrition, and safety.

In young children, the development of small muscle control (hands and feet) occurs more slowly than development of large muscle control (arms and legs). Eye-hand coordination continues to develop throughout the primary years. Effective teaching takes account of children's physical developmental needs in designing activities that develop their small muscles, fine motor skills, and coordination.

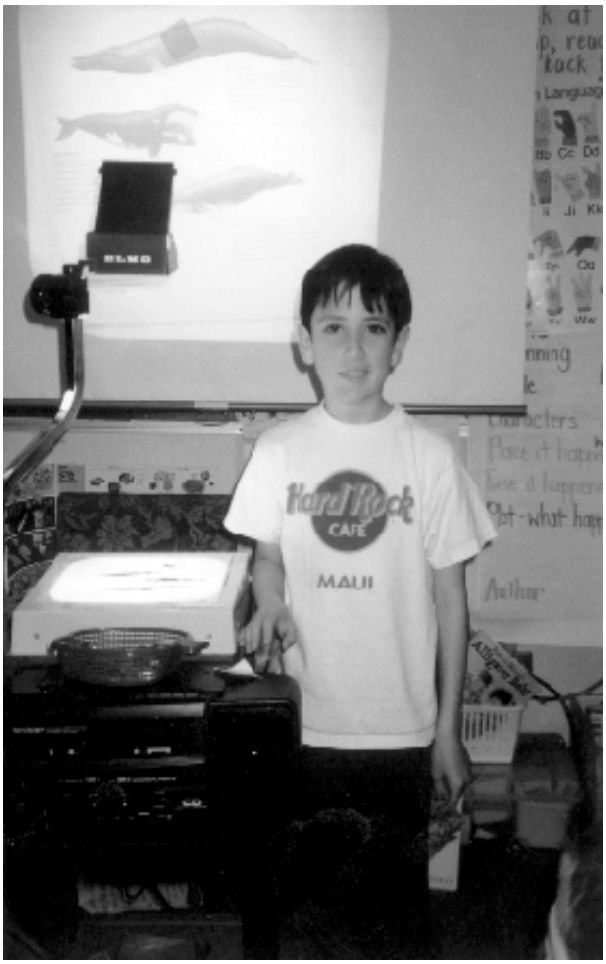
The teacher provides children with opportunities to develop physical fitness — endurance, strength, flexibility, coordination, body awareness and space awareness — and an understanding of the value and importance of fitness.



# Development of Social Responsibility

Within the Primary Program children develop the knowledge, skills, and attitudes that enable them to contribute to the community, solve problems in a peaceful way, value diversity and defend human rights, and exercise the rights and responsibilities of a citizen in a democracy.

In the Primary Program, children are helped to move beyond an egocentric view of the world. Experiences help them learn empathy, critical thinking, conflict resolution, individual and collaborative decision making, and a sense of community. These experiences prepare children to seek solutions to broader issues based on an awareness of what it means to be socially responsible. Within the Primary Program children develop the knowledge, skills, and attitudes that enable them to contribute to the community, solve problems in a peaceful way, value diversity and defend human rights, and exercise the rights and responsibilities of a citizen in a democracy.




The ability to work and to learn with others is essential for success in social situations and in one's career. Children need opportunities to interact with others in many contexts for many purposes; co-operate, collaborate, share, support, and encourage others; and show leadership in the building of community within whatever task they are involved. As children take part in the groups to which they belong — family, school, and community — they begin to realize that all people share similar feelings and a need for support and encouragement from others.

Adults can help children learn to reflect on their actions, respond appropriately to others, manage their emotions, recognize and control impulsive behaviour, and resolve conflicts peacefully. In this way, children come to understand the need for effective communication in preventing physical violence, bullying, and other forms of abusive behaviour. Children learn and practice kindness, respect, and compassion for others in their actions, speech, and ways of thinking. Through literature, discussions, collaborative projects, and participation in decision making, children construct a personal understanding of "community mindedness." They also gain an understanding of what it means to be a "good citizen." Teachers help children consider how to cultivate such qualities in their activities within and beyond the classroom.

As children learn about themselves and their culture, they begin to understand how all people share similar needs, feelings, and aspirations, and how everyone has a contribution to make. Teachers engage children in activities to help them increase their awareness of others and to recognize the similarities between the diverse peoples of the world.

At the same time, they foster an understanding of and respect for individual differences in temperament, appearance, personality, actions, abilities, and cultural background. In these ways teachers lay a foundation for helping students develop respect for others and eliminate, or at least reduce, prejudices and stereotypes in their own outlook. They also help children begin to develop concepts of equality, fairness, tolerance, and justice in relation to the treatment of minority groups, individuals of both genders, and people with diverse family structures and ways of life.

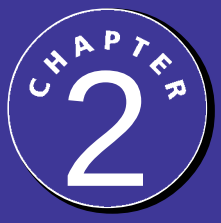
We live in a rapidly changing society that is part of an emerging global village. People are continually faced with decisions that may have a lasting impact on their own lives, the lives of others in immediate and distant communities, and the environments we share. Teachers help children appreciate, reflect on, and understand the complex ethical issues facing our society today. By so doing, children learn to act in thoughtful and responsible ways.

When children experience respect for themselves and others, they come to value socially responsible attitudes and behaviours. Children need opportunities to exercise their rights and responsibilities within a purposeful framework of expectations. These expectations should be based on respect, compassion, collaboration, and co-operation. Teachers encourage children to consider the diverse views of others, to identify and clarify issues in conflict situations, to generate and evaluate potential solutions and strategies, to make responsible choices, and to reflect on and evaluate outcomes. In so doing, children develop their vision of the future and their place in the process of change.

Teachers help children appreciate, reflect on, and understand the complex ethical issues facing our society today. By so doing, children learn to act in thoughtful and responsible ways.

## Summary: Framework

*The Primary Program:* Framework, in outlining the structure of this resource for teachers, reflects the goals, principles, and philosophy that underlie the teaching of primary students in British Columbia. Noting that *The Primary Program* represents a revision of a 1990 document, it recognizes how contexts have changed and explains how research into learning and teaching has been critically reviewed. What remains constant is the desire to address the development of the whole child: foundation statements now encompass all of the learning outcomes prescribed for Kindergarten to Grade 3.




# Learners and Learning

## Key Points in This Chapter

- Brain research contributes new understandings about how children learn.
- Children learn through active participation:
  - by engaging in meaningful experiences
  - by playing
  - by representing in a variety of ways, and
  - by reflecting on their own learning
- Learners are diverse in many ways:
  - in thinking and learning styles
  - in their learning needs
  - in their cultural and linguistic backgrounds
- Learning is an individual process that involves
  - the personal nature of learning,
  - the construction of meaning by integrating new information with prior knowledge, and
  - self-regulation.
- Because learning is also a social and cultural process, children learn in these ways:
  - through social interaction
  - through language
  - through the arts
  - through science
  - through mathematics
  - through technologies

*Children who enter kindergarten are generally inquisitive, imaginative, active, and eager to learn. They enjoy exploring, experimenting, and playing and working with others in a safe, stimulating environment that promotes confidence in their ability to learn.*

— From *The Kindergarten to Grade 12 Education Plan,* 1994

MANY KINDS OF RESEARCH CONTRIBUTE to current knowledge about learners and learning. These studies include experimental studies, observational studies of individual children, ethnographies of groups of learners in a variety of contexts, and field studies in different classrooms. Scientific achievements provide us with a fuller understanding of (1) memory and the structure of knowledge; (2) problem solving and reasoning; (3) the early foundations of learning; (4) regulatory processes that govern learning, including metacognition; and (5) the way symbolic thinking emerges from the culture and community of the learner (National Research Council 1999, p. 14). In the past twenty years medical technology has also made it possible to learn more about brain functioning and optimal conditions for learning. While many of the findings must be considered tentative and preliminary, brain research contributes new evidence to support the importance of the principles of learning presented in *The Kindergarten to Grade 12 Education Plan* (1994).

## research directions

### LEARNING AND THE BRAIN

Brain research affirms the importance of the early years as the foundation for lifelong learning:

> *Evidence from brain studies … demonstrate[s] the young brain's potential, flexibility and resilience and especially … highlight[s] the crucial importance of the pre-school and early school years. What is known lends support for more and better opportunities for children in these vital years of life from birth to about 8* (Brierley 1994, p. 2).

Research from medical and scientific communities has implications for education. It is widely accepted that (Caine & Caine 1997; Diamond & Hopson 1998; Ledoux,1990; Kotulak,1996; National Research Council 1999)

- every brain is uniquely organized,
- learning involves both mind and body,
- learning is developmental,
- emotions strongly affect brain functioning and learning,
- nutrition and water are essential for basic brain function,
- learning is enhanced by challenge and inhibited by threat,
- learning is a multisensory experience,
- meaning is central to learning,
- the brain needs social stimulation,
- learning is affected by environment, and
- guided learning and learning from individual experiences both play important roles in the functional reorganization of the brain.

Although there are some factors beyond our control such as the quantity and quality of food some children may get, teachers can do many things to enhance learning.

> *Brain research extends and supports the contributions of Piaget (1969) — that children learn through interactions and experiences within their environments — and of Vygotsky (1978) — that both personal and social meanings are socially constructed; furthermore, that language is central to this process rather than just reflecting thought* (Braunger & Lewis 1997, p. 12).

# Learning Requires the Active Participation of the Student

*Children are problem solvers and, through curiosity, generate questions and problems: Children attempt to solve problems presented to them and they also seek novel challenges. They persist because success and understanding are motivating in their own right.*

— National Research Council 1999, p. 222

At the heart of learning is inquiry and exploration. Children come to school curious about the world around them. Active participation in learning experiences at school capitalizes on children's desire to inquire and explore their world.

Meaningful and varied experiences in the primary years provide a strong foundation for children's growth in all areas of development; they also enable children to benefit more from instruction. The curriculum areas provide a wealth of ideas with which to engage children so that they expand their knowledge of themselves and their world.

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## Learning through engagement in meaningful experiences

Children learn best when they are physically, intellectually, and emotionally engaged. Manipulating objects is critical to their development of concepts and logical thinking (Piaget 1983). Children must also engage mentally with what they are learning since mental engagement transforms activity into understanding. Emotional engagement is important too, since it leads to learning that is long-lasting.

Children become engaged with an activity when they find it meaningful and purposeful. Intrinsic motivation is essential to engagement. When children are motivated, they maintain engagement, attention, and focus, and persist even though the activity may be difficult. To be engaged, learners must recognize the activity's value and their own potential for eventual success. Engagement is valuable in itself, but also leads to achievement (Guthrie 1997). To address all aspects of children's development, teachers provide the following:

- experiences that allow children to use all their senses;
- activities with a variety of materials and media;
- physical activity, movement, and dance;
- drama, music, and visual arts;
- opportunities to create and read stories, poems, and a variety of non-fiction;
- opportunities to share personal experiences;
- activities that call for language, literacy, and numeracy; and
- explicit instruction (including opportunities to observe demonstrations and receive explanations).

## Learning through play

*Frowning on child's play has a long history perhaps stemming from the Protestant work ethic … but exploration and play possibly help children's brains to develop by improving their language and intellect … by extending their physical skills, and by preparing the ground for the initiation of emotional relationships.*

— Brierley 1994, p. 70

Play is one of several types of activity through which children can learn in their primary years. A natural and universal learning activity, it results from a desire to make sense of the world. Play engages children's whole being. It allows learners to project into the realm of possibility while enabling them to develop and refine current understandings as they explore, imagine, construct, discuss, plan, manipulate, problem-solve, dramatize, create, and experiment (Wasserman 1990). Through play, children represent their knowledge and further explore their world. Play should be seen as

SUPPORTING POSITION STATEMENT

### Young Children Have the Right to Learn Through Play

Children learn through play. Through their play, children develop sensory motor control, eye-hand co-ordination and problem solving skills. Physical, social, intellectual, and emotional development are all enhanced through play.

**CAYC believes that it is important for children to play.**

Children have a natural mechanism that enables them to make sense of their world — that mechanism is play. For over 100 years, researchers have studied play and have found that play

- enhances a child's language development (Garvey 1974)
- encourages creativity and problem-solving (Dansky 1980)
- provides a context through which the child develops representational thought, an essential foundation for reading, mathematics and science (Vygotsky, in. J.S. Bruner, A. Jolly, & K. Sylva [Eds.])
- develops higher motivation to learn and develops higher self-esteem (Weininger 1994)

Play is an integral part of a child's being. It is the business of childhood, and it has a unique and vital role in the whole educational process (Weininger 1994).

**CAYC believes that children need time, space, and certain materials to play.**

CAYC supports all programs including the school setting that provide time for children to play. Space affords children the opportunity to explore and change the surroundings, to be in charge and to find out more about people, things, and ideas in the environment. Support for play does NOT mean that any behaviour is acceptable in any place at any cost — rather, CAYC believes that all children should have the opportunity to be in spaces that are appropriate for them to play. Expensive toys are not necessary, but certain items need to be provided in order to enhance children's play. Teachers use their knowledge of the play potential of a variety of materials to offer children valuable play opportunities.

**CAYC believes that children need adults to support and enable their play.**

Adults take on many roles in order to facilitate children's play: stage manager, mediator, planner, communicator, play observer (Jones & Reynolds 1992). CAYC appreciates that adults draw upon considerable expertise as they enable, support, and extend the play of groups of children in home, preschool, child care and school settings.

**CAYC believes that children's natural inclination to play should be nourished and encouraged.**

The Canadian Association for Young Children acknowledges that play is important through everyone's life — beyond childhood into adulthood. Through play, children ask questions, seek solutions, and grapple with societal problems. CAYC urges all Canadians to become advocates of play.

— Canadian Association for Young Children (1996), p. 8

an essential experience that extends, enhances, and enriches a child's learning.

There are different kinds of play. Of particular importance to learning are exploratory, imaginative, and symbolic play. In reviewing research on learning and brain development in early childhood, Brierley (1994) explains the contribution of exploratory and imaginative play to children's learning:

Exploratory play involves problem solving. It is usually serious, concentrated activity that demands investigation and manipulation and a desire to succeed. Through exploratory play, children build up knowledge of the world through their senses, the basis of all later intellectual activity.

Imaginative play, which differs from exploration, has freedom and usually an element of fun in it. Satisfying for its own sake, it is especially important in learning to think symbolically. Brierley concludes that "all forms of play appear to be essential for the intellectual, imaginative, and emotional development of the child and may well be necessary steps to a further stage of development" (p. 111).

Of particular importance to learning are exploratory, imaginative, and symbolic play.

## Kinds of Play

**(Note that a child's play may be characterized in more than one way.)**

**UNOCCUPIED BEHAVIOUR**
To an observer, the child appears not to be playing at all but is occupied with watching anything that happens to be of momentary interest.

**SOLITARY PLAY**
The child plays alone and independently. Interest is centred on his or her own activity without any reference to what others are doing.

**ONLOOKER BEHAVIOUR**
The child watches others play, talks to them, asks questions, or makes suggestions, but does not enter into the play.

**PARALLEL PLAY**
The child plays with other children and uses similar materials to them, but not necessarily in the same way.

**ASSOCIATIVE PLAY**
The child plays with other children and shares materials in similar activities. The activity is not organized. Each child acts as he or she wishes.

**CO-OPERATIVE OR ORGANIZED PLAY**
The child plays in a group that is organized to make something, attain a goal, dramatize a situation, or play a formal game. There is a marked sense of either belonging, or not belonging, to the group. Each child plays a role in relationship to other members of the group.

**PRACTICE OR FUNCTIONAL PLAY**
The child repeats activities in attempting to master physical or intellectual challenges or acquire and refine skills (e.g., bouncing a ball, writing lists of known words).

**CONSTRUCTIVE PLAY**
The child uses materials to make a particular product representing objects, ideas, or processes (e.g., paintings, drawing, models). Making collections, organizing, trading and displaying collections (e.g., rocks, hockey cards) are forms of constructive play.

**SYMBOLIC PLAY**
The child gives objects properties that suit the needs of play (e.g., a block becomes a car). Other forms of symbolic play include language play (e.g., jokes, riddles, rhymes), literacy play (e.g., "pretend" reading and writing), and numeracy play (e.g., playing with numbers, shapes, and "pretend money").

**SOCIODRAMATIC PLAY**
The child takes on or assigns roles (e.g., "You be the sister"). The child may experiment with roles that are not concrete or direct (e.g., futuristic stories).

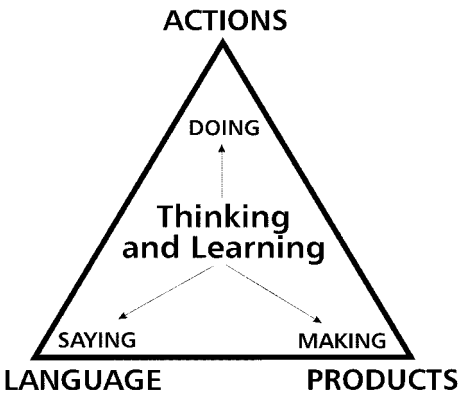
**GAMES WITH RULES**
The child may decide upon rules spontaneously or try to follow established rules in playing various types of games (e.g., computer games, board games, card games, and sports-related games).

**EXPLORATORY PLAY**
The child experiments with new ideas or new materials and/or combines known ideas or materials in new ways to solve problems.

As people try to communicate what is in their minds through the things they do, make, or say, they create meaning: it is the doing that creates meaning and understanding.

An important aspect of symbolic play is play with language, literacy, and numeracy (Pellegrini & Galda 1993; Vygotsky 1978). Opportunities to play with oral language (e.g., songs, patterns, and rhymes), written language (e.g., making signs or labels in the construction centre), numbers (e.g., card games that involve numbers), and shapes (e.g., puzzles) lay a strong foundation for the development of concepts and skills as children progress through school. Effective teaching includes designing environments that facilitate learning through purposeful play. For further information on the use of play, please see Bennett, Wood, and Rogers (1997).

## Representation of Knowledge




**FORMS OF REPRESENTATION**
(possible sources of evidence for assessment)

**Language**
- dialogue
- discussions
- oral presentations
- self-evaluations
- conferences

**Actions**
- movement
- dance
- story drama
- interactions
- gestures, signs

**Products**
- written work
- 2-D and 3-D models
- graphs, charts, maps
- webs, semantic maps
- drawings, paintings
- collages
- songs
- musical compositions

## Learning through representing

*Representing, in one form or another, is an aspect of many learning experiences. Teachers ask students to represent in order to find out what they know. When students are asked to give form to their thoughts and ideas they are invited to question, to clarify, to extend, to revise, to communicate what they know to others. Representing is an opportunity for discovery as students manipulate their ideas and feelings and play with their own thinking. When they have completed the representation, students have something concrete to reflect on and to evaluate. They become their own audience. They have the opportunity to look beyond the surface features to see that representation is more than decoration, and to develop increasing competence in their ability to show what they know.*

— From *Thinking in the Classroom, volume 1: The Context for Thoughtful Learning* (1991), p. 33

Representing does more than simply reflect what is in the mind of the learner. It is an important tool for activating the learning process. As people try to communicate what is in their minds through the things they do, make, or say, they create meaning: it is the doing that creates meaning and understanding. Representing "produces a *record* of our mental efforts …, embodies our thoughts and intentions in a form more accessible to reflective efforts. The process of thought and its product become interwoven …" (Bruner 1996, p. 23).

An important part of learning is increasing one's repertoire of forms of representation. When students can represent their thinking in a variety of ways and discuss the various forms of representation, they learn about their own learning processes. Learning a variety of ways of representing allows students with diverse backgrounds, interests, and abilities to be successful. The accompanying chart suggests some possibilities.

## Learning through reflection

*Children need to understand what it means to learn, who they are as learners, and how to go about planning, monitoring, and revising, to reflect upon their learning and that of others, and to learn to determine for themselves if they understand. These skills of metacognition provide strategic competence for learning.*

— National Research Council 1999, p. xv

Children learn critical thinking strategies and skills through group reflection that is guided by the teacher. Problem-based learning provides children with opportunities to develop, use, and refine the tools of critical thinking, some of which are listed below:

- background knowledge, information needed for thoughtful reflection
- criteria for judgment
- language used to understand and distinguish terms
- strategies and organizing devices
- attitudes and values of a careful and conscientious thinker

As well as specific thinking processes, children need to learn about their own thinking. **Metacognition,** the term used for this process, encompasses the ability to reflect on one's own performance — to know what one knows, doesn't know, and needs to know in order to complete a task — and self-regulation — the ability to plan, monitor success, and correct errors when appropriate (Brown, Collins, & Durgid 1989).

Children also need to develop what Flavell (1978) refers to as person, task, and strategy knowledge, the hallmarks of independent, effective learning. Person knowledge is knowledge about one's strengths and weaknesses in relation to the demands of the task (task knowledge). Strategy knowledge refers to awareness of tactics that will help one cope

Children first learn about their thinking through discussion, then they internalize the reflective talk with others as "inner speech" (Vygotsky 1978) or "inner dialogue" (Lindfors 1999).

with difficult aspects or demands of a task. Having such knowledge allows children to better regulate their thinking and acting.

The evidence suggests that like other forms of learning, metacognition develops gradually and depends on knowledge as much as experience. Whereas self-regulation may appear quite early, reflection appears to develop late. It is difficult to plan and monitor learning and to reflect when one does not understand something. However, on topics that children know, primitive forms of self-regulation and reflection appear early (Brown & DeLoache 1978, cited National Research Council 1999, p. 86).

Reflection develops as a process. Children first learn about their thinking through discussion, then they internalize the reflective talk with others as "inner speech" (Vygotsky 1978) or "inner dialogue" (Lindfors 1999). Talking about learning helps to shift knowledge from the unconscious to the conscious realm. Children need opportunities to verbalize their thinking both to themselves and to others. Having the freedom to "think out loud" when they are learning to do new things helps them learn more effectively. They also benefit from discussing their learning during and after engaging in activities.

Self-evaluation is a natural extension of reflection. Students learn by trying things out in a variety of situations, and also by reflecting on what works for them and monitoring and adjusting where necessary. In this way, reflection greatly helps them expand and refine their repertoire of learning strategies.

# People Learn in a Variety of Ways and at Different Rates

Intelligence is not a fixed quantity or generic trait.

*Development and learning are not two parallel processes. Early biological underpinnings enable certain types of interaction, and through various environmental supports from caregivers and other cultural and social supports, a child's experiences for learning are expanded. Learning is promoted and regulated both by children's biology and ecology, and learning produces development.*

— National Research Council 1999, p. 100

Children vary in their learning styles, prior knowledge and experiences, and abilities and rates of development. There are also differences within each child. Intelligence is not a fixed quantity or generic trait. Instead, learners have greater abilities in some types of activity and learn more easily through one method than another. Context is also an important factor: everyone is more capable in some situations than others.

The following position statement reflects a flexible view of development and learning, in which development is not merely a matter of "ages and stages."

## SUPPORTING POSITION STATEMENT

### Principles of Child Development and Learning That Inform Developmentally Appropriate Practice

- Domains of children's development — physical, social, emotional, and cognitive — are closely related. Development in one domain influences and is influenced by development in other domains.
- Development occurs in a relatively orderly sequence, with later abilities, skills, and knowledge building on those already acquired.
- Development proceeds at varying rates from child to child as well as unevenly within different areas of each child's functioning.
- Early experiences have both cumulative and delayed effects on individual children's development; optimal periods exist for certain types of development and learning.
- Development proceeds in predictable directions toward greater complexity, organization, and internalization.
- Development and learning occur in and are influenced by multiple social and cultural contexts.
- Children are active learners, drawing on direct physical and social experience as well as culturally transmitted knowledge to construct their understandings of the world around them.
- Development and learning result from interaction of biological maturation and the environment, which includes both the physical and social worlds that children live in.
- Play is an important vehicle for children's social, emotional, and cognitive development, as well as a reflection of their development.
- Development advances when children have opportunities to practice newly acquired skills as well as when they experience a challenge just beyond the level of their present mastery.
- Children demonstrate different modes of knowing and learning and different ways of representing what they know.
- Children develop and learn best in the context of a community where they are safe and valued, their physical needs are met, and they feel psychologically secure.

— National Association for the Education of Young Children (1996)

## Diversity in thinking and learning styles

*The weight of the evidence at the present time is that intelligence is multidimensional, and that the full range of these dimensions is not completely captured by any single ability.*

— Sternberg 1996, p. 11

Current understandings of intelligence suggest that it is a combination of general and specific abilities (Case 1992; Sternberg 1996).

One useful model for education is Gardner's (1983; 1993) Theory of Multiple Intelligences. Gardner identifies several distinct types of intelligence, including linguistic, musical, logical-mathematical, spatial, body-kinesthetic, interpersonal, and intrapersonal. More recently, Gardner (1997) has suggested an eighth type of intelligence, "naturalistic intelligence," which is currently being incorporated in educational applications of his theory. These various forms of intelligence constitute the multiple ways children experience their world and the many different ways they can be "smart."

Research studies confirm teachers' observations that children's learning styles differ in important ways, in learning, communicating, expressing ideas, and solving problems. **Learning styles** are intellectual, perceptual, emotional, and behavioural patterns exhibited consistently over time across different tasks. A variety of models explain the diversity and how to address it in the classroom: the work of Dunn and Dunn (1992) and McCarthy (1987) are examples.

### Forms of Multiple Intelligence

**BODY/KINESTHETIC INTELLIGENCE**
This intelligence is related to physical movement and the knowing/wisdom of the body, including the brain's motor cortex, which controls bodily motion.

**MUSICAL/RHYTHMIC INTELLIGENCE**
This intelligence is based on the recognition of tonal patterns, including environmental sounds, and on a sensitivity to rhythm and beats.

**INTERPERSONAL INTELLIGENCE**
Person-to-person relationships and communication are at the heart of this intelligence.

**INTRAPERSONAL INTELLIGENCE**
Internal states of being (thoughts and feelings), self-awareness, self-reflection, and metacognition are aspects of intrapersonal intelligence.

**VERBAL/LINGUISTIC INTELLIGENCE**
This intelligence, which is related to words and language, written and spoken, dominates most Western educational systems.

**VISUAL/SPATIAL INTELLIGENCE**
This intelligence, which relies on the sense of sight, includes the ability to create internal mental images or pictures.

**LOGICAL/MATHEMATICAL INTELLIGENCE**
Often called "scientific thinking," this intelligence deals with inductive and deductive thinking, reasoning, numbers, and the recognition of abstract patterns.

— From *The Theory of Multiple Intelligences* (1983)

## Diversity in learning needs

Students learn at varying rates or in differing degrees. Some learn more quickly and easily; others learn more slowly and with less ease. Given this reality, primary teachers can expect a range of students with differing abilities. The responsibility to respond to learning differences remains largely with the classroom teacher.

Each school district has primary students who meet the Ministry of Education definition for special needs. Some have a disability of an intellectual, physical, sensory, emotional, or behavioural nature. Others have a learning disability, or have exceptional gifts or talents. Students with special needs are typically more like than unlike other children. Although some external differences may be obvious, the children's needs for safety, respect, caring, and equal opportunities for learning and growing are similar and more significant. Primary teachers can respond to the diversity of individual learners by helping all children understand, respect, and appreciate individual differences. For more information, see "Approaches and Programs for Specific Popu-lations" and "Policies and Structures That Promote Success for All Students" in Chapter 4, Teachers and Teaching.

## Cultural and linguistic diversity

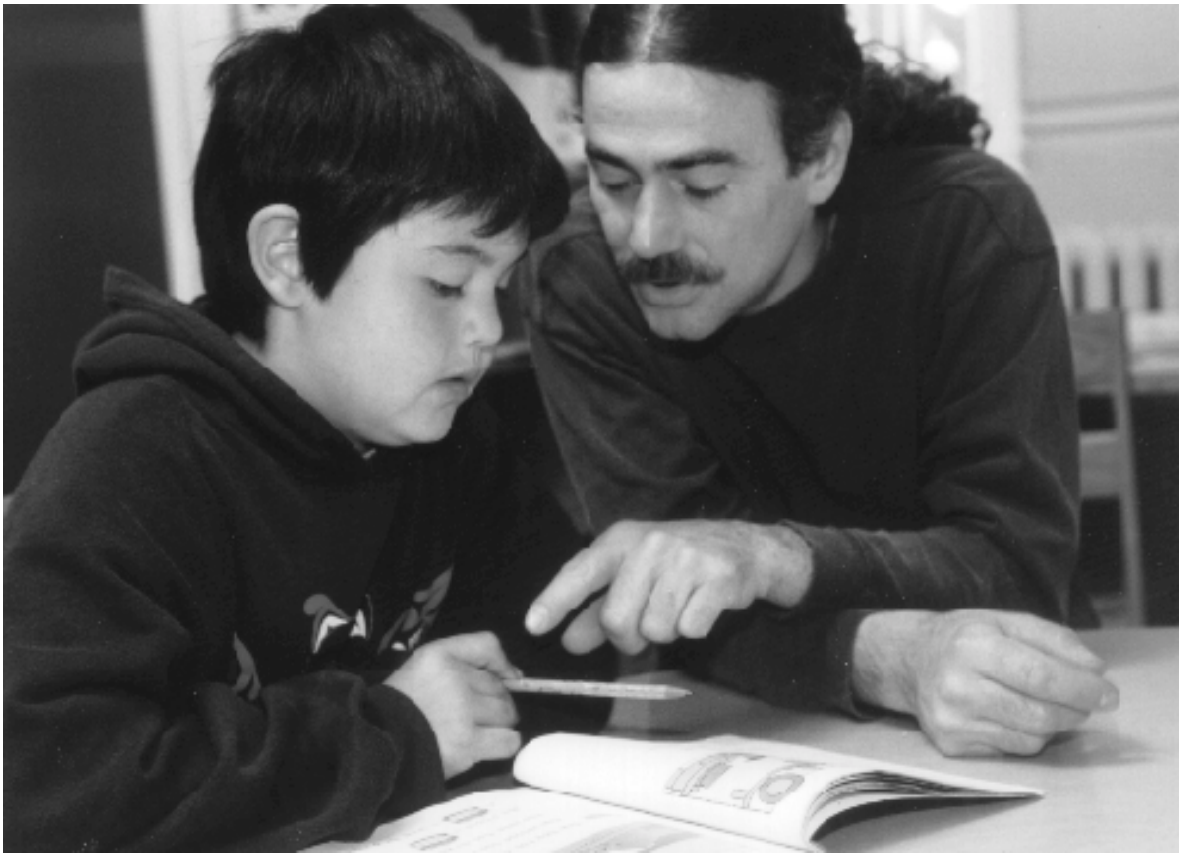
Children are born with an innate ability to learn language but many factors affect their development of language processes and skills:

- **the family's language**
  The language (or languages) of the child's family is probably the greatest factor governing which language is used and how.
- **prior knowledge and experiences**
  Children learn language through use. Thus, their language reflects their experiences. By talking in a variety of contexts for different purposes, they increase their repertoire of language functions, which in turn enhances their development of vocabulary and language structures.
- **natural curiosity**
  Natural curiosity about the world requires children to use language to make meaning. Connecting language to first-hand experiences allows children to create various ways of thinking about and understanding the world. This helps them develop a greater sense of competence and agency, in other words, being able to understand and influence what goes on around them.
- **dialogue**
  Dialogue between child and adult and between child and child is essential for the continuing growth and development of a child's language. The quality of verbal interaction between child and adult enhances the quality of a child's thinking and language use. Adults engage children in conversation about their experiences which helps them to develop their understanding of the world, enhance their thinking processes, and expand their language abilities.

Although some external differences may be obvious, the children's needs for safety, respect, caring, and equal opportunities for learning and growing are similar and more significant.

Children who speak a language or dialect that is different from the mainstream are as diverse as children who speak English as their first or only language.

Children who speak a language or dialect that is different from the mainstream are as diverse as children who speak English as their first or only language. Because language and culture are inextricably related, these children may be unfamiliar with the dominant culture's ways of representing or displaying knowledge. Their discourse may not match the school's ways with words. It is important to acknowledge the role of language and culture in learning and the particular learning needs of Aboriginal students, ESL and second dialect learners, and children enrolled in francophone and French immersion programs. "Approaches and Programs for Specific Populations" in Chapter 4, Teachers and Teaching, offers useful information.



# Learning Is Both an Individual and a Group Process

*Although meanings are "in the mind," they have their origins and their significance in the culture in which they are created. It is this cultural situatedness of meaning that assures their negotiability and, ultimately, their communicability. Whether "private meanings" exist is not the point; what is important is that meanings provide a base for cultural exchange. On this view, knowing and communicating are in their nature highly interdependent, indeed virtually inseparable.*

— Bruner 1996, p. 3

Learning in the primary years is part of a continuum beginning at birth and continuing throughout life. It involves the interplay of development and experience, a process that is both personal and social.

## The personal nature of learning

Learning is a process of making connections between new and already known information. Learners engage in this process sometimes explicitly and at other times without conscious intention. Children come to school with different experiences, varying abilities, and interests. Even when children take part in shared experiences, each child's learning is, to some degree, unique.

As children learn, they acquire not only knowledge and skills, but also attitudes to what they are learning and to themselves as learners. Research on the brain (Caine &

Children come to school with different experiences, varying abilities, and interests. Even when children take part in shared experiences, each child's learning is, to some degree, unique.

## research directions

### MOTIVATION AND LEARNING

Motivation plays an important role in the effectiveness of learning. Motivation is affected by learner's perceptions of the purpose of tasks they are asked to engage in and the type of feedback they receive.

- Learners of all ages are more motivated when they can see the usefulness of what they are learning and when they can use that information to do something that has an impact on others — especially their local community (McCombs 1996, Pintrich & Schunk 1996, cited in National Research Council 1999, p. 49).
- Students who are learning oriented like new challenges; those who are performance oriented are more worried about making errors than about learning (National Research Council 1999).
- Social opportunities also affect motivation. Feeling that one is contributing something to others appears to be especially motivating (Schwartz et al, in press, cited in National Research Council 1999, p. 49).

Feedback that is specific, constructive, and timely is beneficial for learning. Students' self-esteem can be enhanced and their self-concepts can become more realistic when they are provided with quality feedback (Jensen 1995; Rosenthal & Babad 1985).

Children's conceptual development involves the interplay of development and experiences.

Caine 1997) shows that learning is as much an emotional process as a cognitive one. People learn more effectively and remember more when strong emotions are attached to the learning situation. Indeed, the emotional component of the learning experience tends to strengthen connections made by learners.

In the primary years, children who pursue topics of personal interest and relevance, asking their own questions, solving problems, and reflecting on their own thinking, gain increasing levels of confidence. They also experience the joy of learning.

## Constructing meaning

*In the most general sense, the contemporary view of learning is that people construct new knowledge and understandings based on what they already know and believe … Particularly important is the finding that the mind imposes structure on the information available from experience.*

— National Research Council 1999, pp. 10 and 113

Seeking patterns and relationships is at the heart of problem solving and critical thinking. **Patterning** is the meaningful organization of information (Caine & Caine 1991). The brain is not haphazard; learners search the environment for clues to pattern, relating one thing to another. Learning involves two complementary processes: (1) discerning patterns, which requires analysis, or taking things apart, and (2) creating patterns, which calls for synthesizing, or putting things together.

Children's conceptual development involves the interplay of development and experiences. "The term 'development' is critical to understanding the changes in children's conceptual growth. Cognitive changes do not result from mere accretion of information, but are due to processes involved in conceptual reorganization. Research from many fields has supplied the key findings about how early cognitive abilities relate to learning" (National Research Council 1999, p. 222). As children begin to label objects in their environment, they group them into seemingly random categories. As their experience with the world increases, they begin to analyse objects to discover their attributes and note relationships between objects through direct experience.

Language plays an important role in concept development. It helps focus children's attention on characteristics of objects, to make connections with their prior knowledge, and to symbolize their understandings with a sign (a word). In this way words function as verbal tools — they mediate learning by moving

the child from the concrete activity to the abstract realm of concepts (Vygotsky 1978).

Learners must take isolated facts and details and place them into meaningful and personally relevant patterns or they will be rapidly forgotten. Learners benefit from experiences that enable them to see interrelationships. Here are some examples of such experiences:

- clustering ideas into chunks of meaning (e.g., discerning spelling patterns rather than working with isolated letters and sounds);
- seeing ideas in relation to one another (e.g., "storying," one of the mind's most important tools for making connections);
- exploring objects and ideas in order to sort, classify, categorize, compare, and sequence information (e.g., sorting rocks in a science activity);
- learning about ideas and information in an integrated way (e.g., studying thematic units);
- abstracting and creating individual patterns rather than having them imposed (Brierley 1994) (e.g., repeating geometric designs); and
- listening to or observing a demonstration or explanation (responding to explicit instruction).

## Self-regulated learning

*As children progress through the primary years, their understanding of the need to use learning strategies becomes increasingly sophisticated, as does their ability to talk about and reflect on learning (Brown et al. 1983). Children of the same age use a variety of strategies. Indeed, the same child may use different strategies when presented with the same problem on different days.*

— Siegler & McGilly 1989, cited in National Research Council 1999

Competent learners regulate their own learning processes and change strategies as necessary. Three key findings have emerged from studies of the ways learners develop effective learning strategies:

1. Discoveries are often made not in response to impasses or failures but rather in the context of successful performance.
2. Short-lived transition strategies often precede more enduring approaches.
3. Generalizations of new approaches often occur slowly, even when children can provide compelling rationales for their usefulness (Karmiloff-Smith 1992, Kuhn 1995, Siegler & Crowley 1991, cited in National Research Council 1999, p. 88).

As students better understand their own learning processes and adapt their learning to different situations, they transfer their most effective ways of learning from one context to another. They become more autonomous and self-regulating in their learning.

Students' beliefs about themselves as learners, their goals and expectations, and their decisions about how to regulate their behaviour are influenced by classroom tasks, authority structures, and evaluation practices (Butler & Winne 1995). Self-regulation develops through learning experiences that promote autonomy rather than dependence

***Effective schools and effective teachers are those who develop goals, beliefs, and attitudes in students that will sustain long-term involvement and that will contribute to quality involvement in learning … Students need to develop motivational thought patterns that contribute to self-regulated learning …***

**— Ames 1990, pp. 410–411**

Culture in its most global sense encompasses ethnicity, language, socioeconomic class, power relations, and gender.

(Deci et al. 1991; Sweet & Guthrie 1996). Students are more likely to engage in effective forms of self-regulated learning in classrooms where they are doing complex, meaningful tasks.

When teachers focus on the learning process rather than on the number of correct responses, students feel encouraged to take risks in their learning and establish further challenges (Kohn 1993). Children's self-regulation is also enhanced when they have opportunities to choose the products and processes that will be evaluated, negotiate tasks and assessment criteria to attain optimal levels of challenge, collaborate with peers, and evaluate their own work (Perry 1998; Winne 1996).

## The nature and importance of context

Learning occurs in and is influenced by both personal and social context. Context is multidimensional and dynamic. The following box shows some of the dimensions of context.

### Dimensions of Context

**SOCIOCULTURAL CONTEXT**
Culture in its most global sense encompasses ethnicity, language, socioeconomic class, power relations, and gender. The sociocultural context includes a variety of communities in which people live and interact.

**COMMUNITY CONTEXT**
A community consists of a group of people with a common focus, purpose, or interest. A person may be a member of several communities (e.g., an academic community, a religious community, and a neighbourhood community). A classroom is a community of people whose major purpose is learning.

**SPHERE OF ACTIVITY**
Each community encompasses several spheres of activity, recurring contexts that give rise to particular ways of thinking, acting, and communicating. School learning is organized into curriculum subjects that are related to particular disciplines. Each school subject can be thought of as a sphere of activity (e.g., in mathematics, children engage in mathematical thinking, perform mathematical operations, and use mathematical language).

**IMMEDIATE CONTEXT**
The particular learning situation is comprised of a specific set of circumstances, including the people, the environment, and the task. It occurs at a particular moment in time and is bound by events immediately preceding and following.

**PERSONAL CONTEXT**
Context can also be considered in relation to the life of the individual learner. It is part of a personal historical timeline, influenced by what has gone on before in a person's life and in turn affecting what will follow.

— Chapman 1997

## The social and cultural nature of learning

*Human mental activity is neither solo nor conducted unassisted, even when it goes on "inside the head." We are the only species that* teaches *in any significant way. Mental life is lived with others, is shaped to be communicated, and unfolds with the aid of cultural codes, traditions, and the like.*

— Bruner 1996, p. xi

Children's social worlds — their cultures and communities — provide them with resources they draw upon in their learning. People and the things people create are learning resources. The things people create include objects, ways of acting and participating, and ways of thinking, representing, and communicating. From this perspective, oral language, alphabetic writing, literature, drama, music, dance, and the visual arts are forms of expression, but also representations of one's culture and cognitive tools (Egan 1997). Culture "provides us with the toolkit by which we construct not only our worlds but our very conceptions of ourselves and our powers" (Bruner 1996).

Children learn by acting and re-acting within their various social worlds. No person "is 'culture free,' but neither are individuals simply mirrors of their culture. It is the interaction between them [the individual and his/her culture] that both gives a communal cast to individual thought and imposes a certain unpredictable richness in any culture's way of life, thought, or feeling" (Bruner 1996, p. 14).

## Learning through social interaction

*Individual activity is always specific to a particular culture at a particular point in the historical development of that culture and dependent on the [concrete and abstract] tools that the culture makes available ... Human development and learning are thus intrinsically social and interactive.*

— Wells & Chang-Wells 1992, p. 29

Other children and adults play an active part in children's learning and development by modelling and providing information, assistance, and feedback. Vygotsky's (1978) Theory of the Zone of Proximal Development provides a framework for understanding the relationship between the personal and social, between development and learning. It also provides a framework for understanding the central role parents and teachers play in promoting children's growth. According to Vygotsky, there exist two levels of development:

1. **attained development,** or levels of independent functioning;
2. **zones of proximal development,** or "learning zones" which are *just beyond attained levels*.

(See the chart under "Developmentally Appropriate Teaching" in Chapter 4, Teachers and Teaching.)

Vygotsky's explanation of the zone of proximal development, the "learning zone," illustrates how people can stretch beyond their individual capabilities toward more mature cognitive functioning when they learn through social interaction. The zone of proximal development is the distance between the actual developmental level, as determined by independent problem solving, and the potential developmental level as determined through problem solving under adult guidance or in collaboration with more capable peers (Vygotsky 1978, p. 86).

Interaction is at the heart of all forms of teaching.

As noted earlier, learning *precedes* development. Vygotsky viewed the primary role of the adult as one of facilitator or mediator, who guides the child's participation in a learning task by providing directions and clues. These actions provide a **scaffold** for the learning child: the adult observes what the child does, determines the degree and type of support needed, guides the child's participation and gradually removes support to allow the learner to take on more of the task. In this way, teachers "cultivate" learning rather than "impose" it. From a broad perspective, everything teachers do to help children learn — assessing their learning, creating a rich learning environment, planning learning activities, and providing instruction — is an intervention.

Interaction is at the heart of all forms of teaching, whether it be assisting individual students, engaging in conversations with students about their learning, or instructing small groups or the whole class. Likewise, learning experiences in which students interact, such as discussion, partner and group activities, collaboration and co-operative learning, harness the potential of social interaction as a tool for learning.

## Learning through language

*Although the processing takes place in our students' individual brains, their learning is enhanced when an environment provides them with an opportunity to discuss their thinking out loud, to bounce their ideas off their peers, and to produce collaborative work.*

— Wolf and Brandt 1998, p. 11

Language is possibly the most versatile cognitive tool that a culture makes available to learners. The talk that accompanies, directs, and reflects on activities enables children to construct meaning by connecting the immediate experience to the symbolic realm (words) and abstract thought. At the same time, children learn culturally embedded ways of thinking and communicating.

Learning a language involves cultural ways of thinking and representing knowledge. Each sphere of activity within a culture encompasses a *language register (*i.e., vocabulary and syntax), *forms of representation,* and *genres* ("ways with words"). Rather than rules to be followed (e.g., using "story grammar elements" to create a story) or models to be

imitated (e.g., a "thank-you letter" as a Thanksgiving writing activity), genres are now thought of as cultural resources that people draw upon in communicating for particular purposes and in specific situations (Bakhtin 1986).

In a literate culture, literacy is a resource for learning long before children can read and write independently. Stories, poems, and nursery rhymes are part of children's cultural heritage. Although learned orally, they lay a foundation for children's emerging literacy. Likewise, immersion in environmental print such as signs and labels and a variety of fiction and non-fiction helps children to learn about their world and develop the awareness of written language that is essential for literacy.

Children with special needs may communicate in ways other than oral language. Experiences with alternative or augmentative methods of communication such as sign language, Bliss symbolics, and assistive technology devices also affect emergent literacy.

## Learning through the arts

Dyson (1986) describes children as "symbol weavers" who create and express their ideas in an integrated way. For primary children especially, dance, drama, music, and visual arts are vehicles for learning and communicating as well as activities to be pursued for their own sake. The fine arts are particularly important in allowing diverse learners to be successful. Children who do not yet fluently speak the language or dialect of the school will be disadvantaged in language-laden activities, but may have strongly visual or kinesthetic learning styles. When they gain opportunities to learn through the arts and represent their learning through a variety of representational forms, they are often more successful.

The fine arts are particularly important in allowing diverse learners to be successful.

## Learning through science

The essence of scientific thinking is the process of inquiry: formulating hypotheses, devising ways to test those hypotheses, collecting and evaluating evidence, and confirming or rejecting hypotheses. Learning through science is as important to young children as learning about science. Science builds on children's sense of wonder about the world around them. As children inquire into their world they can learn about their physical environment. Through teacher guidance they can also learn to engage in "scientific thinking" that can be applied in science and across the curriculum.

Children learn to make sense of their world through developing mathematical ability in the areas of: sense, spatial sense, sense of data and probability, and sense-making with patterns and relationships

## Learning through mathematics

Children learn to make sense of their world through developing mathematical ability in the areas of: sense, spatial sense, sense of data and probability, and sense-making with patterns and relationships. These aspects of numeracy provide children with important tools for interpreting their environment and for constructing meaning. Mathematics provides opportunities for children to succeed in various areas that depend on spatial, numerical or pattern-based thinking as a complement to other language-dependent areas of the curriculum. Mathematics supports children's ability to learn through science and to construct meaning essential to problem solving and critical thinking across the curriculum.

## Learning through technologies

In the larger sense, "technology" refers to any human invention that assists people in accomplishing tasks. The alphabet, paper, pens, and books are technologies for literacy, as well as computers and CD-ROMs. Likewise, drawing materials, "found" materials, blocks, and computer software are all technologies for design.

As society becomes more technologically advanced, experience with a range of technologies becomes increasingly important for learners of all ages, including young children. Children need access to both traditional materials and newer technologies. For more on the subject, see "The role of technology in the learning environment" in Chapter 4, Teachers and Teaching.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## Summary: Learners and Learning

Learners and Learning expands upon the three principles of learning introduced in Chapter 1. It recognizes that children learn best when they are totally engaged, as they are when they play. Play allows children to make sense of the world, while the act of representing enables them to create meaning. Representing goes beyond reflecting, but that's necessary too so that children can determine if they understand.

People learn in different ways, as Gardner elaborates in his Theory of Multiple Intelligences. However, all learners are always making connections and need an environment in which they feel safe to take risks in order to flourish. Vygotsky's Theory of the Zone of Proximal Development provides a framework for understanding the relationship between the personal and the social, between development and learning. It reveals the role teachers and parents can play in allowing students to stretch beyond their individual capabilities. Learning is both an individual and a social and cultural process.


# Curriculum and Context

## Key Points in This Chapter

- Various organizations of curriculum may be used to help teachers make more effective use of the Integrated Resource Packages (IRPs) for primary. The Primary Program foundation statements (and related learning descriptors) provide a useful form of organization for teachers.
- The Primary Program foundation statements (and related learning descriptors) capture in summary form the intent of the provincially prescribed learning outcomes for Kindergarten to Grade 3.
- Various features of the K to 3 curriculum make it compatible with a developmental perspective. These include
  - development by grade cluster rather than grade
  - the ability of teachers to decide which outcomes to emphasize (on the basis of student need)
  - the various levels of complexity implicit within particular outcomes
- There is a variety of models of curriculum integration that teachers may use to plan instruction.

**The provincially prescribed learning outcomes contained in the Integrated Resource Packages can be organized in a variety of ways for different purposes.**

PROVINCIAL CURRICULUM IS PRESENTED in Integrated Resource Packages (IRPs), organized in curriculum subjects. Curriculum subjects are vehicles for teaching particular sets of knowledge, skills, and attitudes. School subjects, not disciplines in themselves, are derived from and related to particular disciplines, such as science, social studies, and mathematics. A discipline-based focus becomes more evident as students progress through school.

At the primary level, provincially prescribed curriculum for students is presented in seven Integrated Resource Packages (IRPs). Each of the seven IRPs deals with one of the areas identified in Ministerial Order M295/95 (see below).

Classroom teachers have a responsibility to provide learning experiences for children in all areas of study. To make effective decisions about learning experiences for students in their classrooms, teachers need to be familiar with the learning outcomes and other information contained in the IRPs.

The provincially prescribed learning outcomes contained in the Integrated Resource Packages can be organized in a variety of ways for different purposes. At the primary level, the Primary Program foundation statements represent a helpful form of organization for the learning outcomes: they provide a succinct overview of the learning outcomes prescribed for K–3. As a result, educators can use them in planning for learning activities and instruction, planning for assessment and evaluation, and communicating with parents and others about children's progress.

**REQUIRED AREAS OF STUDY IN AN EDUCATIONAL PROGRAM ORDER**

**Authority:** *School Act*, section 168 (2) (a)

Ministerial Order 295/95 ..... Effective September 1, 1995

**Kindergarten to grade 3**

2. Each school year, a board must offer to all students in kindergarten to grade 3, an educational program that meets the learning outcomes set out in the applicable educational program guide in
   (a) English Language Arts, or in the case of a student enrolled in a francophone educational program or a French immersion student, French Language Arts,
   (b) Social Studies,
   (c) Mathematics,
   (d) Science,
   (e) Physical Education,
   (f) Fine Arts, and
   (g) Personal Planning.

# Organization of the IRPs

Developmentally appropriate curriculum provides for all areas of a child's development: physical, emotional, social, linguistic, aesthetic, and cognitive.

In the IRPs, the learning outcomes for each subject area are presented by grade level or cluster and grouped according to subject-specific organizers. The significance of the curriculum organizers and how they reflect the nature of the subject area are described in the front matter of the IRP.

## Two-year clusters

Primary provincial curricula are organized in two-grade clusters (Kindergarten to Grade 1 and Grades 2 to 3) to acknowledge the developmental nature of children's learning. The prescribed learning outcomes identify attitudes and skills, as well as knowledge of specific topics or concepts. Students work toward meeting these outcomes over two school

## SUPPORTING POSITION STATEMENT

### Constructing Appropriate Curriculum*

- Developmentally appropriate curriculum provides for all areas of a child's development: physical, emotional, social, linguistic, aesthetic, and cognitive.
- Curriculum includes a broad range of content across disciplines that is socially relevant, intellectually engaging, and personally meaningful to children.
- Curriculum builds upon what children already know and are able to do (activating prior knowledge) to consolidate their learning and to foster their acquisition of new concepts and skills.
- Effective curriculum plans frequently integrate across traditional subject-matter divisions to help children make meaningful connections and provide opportunities for rich conceptual development; focusing on one subject area is also a valid strategy at times.
- Curriculum promotes the development of knowledge and understanding, processes and skills, as well as the dispositions to use and apply skills and to go on learning.
- Curriculum content has intellectual integrity, reflecting the key concepts and tools of inquiry of recognized disciplines in ways that are accessible and achievable for young children. Children directly participate in study of the disciplines, for instance, by conducting scientific experiments, writing, performing, solving mathematical problems, collecting and analysing data, collecting oral history, and performing other roles of experts in the disciplines.
- Curriculum provides opportunities to support children's home culture and language while also developing all children's abilities to participate in the shared culture of the program and the community.
- Curriculum goals are realistic and attainable for most children in the designated age range for which they are designed.
- When used, technology is physically and philosophically integrated in the classroom curriculum and teaching.

* "Curriculum" is used in its generic sense to refer to "instructional/learning program." It does not refer to provincially prescribed curriculum, although British Columbia's provincially prescribed learning outcomes are designed to be consistent with many of the principles cited here.

— National Association for the Education of Young Children (1996), pp. 4–5

At the primary level, learning outcomes in all subject areas can be seen as an integrated whole for the designated grade cluster.

years. By the end of Grade 1 or the end of Grade 3, they are expected to meet them.

At the primary level, learning outcomes in all subject areas can be seen as an integrated whole for the designated grade cluster. For the most part, the Kindergarten to Grade 1 and Grades 2 to 3 outcomes cannot be redistributed to make separate sets for Kindergarten and Grade 1 or for Grade 2 and Grade 3. That is because learning outcomes that address attitudes, processes, and skills rather than content develop over longer periods than a school year.

In a few cases, however, dividing outcomes by grade level may be appropriate. For example, some science topics may be taught in Grade 2 and others in Grade 3. In such cases, decisions are best made among teachers or at the school level.

## Recurring outcomes across the IRPs

Similar learning outcomes appear in more than one subject area IRP. The following outcomes, for example, all deal with exploring vocations and avocations:

- identify a variety of job and volunteer situations within the community (*Personal Planning K to 7 Integrated Resource Package, 1999)*
- identify different occupations in their community (*Social Studies K to 7 Integrated Resource Package, 1998*)
- demonstrate a willingness to participate in drama activities that explore the roles of community members (*Fine Arts K to 7 Integrated Resource Package, 1998 — Drama*)
- identify the links between work and leisure (*Physical Education K to 7 Integrated Resource Package, 1995*)

Teachers may want to address recurring outcomes such as these through the use of theme studies.

## The Primary Years

In the primary years, students:

- study all required areas of learning including language arts, social studies, science, math, personal planning, physical education, fine arts, and applied skills
- learn basic skills in oral language, reading, writing, and mathematics
- begin to develop strategies for healthy living, become aware of good nutrition, maintain physical fitness, learn safety procedures, and develop an understanding of their personal responsibility to themselves, to others, and to the environment
- begin to develop critical thinking, and decision-making and problem-solving.

The curriculum for these years is designed to:

- support the development of children aesthetically, socially, emotionally, intellectually, and physically
- foster the development of imagination
- encourage children to share, co-operate, develop friendships, and appreciate their own and others' abilities and cultural heritage
- develop traits and attitudes that contribute to career awareness and development, such as taking pride in one's work, working effectively with others, and understanding the relationship of work to everyday life.

— From *The Kindergarten to Grade 12 Education Plan,* 1994

# Contexts for Provincial Curriculum

For Kindergarten children especially, learning is inseparable from living. Separating learning experiences into blocks of time or into subjects taught in isolation is contrary to what is known about how young children learn.

## Kindergarten

Within the Primary Program, the daily organization of Kindergarten is unique. Funding is provided for a half-day program, with the exception of those programs specially designed for some students with special needs, aboriginal students, and ESL students. For these students, Kindergarten may be funded and offered on a full-day basis.

The Kindergarten year provides an important transition between home and school for young children. Children in Kindergarten often have very different developmental needs from older students in the Primary Program. They are new to the school system. While some children may have attended day care or preschool, others are experiencing school for the first time. Kindergarten may also be some children's first group experience.

For Kindergarten children especially, learning is inseparable from living. Separating learning experiences into blocks of time or into subjects taught in isolation is contrary to what is known about how young children learn. While mindful of the curriculum requirements set out for the Kindergarten to Grade 1 cluster, teachers need to consider their students' developmental needs. They must recognize that learning outcomes define expectations marking the end of Grade 1, not items to be 50 percent "covered" by the time students leave Kindergarten. Children will learn effectively if activities integrate various aspects of curriculum and if they can explore their world in a relaxed yet guided way.

## Thinking and learning in the curriculum

Effective teachers combine discipline-based and integrated approaches to curriculum.

Each subject area introduces children into discipline-based ways of thinking and communicating as well as helping them develop an understanding of the fine arts, mathematics, physical education, and the natural, physical, and social world. A discipline-based approach helps children acquire the knowledge of particular disciplines by focusing on the thinking and learning within the subjects. For example, in science, children do the following:

- They engage in science activities, such as performing experiments.
- They learn thinking skills and processes, such as observing and classifying.
- They learn scientific concepts such as the life cycle of an animal hatched from an egg.
- They learn about scientific vocabulary, forms of representation (e.g., diagrams), and genres (e.g., the lab report).

The development of skills essential to learning can be addressed in an integrated fashion throughout the school day as well as in the context of the specific subjects. Opportunities for children to apply their knowledge and skills in a variety of contexts, both discipline-based and integrated, enhance the development of "usable knowledge [... and] support understanding and transfer (to other contexts)" (National Research Council

In each subject area children learn language, learn through language, and learn about language (Halliday 1982).

1999, p. 9).

Most of the activities that occur in classrooms call upon students to learn about or reinforce many skills and processes at the same time. For example, when children are conducting a survey as part of their mathematics curriculum, they must use such skills as reading, writing, speaking, listening, representing, thinking, collaborating, and information processing.

## Language, literacy, and the curriculum

As children learn content and skills in each subject, they also learn related aspects of language. For example, consider the learning outcome "explore and describe real-world and three-dimensional objects using descriptive attributes such as *big, little, like a box*, and *like a can*" (*Mathematics K to 7 Integrated Resource Package 1995*).

Even when not stated in a learning outcome, language is integral to learning across the curriculum. In each subject area children learn language, learn through language, and learn about language (Halliday 1982). Here is a science example:

- Children learn language, namely, scientific vocabulary. They express thinking processes, including describing and classifying; communicate through genres such as observation records and expository reports; and work with forms of representation (e.g., graphs and diagrams).
- Children learn *through* language, for example, by discussing and collaborating, reading and writing expository text, and representing ideas in a web or chart.
- Children learn *about* language, becoming familiar with the structure of expository texts, including headings and subheadings, main ideas and supporting details.

Paying particular attention to language is helpful for all children, but especially for children learning a second language or having special learning needs. For more information about integrating language and content, teachers may wish to refer to *English as a Second Language Learners: A Guide for Classroom Teachers* (1999, RB 0074).

Integrating literacy across the curriculum enhances children's skills in reading, writing, viewing, and representing. It works in these ways:

- expanding children's oral vocabulary and reading vocabulary;
- helping children learn about a variety of purposes for reading and writing;
- providing opportunities outside of language arts lessons to engage in reading and writing, thus increasing fluency;
- increasing motivation to read, write, and represent, especially for children who are interested in acquiring information;
- exposing children to a greater variety of written genres and forms of representation; and
- providing opportunities for teachers to help children learn the purposes and structures of a variety of written genres and forms of representation in the content areas.

Learning language in each curriculum area means learning that area's ways of communicating. For example, in mathematics it means learning to communicate mathematically, that is, developing numeracy.

Ways of communicating include oral and written genres and forms of representation. **Forms of representation**, such as charts and maps, are genres that convey information visually. **Genres** provide a set of signals that enable a speaker/writer and listener/reader to communicate effectively. They are flexible patterns of communication that reflect an integration of *content* (what we want to express), *form* (ways of organizing our words and ideas), *function* (communicative purposes), and *context of situation* (Bakhtin 1986). Children become more thoughtful readers and writers when they develop an understanding of the various ways people communicate in the different curriculum areas.

As Shanahan (1997) suggests, "instruction will serve literacy learning best if it focuses on genres as cultural ways of communicating, and on being able to translate information from one form to another. These connections should be made explicitly, and process talks in which disciplinary similarities and differences are explored should be a regular part of integrated instruction" (p. 17). Accordingly, students will benefit from opportunities to compare differing presentations of the same idea or information (e.g., map, web diagram, paragraph, poem). For further information, see Chapter 6, Enhancing Children's Growth in Language and Literacy.

Integrating literacy across the curriculum enhances children's skills in reading, writing, viewing, and representing.

*All curriculum areas make demands on students' mathematical knowledge and understanding. Problem solving at home, school, or workplace requires more than just specific mathematical competencies. It also requires the patient development of logical thought processes and the art of inquiry.*

— British Columbia Association of Mathematics Teachers 1998

## Numeracy and the curriculum

Numeracy includes a variety of mathematical attitudes, skills, and knowledge which can be expressed as

- **number sense** — abilities in using numbers and estimation
- **spatial sense** — abilities to visualize common shapes and understand their properties; to interpret plans, models, and diagrams; to estimate measurements
- **statistical sense** — abilities to understand how information is collected and analysed, to understand the nature of probability, to make predictions, and to recognize misinformation in graphical representations
- **sense of relationship** — abilities to describe patterns and relationships between quantities when solving problems, and in connecting mathematical ideas to everyday observations

Numeracy extends beyond mathematics to other curriculum areas and to a variety of situations in students' present and future lives. For example:

- As part of classroom routines, children may use the calendar and weather charts and record numbers of books read.
- In language arts, the fine arts, and physical education, they may find and create shapes, symmetry, rhythm, and patterns.
- In science, measuring, graphing, and applying the scientific method to number investigations all draw upon numeracy.
- Social studies draws upon numeracy for mapping and understanding how people use mathematics in their work.
- At home and in the community children use numeracy when they play games and consider probabilities, such as whether it will rain.

Creating classroom settings that encourage meaningful dialogue and discussions calling for higher order thinking will encourage mathematical sense-making. The following principles characterize children's mathematical activity when sense-making is a priority:

- **demonstrating positive attitudes**
  Children show curiosity and a disposition to make sense of mathematical situations and relationships. They have the confidence to try out their ideas, and take pride in their mathematical accomplishments.
- **problem-solving**
  Children think through problems, persevere when they are stuck, flexibly draw on a range of alternative problem-solving strategies, and see themselves as capable thinkers and problem solvers.
- **communicating mathematically**
  Children represent mathematical situations in different ways, and describe them using language, pictures, symbols, models, and/or actions.
- **connecting and applying mathematical ideas**
  Children make connections between real life and school mathematics, between different topics in mathematics (e.g., money and place value), and between mathematics and other curriculum areas.
- **reasoning mathematically**
  Children readily use what they know about mathematics to figure out what they don't know (e.g., if 25 + 25 is 50, then 24 + 24 will be 2 less than 50). Students use estimation strategies and mental arithmetic as part of their reasoning processes.
- **using technology**
  Children use models such as place value blocks to make sense of multi-digit number situations, calculators to focus on problem solving, and computers to study patterns and relationships.

# Interpreting Provincial Curriculum

## Foundation statements and learning descriptors

The task of transforming the information in the IRPs into a comprehensive plan for learning can seem overwhelming. Looking at each IRP individually has led some teachers to ask, "Where do I start?" This section will assist teachers in bringing clarity and coherence to the many learning outcomes in the following ways:

- by explaining the relationship among learning outcomes, the Primary Program foundation statements, and the related learning descriptors (see page 59);
- by describing the developmental perspective on curriculum; and
- by outlining strategies for integrating the curriculum.

The Primary Program foundation statements and learning descriptors provide a cross-curricular organization of prescribed learning outcomes according to key areas of student development. While the foundation statements describe each area of development, the learning descriptors summarize the common intention of several prescribed learning outcomes from different subject areas. Appendix B provides charts listing all prescribed learning outcomes for all Kindergarten to Grade 3 subject areas. On these charts, the outcomes are grouped according to areas of development. The following pages outline the foundation statements and learning descriptors used in those charts.

The foundation statements and learning descriptors categories were arrived at by grouping and regrouping prescribed learning outcomes until all were incorporated in logical and meaningful ways. As determined by the ministry's *Review of Outcomes Project*, teachers' global perspectives on learning provided one key source of information. About 50 practising teachers in 13 districts within the province took part in the project, which identified "big ideas" around which outcomes in the seven subjects taught in the Primary Program can be grouped. The teachers' list included these themes:

- ✓ love of learning,
- ✓ thinking processes,
- ✓ communication skills,
- ✓ numeracy,
- ✓ basic academic skills (e.g., science principles),
- ✓ personal development (e.g., self-confidence, positive self-image, independence, risk taking),
- ✓ interpersonal skills (e.g., ability to work co-operatively with others),
- ✓ social responsibility,
- ✓ aesthetics and enthusiasm for the arts,
- ✓ positive work habits and organizational skills.

Other key sources of information were:

- the foundation statements presented in the 1990 *Primary Program: Foundation Document*,
- the curriculum organizers of each IRP,
- performance standards (e.g., in Social Responsibility), and
- descriptions of literacy and numeracy development from professional organizations such as the International Reading Association and the National Council of Teachers of Mathematics.

Appendix B provides charts listing all prescribed learning outcomes for all Kindergarten to Grade 3 subject areas. On these charts, the outcomes are grouped according to areas of development.

Teachers who are interested in exploring comprehensive approaches to curriculum may find it useful to obtain a copy of the *Review of Outcomes Project* from the Ministry of Education.

## An Example of Relationships among Areas of Development, Foundation Statements, Learning Descriptors, and Learning Outcomes*


### PRIMARY PROGRAM FOUNDATION STATEMENTS

***A variety of experiences enable the child to:***

- **develop strategies to facilitate thinking and learning**

### PRIMARY PROGRAM LEARNING DESCRIPTORS

***A variety of experiences enable the child to:***

- **use strategies to identify, clarify, and address problems and issues**

***A variety of experiences enable the child to:***

- **categorize information, ideas, events, and objects according to specific criteria**

### LEARNING OUTCOMES

**Grades K–1**
*It is expected that students will:*

- suggest questions for investigations (Science)
- identify problems (Personal Planning)
- identify and clarify a problem or issue (Social Studies)
- identify strategies to address problems (Social Studies)

**Grades 2–3**
*It is expected that students will:*

- use various strategies for generating questions (English Language Arts)
- identify various ways to respond to and solve problems (Personal Planning)
- identify an issue and provide several reasons to support a position (Social Studies)
- identify and implement strategies to address class problems or projects (Social Studies)

### LEARNING OUTCOMES

**Grades K–1**
*It is expected that students will:*

- sort information, including ideas, details, and events obtained from a variety of sources (English Language Arts)
- sort objects to one attribute chosen by themselves or the teacher (Mathematics)

**Grades 2–3**
*It is expected that students will:*

- organize details and information to make simple charts, webs, or illustrations (English Language Arts)
- sort and organize data by one of more attributes and by using graphic organizers such as lists and charts (Mathematics)
- identify patterns and groupings to draw conclusions from information (Science)

* as organized in Appendix B (p. 205)

**Learning Descriptors**

# AESTHETIC AND ARTISTIC DEVELOPMENT

*A variety of experiences will be provided that enable the child to:*

develop enthusiasm and appreciation for the arts

- participate in the arts
- show appropriate performance skills and audience etiquette
- be aware of various art forms, and various purposes for artworks
- give reasons for preferences in artworks and literature

communicate through the arts

- apply artistic elements and principles to create original artworks or specific effects
- create patterns and images for self-expression and to represent his or her world
- use a variety of materials, tools, equipment, and processes to create artworks

respond to the arts in imaginative ways

- recognize the elements and principles of the art form in a specific work
- identify the expressive elements in a work of art
- respond to artworks in personal ways

NATURE OF THE LEARNER

- ✓ **unique**
- ✓ **a natural explorer, creator, inventor**
- ✓ **enjoys rhythm and movement**
- ✓ **uses all the senses**
- ✓ **responsive**
- ✓ **enthusiastic**
- ✓ **has a vivid imagination**
- ✓ **is inquiring**
- ✓ **enjoys socio-dramatic play**
- ✓ **enjoys using a variety of media**

# EMOTIONAL AND SOCIAL DEVELOPMENT

NATURE OF THE LEARNER

- ✓ **unique**
- ✓ **talkative**
- ✓ **friendly**
- ✓ **social**
- ✓ **sensitive**
- ✓ **likes to please**
- ✓ **is learning to co-operate and collaborate**
- ✓ **egocentric, moving toward socio-centric**
- ✓ **dependent on adults**
- ✓ **needs reassurance**
- ✓ **resolves inner conflicts through play and language**
- ✓ **finds pleasure in routines**
- ✓ **seeks help from adults**

*A variety of experiences will be provided that enable the child to:*

develop a positive and realistic self-concept

- identify his or her personal attributes, skills, and successes
- show self-confidence

develop independence

- set goals and feel satisfaction in accomplishments and efforts
- make thoughtful choices and accept responsibility for decisions
- be aware of the influence of others on her or his attitudes and values

share, co-operate, and learn from others

- communicate a range of feelings and ideas
- interact and co-operate with others
- develop and maintain friendships

**Learning Descriptors**

# INTELLECTUAL DEVELOPMENT

*A variety of experiences will be provided that enable the child to:*

develop strategies to facilitate thinking and learning

- use strategies to identify, clarify, and address problems and issues
- categorize information, ideas, events, and objects according to specific criteria
- compare and contrast information, ideas, objects, and concepts
- reflect on her or his work and assess accomplishments
- predict and experiment to extend understanding

develop an awareness of the nature and purposes of language and literacy

- be aware of himself or herself as a user of language
- understand the different purposes and uses of language
- understand the nature of oral and written language

develop listening and speaking abilities

- participate willingly in activities requiring listening and speaking
- orally convey feelings, ideas, and information
- listen to make meaning from ideas and information

develop reading and viewing abilities

- show interest and enjoyment in reading and viewing
- use various strategies and approaches to reading
- read with comprehension and accuracy
- respond to and analyse what is read

develop writing and representing abilities

- show interest and enjoyment in writing and representing
- write and represent to convey feelings, ideas, and information
- apply standard conventions when writing

develop information processing abilities

- identify information needs; and locate and gather information
- organize and analyse information
- present information

NATURE OF THE LEARNER

- ✓ **is curious about the world**
- ✓ **a natural explorer and inventor**
- ✓ **thinks differently from adults**
- ✓ **learns through play**
- ✓ **learns through social interaction**
- ✓ **learns through engagement in meaningful experiences**
- ✓ **is developing thinking skills**
- ✓ **represents knowledge in different ways**

# INTELLECTUAL DEVELOPMENT

- ✓ clarifies and extends thinking through language
- ✓ uses language to communicate
- ✓ is developing language and literacy concepts and skills
- ✓ is developing numeracy concepts and skills
- ✓ is developing ability to reflect and regulate own learning
- ✓ is developing understanding of the world

## develop number sense

- use numbers to describe quantities
- read and represent numbers in a variety of ways
- understand and develop proficiency with calculations
- first describe and then use arithmetic operations to solve problems

## develop spatial sense

- use direct or indirect measurement to describe and compare in "real-world" situations
- describe and construct 3-D objects and 2-D shapes and analyse the relationships among them
- perform, analyse, and create transformations

## develop statistical sense

- collect, display, and analyse data to make predictions
- use probability to represent and solve problems involving uncertainty

## develop a sense of relationships and patterns

- use patterns to describe the world around them and to solve problems

## develop an understanding of the world around them

- understand the natural world
- understand the physical world
- understand the social and political world
- understand information technology and be willing to use information technology tools

**Learning Descriptors**

# PHYSICAL DEVELOPMENT AND WELL-BEING

*A variety of experiences will be provided that enable the child to:*

learn and practice safety

- identify the characteristics that make a situation safe or unsafe
- identify and use basic principles of safety in the home, at school, and in the community
- handle equipment and materials safely
- use strategies for moving safely, depending on the situation

take care of and respect her or his body

- be aware of good nutrition
- develop motor skills while maintaining physical fitness
- apply specific motor skills
- understand and follow a healthy lifestyle
- identify changes in personal growth and development

develop an appreciation and enjoyment of movement

- show interest and enjoyment in physical activity
- describe the benefits of physical activity

NATURE OF THE LEARNER

- ✓ **unique**
- ✓ **active**
- ✓ **energetic**
- ✓ **muscles still developing**
- ✓ **needs mobility**
- ✓ **learns by handling things**
- ✓ **is developing gross and fine motor skills**

# DEVELOPMENT OF SOCIAL RESPONSIBILITY

NATURE OF THE LEARNER

- ✓ **unique**
- ✓ **social**
- ✓ **willing to help**
- ✓ **impressionable**
- ✓ **develops autonomy through play**
- ✓ **has heightened awareness of individual differences**
- ✓ **eager to assume responsibility**

*A variety of experiences will be provided that enable the child to:*

value and respect diversity and the contributions people make to their communities

- show respect for the contributions of self and others
- value and respect cultural identity and heritage
- tell how families can be similar and different

contribute to a collaborative environment

- know and act on rights and responsibilities
- take responsibility for a shared social environment

develop an awareness of the roles and responsibilities of a member of a community

- identify the purpose and functions of family, school, and community
- respect and care for the environment
- recognize the role of work
- adapt to a changing world

## A developmental perspective on learning outcomes

The provincial curriculum provides a focus to engage children in learning experiences rather than providing a list of items to be "covered." Each curriculum area allows teachers to address children's development. Some aspects of development are addressed primarily through one subject. For example, the fine arts curriculum is central to children's aesthetic and artistic development. Other aspects of development, such as intellectual development, are enhanced through all curriculum subjects and opportunities to make cross-curriculum connections.

Learning outcomes at the primary level are intended to reflect the developmental nature of learning. Teachers should view the clustered learning outcomes as a continuum, recognizing that children are learning the skills and processes that will provide the foundation for ongoing learning. Children need time to construct their knowledge and refine their abilities within and among the curriculum areas.

The developmental, continuous nature of the learning outcomes in the IRPs is demonstrated in three ways:

1. through the curriculum organizer, the broad or general learning outcome statement (where there is one), and, in some cases, the language of the learning outcomes;
2. by the grouping of outcomes at the primary level into grade clusters rather than separate grades; and
3. through the recurrence of similar outcomes within each grade cluster.

As they interpret the curriculum, effective teachers take account of developmental stages toward attainment of outcomes, the degree to which an outcome should be emphasized at a particular time within the two-year grade cluster period, and the increasing complexity within outcomes.

### DEVELOPMENTAL STAGES IN ACHIEVING OUTCOMES

In interpreting curriculum, it is important for teachers to recognize that there may be developmental stages or a progression of steps toward the attainment of a particular learning outcome. The following learning outcome from the English Language Arts curriculum at the K–1 level is used as an example.

---

**Communicate ideas and information**
*(Knowledge of Language):*

- use conventional spelling for some of the words they use in their writing

---

Research shows that the development of conventional spelling progresses through a series of stages, moving from letters and letter-like shapes that may not be associated with specific speech sounds, to single consonants, to "invented spellings" with increasingly more speech sounds represented, to inclusion of conventional spellings, to increasing proportions of invented spellings (Templeton & Morris 1999).

Many early primary children will be in the earlier stages of spelling development and may not use conventional spellings in their written work. This is appropriate. It is more important to emphasize developing an understanding of the spelling system rather than conventional spellings of particular words (Rosencranz 1998; Templeton & Morris 1999). (See Chapter 6, Enhancing Children's Growth in Language and Literacy, for further information.)

Teachers should view the clustered learning outcomes as a continuum, recognizing that children are learning the skills and processes that will provide the foundation for ongoing learning.

In interpreting curriculum, it is important for teachers to recognize that there may be developmental stages or a progression of steps toward the attainment of a particular learning outcome.

In interpreting the learning outcomes from a developmental perspective, effective teachers will take into account common patterns in the progression of learning, the developmental characteristics of particular children, and the standards set out in *B.C. Performance Standards*, 2000. Where students appear to experience difficulties achieving outcomes and meeting expected standards, teachers may need to intervene to provide support and remediation. For further information, see "Policies and Structures That Promote Success for All Students" in Chapter 4, Teachers and Teaching.

## DEGREE OF EMPHASIS ON PARTICULAR OUTCOMES

While learning outcomes are allocated to a particular grade cluster, keep in mind that not all outcomes are emphasized throughout the two-year period. The following learning outcome from English Language Arts, K–1, is used as an example.

**Comprehend and respond**
*(Knowledge of Language):*

- demonstrate an awareness of upper- and lower-case letters and of punctuation in written work

In many cases, this outcome might not be emphasized in the early part of Kindergarten, although it may be introduced if children are ready. Depending on the abilities of the children, a teacher might begin to focus more on upper- and lower-case letters and punctuation in the latter half of the Kindergarten year. Teachers of Grade 1 students would find this learning outcome a suitable emphasis for most of their students. By the end of Grade 1, it would be appropriate to expect most children to attain this outcome.

## INCREASING COMPLEXITY WITHIN OUTCOMES

In some curricula, learning outcomes represent content to be understood or specific skills to be mastered at the end of a two-grade cluster. In other cases, learning outcomes represent abilities that people continue to develop throughout their lifetimes. This is particularly the case with process outcomes. The following example from English Language Arts, Grades 2–3, illustrates this point.

**Comprehend and respond**
*(Critical Analysis):*

- offer direct responses to their reading, listening, or viewing experiences supported by reasons, examples, and details

The ability to respond to reading, listening, or viewing deepens and expands through the school years and beyond — it is never "mastered." What changes over time is the complexity, sophistication, and depth of response as well as the type of material one is able to respond to. As teachers interpret the learning outcomes, they need to take into account the context and complexity of students' learning.

# Models of Curriculum Integration

The main purpose of curriculum integration is to enhance students' learning and the making of thoughtful connections.

*There are many appealing strengths to the idea that learning should be organized around authentic problems and projects that are frequently encountered in non-school settings: in John Dewey's vision, "School should be less about preparation for life and more like life itself."*

— National Research Council 1999, p. 63

As well as coming to understand the ways of thinking, communicating, and participating within the context of each school subject, children need opportunities to see connections among them. To achieve this, teachers may integrate thinking and communicating processes across the curriculum and use a variety of approaches to integrate the curriculum. The main purpose of curriculum integration is to enhance students' learning and the making of thoughtful connections. Thus, teachers may choose to integrate two or more subjects (such as mathematics and the visual arts) or may include all or most curriculum areas, depending on their purpose and context.

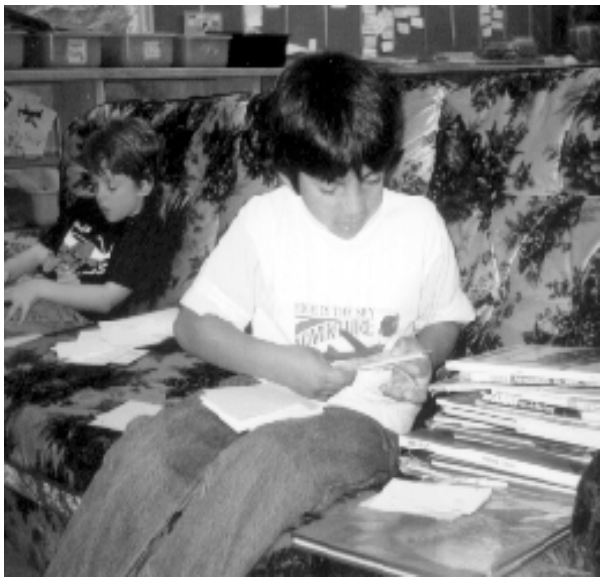
Current understanding of curriculum integration has evolved beyond theme-based studies. The following chart provides a sample of some approaches to curriculum integration and a brief list of professional resources for teachers who want to learn more about them.

## Approaches to Curriculum Integration

| | |
|---|---|
| **THEME-BASED LEARNING**<br>This approach uses themes (from topics such as "communities" or "winter," to big ideas such as "change" or "caring for our environment") to unify learning experiences. | Davies, A., Politano, C., & Cameron, C. (1993). *Making themes work.* Winnipeg, MB: Peguis.<br>Jacobs, H. H. (1993). Integrating the curriculum (video recording). *Video journal of education.* Fountain Hills, AZ: Linton Productions in association with the National Center for Outcome Based Education.<br>Tchudi, S. (1991). *Travels across the curriculum: Models for interdisciplinary learning*. Richmond Hill, ON: Scholastic. |
| **PROJECT-BASED LEARNING**<br>This approach applies Dewey's "learning through doing" as a way of integrating thinking processes, problem solving, and the use of a variety of tools and technologies to research, design, and create products. | Barron, M., & Young, K. (1996). *Ready, set, explore.* New York: J. Wiley & Sons.<br>Bennet, N., Wood, L., & Rogers, S. (1997). *Teaching through play: Teachers' thinking and classroom practice.* Buckingham, PA: Open University Press.<br>Bodrova, E., & Leong, D. (1996). *Tools of the mind: The Vygotskian approach to early childhood education.* Englewood Cliffs, NJ: Merrill.<br>Katz, L., & Chard, S. (1989*). Engaging children's minds: The project approach.* Norwood, NJ: Ablex. |

## Approaches to Curriculum Integration

| | |
|---|---|
| **INQUIRY-BASED LEARNING**<br>Individual students' questions or "focus questions" and "critical challenges" developed collaboratively by teachers and students are used to focus a unit that engages students in inquiry across the curriculum. Social studies and science are often starting points for inquiry-based learning. | Jacobs, H. H. (1993). Integrating the curriculum (video recording). *Video journal of education.* Fountain Hills, AZ: Linton Productions in association with the National Center for Outcome Based Education.<br>Lindfors, J.W. (1999). *Children's inquiry: Using language to make sense of the world*. New York: Teachers College Press; Urbana IL: National Council of Teachers of English.<br>McDiarmid, T., Manzo, R., & Musselle, T. (1996). *Critical challenges for primary students. Critical challenges across the curriculum series: Volume 2.* R. Case & L. Daniels (Eds.). Vancouver, B.C.: The Critical Thinking Cooperative.<br>Short, K., Schroeder, J., Laird, J., Kauffman, G., Ferguson, M., & Crawford, K. (1996). *Learning together through inquiry.* York, ME: Stenhouse.<br>Wells , G., & Chang-Wells, G. (1992). *Constructing knowledge together: Classrooms as centers of inquiry and literacy*. Portsmouth, NH: Heinemann. |
| **LEARNING STYLES**<br>These models incorporate a variety of strategies to address different ways of learning within a classroom to enable more students to be successful. | Dunn, R., & Dunn, K. (1992). *Teaching elementary students through their individual learning styles: Practical approaches for grades 3–6.* Boston, MA: Allyn & Bacon.<br>McCarthy, B. (1987). *The 4MAT system: Teaching to learning styles with right/left mode techniques*. Barrington, IL: EXCEL. |
| **MULTIPLE INTELLIGENCES**<br>Similar to learning styles, this model incorporates ways of using different forms of intelligence to address diversity in ways of learning. | Armstrong, T. (1993). *Seven kinds of smart: Identifying and developing your many intelligences*. New York: Plume (Penguin).<br>Gardner, H. (1993). *Multiple intelligences: The theory in practice.* New York: Basic Books.<br>Gardner, H. (1991). *The unschooled mind: How children think and how schools should teach.* New York: Basic Books.<br>Lazear, D. (1991). *Seven ways of knowing: Teaching for multiple intelligences*. Palatine, IL: Skylight Publishing.<br>Nicholson-Nelson, K. (1998*). Developing students' multiple intelligences.* Toronto, ON: Scholastic. |
| **KNOWLEDGE FRAMEWORK**<br>Knowledge structures and key visuals are used as techniques for integrating language and content for ESL learners (with possibilities for application to students with special needs and FSL learners). | Vancouver School Board (1992). *Integrating language and content: A planning guide for teachers K–12.* Vancouver, B.C.: Vancouver School Board. |
| **LITERATURE-BASED LEARNING**<br>This approach uses children's literature as a starting point for integration. Teachers select particular books or use a story line or plot to develop a sequence for teaching a unit of study. | Egan, K. (1986). *Teaching as story telling: An alternative approach to teaching and curriculum in the elementary school.* London, ON: Althouse Press.<br>Jobe, R. (1993). *Cultural connections: Using literature to explore world cultures with children*. Markham, ON: Pembroke.<br>McEwan, H., & Egan, K. (Eds.) (1995). *Narrative in teaching, learning and research*. New York: Teachers College Press.<br>Millet, M., & Lee, M. (1998). *Books you can count on.* Toronto, ON: Scholastic.<br>Moen, C. (1991). *Teaching with Caldecott books: Activities across the curriculum.* Toronto, ON: Scholastic. |
| **GENRE-BASED LEARNING**<br>Genres are used as a framework for thinking and communicating across the different curriculum areas. | Chapman, M. L. (1997). *Weaving webs of meaning: Writing in the elementary school.* Toronto, ON: ITP Nelson.<br>Chapman, M. L. (1999). Situated, social, active: "Rewriting genre" in the elementary classroom. *Written Communication,* 16(4), 469–490. |



## Summary: Curriculum and Context

The learning outcomes are presented according to the five key developmental areas: aesthetic and artistic, social and emotional, intellectual, physical development and well-being, and social responsibility. As outlined in Integrated Resource Packages, they appear in grade clusters and by subject. *The Primary Program*, with its use of foundation statements and learning descriptors, offers a helpful cross-curricular organization of the prescribed outcomes.


# Teachers and Teaching

## Key Points in This Chapter

- Teachers play a central role in enhancing children's development and learning: creating enriched learning environments, designing and implementing learning experiences, and providing instruction.
- Teachers apply the principles of learning and developmentally appropriate practices to meet the needs of diverse learners.
- Teachers address learner diversity through the use of a range of instructional strategies that are learner-centred, open-ended, flexible, and developmentally appropriate, including explicit teaching and the use of varied groupings for differing purposes.
- Ongoing assessment and evaluation are an important part of the instructional process.
- Effective instruction may help prevent or minimize the effects of potential learning difficulties.
- Early and appropriate interventions help address the learning needs of children who experience difficulty and are more effective than retention or social promotion; together with support for students with special learning needs, intervention can increase the likelihood of success for all students.

# The Role of the Teacher

*Teachers organize learning to accommodate the full range of children's interests, learning needs, and diverse social backgrounds.*
*— From The Kindergarten to Grade 12 Education Plan, 1994*

TEACHERS PLAY A CENTRAL ROLE IN enhancing children's development and learning. They create enabling learning environments and design and implement learning experiences and activities that engage children, and provide instruction and other kinds of support so that students can become independent and interdependent learners. Teachers collaborate with other professionals, auxiliary school personnel, and also with children and their parents to plan, create, and sustain a safe climate in which children can work harmoniously, creatively, and productively.

Teachers address the needs of diverse learners by applying the three principles of learning and the principles that inform developmentally appropriate practice (see Chapter 2, Learners and Learning). "Good first teaching for all children" (Fountas & Pinnell 1996) promotes successful learning and may prevent potential learning difficulties, especially in the core learning areas of literacy, numeracy, and social responsibility.

Teachers focus on the learning of individual children through ongoing assessment and evaluation that considers what is known about children's development and their achievement in relation to *B.C. Performance Standards*, 2000. Effective teaching uses information gained through a comprehensive plan of assessment and evaluation to make thoughtful, informed instructional decisions and to design interventions as required. Early identification of learning needs and interventions in ways that are developmentally appropriate and meaningful to children lead to greater success in school and beyond.

## SUPPORTING POSITION STATEMENT

### Teaching to Enhance Development and Learning

- Teachers respect, value, and accept children and treat them with dignity at all times.
- Teachers make it a priority to know each child well.
- Teachers create an intellectually engaging, responsive environment to promote each child's learning and development.
- Teachers make plans to enable children to attain key curriculum goals across various disciplines, such as language arts, mathematics, social studies, science, art, music, physical education, and health.
- Teachers foster children's collaboration with peers in interesting, important enterprises.
- Teachers develop, refine, and use a wide repertoire of teaching strategies to enhance children's learning and development.
- Teachers facilitate the development of responsibility and self-regulation in children.

— National Association for the Education of Young Children (1996), pp. 2–3

## Teaching as a collaborative process

While the classroom teacher has the prime responsibility for his or her own classroom, teachers may work with other educators and auxiliary school personnel. Together, the members of the school community provide a support system for enhancing children's development and learning. Teachers may, for example,

- plan and teach collaboratively with teacher-librarians to help children learn how to access, select, and use learning resources;
- consult with the school-based team, including school administrators, learning assistance teachers, school psychologists, speech-language specialists, para-professionals, parents, and others, to identify potential learning difficulties and design appropriate interventions for particular children; and
- work collaboratively with learning assistance teachers, ESL teachers, and school counsellors who provide additional support for some children.

Auxiliary school personnel generally assist the teaching and administrative staff in the performance of duties. They may be trained and certified and have specialist knowledge and expertise in defined areas. Their roles include those of teacher aides, school assistants, library aides, supervision aides, and child-care workers. The duties and expectations of auxiliary school personnel are determined by each school district. (For further information, teachers can refer to the information provided by the school district in which they teach.)

Teachers may invite people from the wider community into the classroom to enrich children's learning experiences. Visitors might include parents, elders and other volunteers from the local community, resource people from a variety of organizations, students in other classrooms within the school ("buddies"), and students in other levels of education. Children learn through interactions with their teacher and other adults — and from each other.

As well, teachers provide opportunities for children to learn in the larger community. Collaboration between children and others provides benefits for those who participate. It also promotes greater awareness and mutual appreciation between the school and community.

Children learn through interactions with their teacher and other adults — and from each other.

**Teachers' responsibilities**

17. (1) A teacher's responsibilities include designing, supervising and assessing educational programs and providing instruction to individual students and groups of students.

[ … ]

**Teachers' assistants**

18. (1) A board may employ persons other than teachers to assist teachers in carrying out their responsibilities and duties under this Act and the regulations.

(2) Persons employed under subsection (1) must work under the general supervision of a teacher or administrative officer.

— *School Act* (1998)

# Enriched Learning Environments

Although it is primarily located in the classroom, the learning space extends beyond its walls to the library resource centre, the gymnasium, the computer lab, and the playground.

*A good environment is not a luxury but a necessity during the early years of life. It is important to know that it is good to talk to a child, that young children need to play and explore, that experience of touch, sound and sight are vital, that memory and imagination are important for development, that a broad curriculum which teaches a child to notice and to think is crucial and that … the affectionate care of adults whom a child can trust and [who can] set standards are essential.*

— Brierley 1994, p. 3

One of a teacher's most important tasks is establishing an environment that promotes children's learning and development in all areas. The environment enables children to learn effectively, and work and play independently and collaboratively. Although it is primarily located in the classroom, the learning space extends beyond its walls to the library resource centre, the gymnasium, the computer lab, and the playground. It may also extend to the local community, taking in the public library, community heritage sites, cultural centres, science centres, and sports centres. Constructing the learning environment is a dynamic, ongoing process of decision making throughout the school year.

An environment that fosters thoughtful learning emphasizes the development and expression of ideas rather than focusing on surface features or correctness. It focuses on possibilities as well as problems. The learning environment captures children's natural curiosity, enables them to build on their prior knowledge, and allows them to acquire

## research directions

### ENRICHED ENVIRONMENTS

Brain structures are modified by the environment. All environments, including the classroom, are not neutral places. The brain does not take in meaningless data. An enriched environment provides opportunities for students to make sense out of what they are learning and addresses multiple aspects of development simultaneously (Wolfe and Brandt 1998). Diamond and Hopson (1998) found that enriched environments influence the brain's growth and learning. An enriched environment for children

- includes a steady source of positive emotional support
- provides a nutritious diet with enough protein, vitamins, minerals, and calories
- stimulates all the senses (but not necessarily all at once)
- has an atmosphere free of undue pressure and stress but suffused with a degree of pleasurable intensity
- presents a series of novel challenges that are neither too easy nor too difficult for the child at his or her stage of development
- allows social interaction for a significant percentage of activities
- promotes the development of a broad range of skills and interests that are mental, physical, aesthetic, social, and emotional
- gives the child an opportunity to choose many of his or her efforts and to modify them
- provides an enjoyable atmosphere that promotes exploration and the fun of learning, and
- allows the child to participate actively rather than observe passively. (pp. 107–108)

## The Complex Dimensions of an Enriched Environment

**Access to and use of a variety of materials and resources that allow children to use all their senses, for example:**

- manipulative materials, such as blocks, clay, and "found" materials
- paints, crayons, and other materials for imagining and creating through the visual arts
- musical instruments and other things that can create sound
- puzzles, games, cards, clocks, rulers, and base-10 blocks
- songs, rhymes, poems, stories, and word plays
- classroom libraries stocked with a variety of reading materials, including fiction and non-fiction books, poetry, magazines, "big books," and class-made books
- learning centres related to mathematics, social studies, science, integrated themes, etc.
- learning centres that integrate literacy, numeracy, and play (including dramatic)
- computers and related technologies

**Opportunities to participate as a member of the classroom learning community, for example:**

- showing respect to and being shown respect by classmates and the teacher
- building and maintaining friendships
- taking responsibility for one's own learning and contributing to the learning of others
- taking care of one's own belongings and those of the school
- showing appreciation for the contributions of others
- making appropriate choices
- participating in collaborative decision making, such as the "class promise" at the beginning of the school year

**Physical and emotional safety**

- materials, space, and equipment designed with children's physical safety in mind
- a positive, supportive, caring, and inclusive atmosphere that creates a feeling of belonging
- modelling and demonstration of appropriate social interactions and behaviour by adults
- an atmosphere that allows children to make mistakes as part of learning
- routines and expectations that are predictable, yet allow for flexibility

**Time and opportunities for diverse learning experiences, such as:**

- exploring and playing with materials that allow children to use all their senses and their imagination
- exploring and playing with language, literacy, and numeracy (e.g., role-play, dominoes, games with numbers)
- engaging in appropriately challenging activities related to all curriculum areas
- representing in a variety of ways (e.g., through music, movement, drama, visual arts, 2-D and 3-D models, writing)
- interacting with children and adults — to talk, share, co-operate, and collaborate
- reflecting with others and alone — to use and apply critical thinking skills and enhance metacognition
- working and learning independently, to set personal goals, make choices, and take initiative
- instructing, such as modelling, demonstration, explicit instruction
- support, guidance, and feedback

Legislation provides for the use of either provincially recommended or district-approved learning resources.

knowledge and skills in meaningful and appropriately challenging ways. An intellectually stimulating environment allows students to engage in such varied activities as exploring, interacting, thinking critically, reflecting, playing imaginatively, and representing ideas in varied ways. An essential attribute in any intellectual pursuit is the element of play, of trying things out this way and that, exploring what happens with different techniques or arrangements. Playing with ideas and words is a hallmark of intellectual life.

Teachers try to ensure equal learning opportunities for all children by

- using resources that depict different cultures and that show both women and men in non-traditional roles;
- using inclusive language and conveying consistent messages about gender equity through expectations for classroom behaviour and play and structuring of learning activities;
- questioning and coaching girls and boys with the same frequency, specificity, and depth;
- inviting and encouraging all children to participate in all activities; and
- arranging the environment to foster participation for children with physical disabilities.

"Much of the material and equipment used in play and more formal work contributes to the development of simple scientific and mathematical ideas. Woodwork, waste materials and play with blocks will promote awareness of shape, size and relationship of one piece to another; use of balances and scales helps to develop concepts of 'heavy' and 'light' while everyday observations — the hands of a clock turning through angles, calendars — promote mathematical ideas … Just as early practical experience is crucial for progress in science, early experience of number relationships by doing may be especially important for girls" (Brierley 1994, pp. 62–63).

## Resources in the learning environment

Teachers are expected to use their professional judgment in selecting learning resources, to ensure that any materials used in their classrooms have merit and relevance. For most purposes there exists a wide variety of titles to choose from, as legislation provides for the use of either provincially recommended or district-approved learning resources. Provincially recommended resources (including those listed in Appendix B of the Integrated Resource Packages) have been through a rigorous provincial review process. District-approved resources, including any new resource a particular teacher might like to use with students, are likewise subject to a board-approved review process. School boards are ultimately responsible for the use of any particular resource in a classroom within their district. Teachers will want to be familiar with their district policies on selection and challenge of learning resources.

The Ministry of Education has consulted experienced teachers to identify "Grade Collections" for each subject. Each Grade Collection lists the recommended resources that match the greatest number of learning outcomes for that grade (or grade cluster, at the primary level) and subject. Teachers do not have to use Grade Collections, as these have been created solely to provide assistance and advice. As with any provincially recommended resource, opportunities are provided for teachers to review Grade Collection resources before making decisions about their use.

Effective teachers use a variety of resources. Doing so enables them to address diversity within the classroom and meet the various developmental needs of young children. Resources include computers, software, on-line services, video, CD-ROMs, audiotapes, and manipulatives, as well as non-fictional and fictional books. When effective

teachers choose resources for particular purposes, they consider the advantages of various types of media, knowing that some students learn better from one medium than another. They also take account of the fact that some topics may be best taught using a specific medium. Video, for example, might be the best way to teach an observable skill to many children, while print resources may be best used to provide extensive background information on a given topic.

For more information about recommended learning resources, see the Ministry Web site (www.bced.gov.bc.ca/irp_resources) or refer to the publication *Evaluating, Selecting, and Managing Learning Resources.*

## The role of the library resource centre

Since information is vital in the development of critical thought and independent decision making, students need access to the ever-increasing body of available information (Association of Teacher Librarianship in Canada and the Canadian School Library Association 1997).

An effective school library resource centre program promotes the development of lifelong independent learners. The teacher-librarian, as director of the school library resource centre, supports the major goal of lifelong, independent learning in three key ways:

- **providing reading/learning materials**

  School libraries that supply extensive learning resources and reading materials enhance children's achievement across the curriculum and promote literacy development. The teacher-librarian can select and recommend materials to support instruction in the classroom in developmentally and culturally appropriate ways and connect each child with the curriculum. Access to a rich library collection makes an important contribution to literacy development (Elley 1992; Krashen 1998; Lance, Wellborn, & Hamilton-Pennell 1993; McQuillan 1995; McQuillan 1998a). Because many low-income families cannot afford to purchase a lot of books, the school library is especially important for their children (McQuillan 1998b).

- **planning and implementing resource-based learning experiences**

  In resource-based learning, teachers and teacher-librarians co-operatively plan and teach inquiry-based units of study that further information processing skills. Teacher-librarians have a wide repertoire

When effective teachers choose resources for particular purposes, they consider the advantages of various types of media, knowing that some students learn better from one medium than another.

Teacher-librarians are skilled in accessing and evaluating information regardless of delivery system, book or computer, and providing leadership in the appropriate use of newer technologies.

of teaching strategies by virtue of their many co-operative experiences with teachers. Through these instructional partnerships, students benefit from increased opportunities for individual and small-group instruction, access to a wider range of resources than one teacher can normally provide, and exposure to multiple perspectives on a topic, a basis for critical thinking. Examples of such collaborative units can be found in *Literature Connections* (B.C. Ministry of Education 1991) and in each issue of *The Bookmark*, the journal of the British Columbia Association of Teacher-Librarians.

- **providing instruction in information literacy (how to seek, find, and evaluate information)**

  A more recent focus of school library resource programs is support of students' higher level thinking through information literacy. The *Students' Bill of Information Rights*, established by the Association of Teacher-Librarianship in Canada (ATLC) and the Canadian School Library Association (CSLA) (1997), and the *Information Literacy Standards for Students by the American Association of School Librarians* (American Librarian Association 1998) affirm the role of the school library as central to an information literate society. Teacher-librarians are skilled in accessing and evaluating information regardless of delivery system, book or computer, and providing leadership in the appropriate use of newer technologies (ATLC / CSLA 1998).

## The role of technology in the learning environment

Research from CSILE (Computer Supported Intentional Learning Environment), developed by Canadian researchers Marlene Scardamalia and Carl Bereiter from the Ontario Institute for Studies in Education, indicates that students who are provided with appropriate forms of computer-supported instruction excel in a variety of ways. These range from showing sophisticated insights about learning to performing better on standardized reading and language arts tests (Dahl and Farnon 1996, p. 92).

Technology has the potential to assist young children in their learning in many ways. For example, it may allow students to focus on words and ideas rather than the mechanical aspects of writing (Jones and Pellegrini 1996). For some children, however, word processing seems to interfere with their writing processes (Dahl and Farnon 1996). Software that is developmentally appropriate and educationally relevant can be teamed with other resources to enhance learning. Computers, like other types of technology, extend human capabilities. They provide tools such as e-mail and Internet browsers that enable people to send and receive sounds and images from around the world.

Using technologies actually transforms human consciousness and technology itself may transform people's ways of thinking and writing and ways of knowing and making meaning (Ong 1982).

Technologies such as computers can serve as creative tools that students use to communicate with others, explore ideas, and represent their ideas in various ways. Specific software applications need to be evaluated in relation to content and age suitability, biases, and stereotypes, like any other type of resource. The creative use of technology can

support a variety of learning styles in the primary classroom and in home learning.

There are also many ways in which technological tools can facilitate learning for primary students with special needs. Technology allows some students with special needs access to the curriculum. It can allow for expressive as well as written output for students who have communicative or physical disabilities. Word processing software, for example, is beneficial for children with learning disabilities (Morocco 1987, cited in Dahl & Farnon 1996).

K–12 teachers may find helpful information on integrating technology into their classrooms on the Community Learning Network (CLN) at http://www.cln.org/. For more information on the importance of technologies in supporting learning, see "Learning through technologies" in Chapter 2, Learners and Learning.

Specific software applications need to be evaluated in relation to content and age suitability, biases, and stereotypes, like any other type of resource.

# Developmentally Appropriate Teaching

Developmentally appropriate teaching fosters children's development in all areas rather than focusing narrowly on intellectual development or academic achievement.

*While academic environments sometimes may result in higher levels of achievement, this achievement may come at emotional costs to the child. Given that similar cognitive advantages also occur in child-initiated environments, it would seem beneficial to explore ways to communicate more effectively how cognitive development is enhanced through developmentally appropriate practices.*

— Dunn & Kontos 1997, p. 12

Developmentally appropriate teaching fosters children's development in all areas rather than focusing narrowly on intellectual development or academic achievement. While some instructional approaches increase academic achievement in particular areas over the short term (e.g., in recognizing words or recalling facts), it is more beneficial to take a broad perspective that considers all areas of development. Intellectual development is enhanced by practices that address the needs of the whole child.

Vygotsky's (1978) Theory of the Zone of Proximal Development provides a framework for thinking about developmentally appropriate practices. Teachers take into account two levels of development:

1. **the independent level** — the "can-do zone," which reflects a child's attained development with activities within children's abilities;
2. **the instructional level** — the "learning zone," which reflects a child's zone of proximal development which is *just beyond her or his attained level*; activities are appropriately challenging and attainable with support.

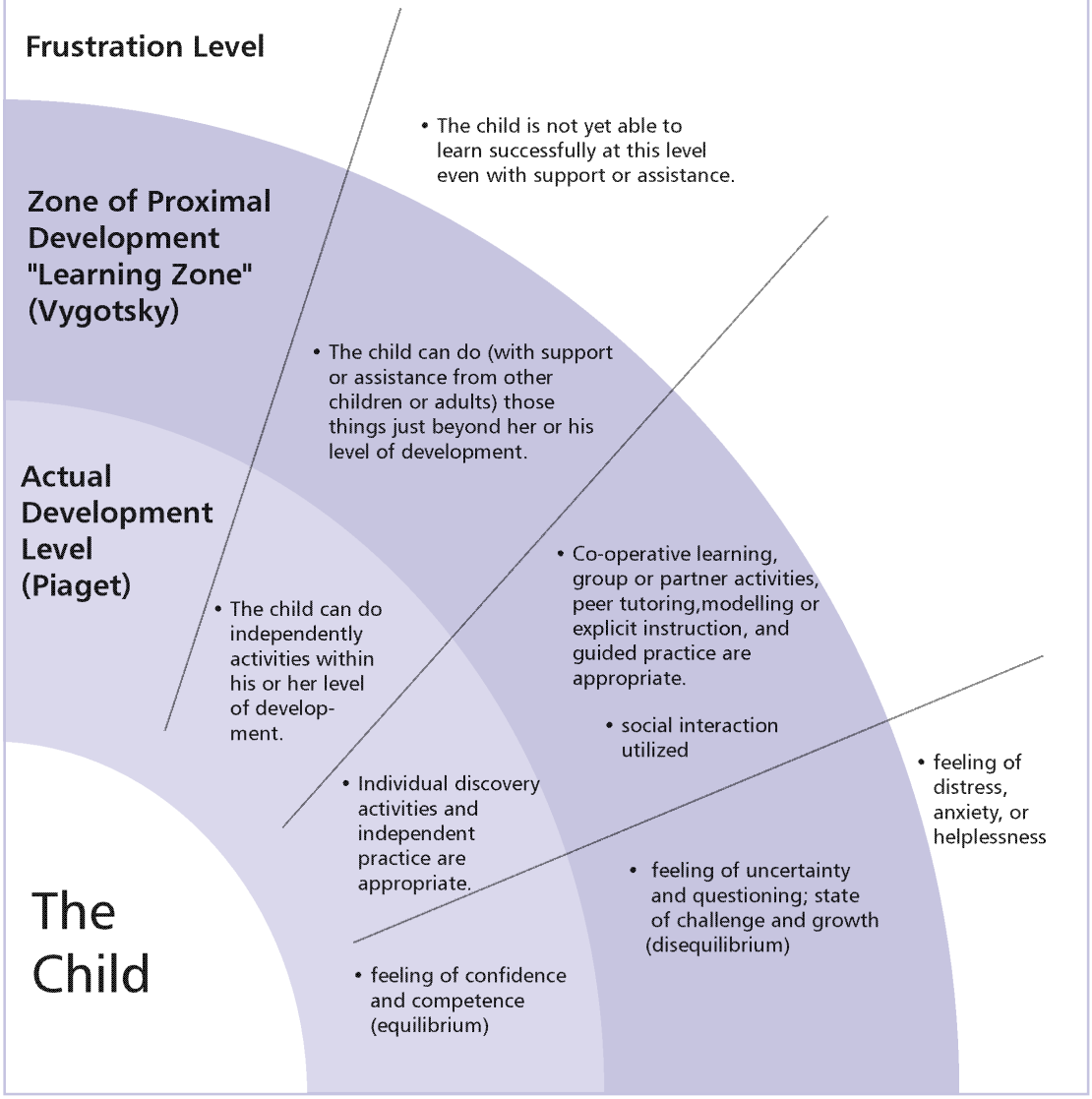
Effective teaching uses assessment and evaluation on an ongoing basis to determine children's independent and instructional levels. As teachers gather data, they consider how children are learning in relation to the learning context, type of task, and degree of support needed. Learners need experiences that are appropriately challenging so they can take risks and venture beyond what they can already do on their own.

- *Maximum* support may be provided through teacher-led activities, explicit instruction, or co-operative learning experiences. For some students and in particular situations, teacher or peer support is especially important in early stages of new learning. (This does not mean, however, that discovery learning or problem-based approaches cannot be used in learning new concepts, since learning can occur without directed activity.)
- *Moderate* support through small group or partner activities extends students' learning and provides guided practice. Some students may need continued teacher support in small group or individual mini-lessons; student tutors and teacher assistants may also provide support.
- *Minimal* support is provided when children are working at their independent levels because they already have the knowledge and skills to be successful. Experiences that call for "discovery learning" and independent practice activities are designed to be within children's independent levels so that all that is needed is encouragement and feedback.

The chart below shows the relationships between children's independent and instructional levels and how teachers may provide support toward independence.

Learners need experiences that are appropriately challenging so they can take risks and venture beyond what they can already do on their own.

## Support to Independence




With permission, M. Chapman

# Addressing Diversity

***Overall, learner-centered environments include teachers who are aware that learners construct their own meanings, beginning with the beliefs, understandings, and cultural practices they bring to the classroom. If teaching is conceived as constructing a bridge between the subject matter and the student, learner-centered teachers keep a constant eye on both ends of the bridge.***
**— National Research Council 1999, p. 124**

*Because culture and language are critical components of children's cognitive development, practices cannot be developmentally appropriate unless they are responsive to cultural and linguistic diversity.*

— National Association for the Education of Young Children (NAEYC) 1996

There is no "magic potion" that will, in itself, enable every learner to be successful (Allington & Walmsley 1995). Many causes of lack of achievement for individual children or particular groups of students are beyond the control of individual teachers or the educational system as a whole. There are, however, approaches which, taken together, can help more students realize their potential. Research shows the following:

- Culturally responsive teaching takes into account the social and cultural contexts in which children live and increases the likelihood of success. Learning experiences need to be meaningful, relevant, and respectful of children, their families and communities (NAEYC 1996).
- Teaching can make a difference, and some approaches and strategies enable more students to be successful within a classroom.
- There are some policies and structures that increase the potential for success for all students.
- Some students have learning needs that are best addressed through early identification and intervention with particular kinds of support.

## Teaching strategies that support diverse learners

All children enrich the culture of the classroom through the diversity of their origins, beliefs, values, and languages. Children come to school with a vast storehouse of knowledge, skills, and attitudes learned in their homes and communities. It is important to acknowledge and understand children's historical backgrounds, oral and literate traditions, and lifestyles.

Effective teachers build upon children's diverse cultural knowledge and weave it into the fabric of the school culture. They work with members of the local community to provide learning experiences so that students will see an accurate reflection of their society and history. Drawing on the local community also helps build stronger connections between home and school for children of diverse cultural backgrounds.

Developmentally appropriate teaching considers the whole child in context of family and community. Every classroom includes learners of various abilities, with different kinds of prior knowledge and experiences, learning interests and dispositions. While children with special learning needs may need Individualized Education Programs (IEPs), meeting the needs of each child does not entail an individualized program for each student.

Today's culturally and linguistically diverse classrooms mean developmentally appropriate teaching is also culturally and linguistically sensitive. These differences are taken into account in planning for instruction. Indeed, applying the principles of learning and of de-

velopmentally appropriate practice is even more critical for children who come from diverse backgrounds.

The chart below provides a variety of teaching strategies that support diverse learners within a classroom.

Developmentally appropriate teaching considers the whole child in context of family and community.

## Teaching Strategies That Support Diverse Learners

**Open-ended activities** are meaningful for all children because they can put to use their knowledge and skills in ways appropriate to their varying abilities. This strategy is particularly important whenever teachers want all children to do a related activity at the same time: open-ended activities are by nature multi-levelled. In open-ended activities, students are more motivated, spend more time on task, and are more engaged with their learning (Freppon 1995; Turner 1995). As a result, they need fewer interventions and reminders about their behaviour. Open-ended questions encourage risk taking and foster confidence, requisites for developing numeracy. Open-endedness can be achieved by allowing students some choice and control over the content, process, and/or form of the activity.

**Opportunities for choice** might include
- choosing whether to work independently or collaboratively,
- selecting from a range of options determined by the teacher,
- choosing how to respond to a shared experience, and
- determining topic or form of response.

**Flexible grouping** for different purposes might include
- individual, partner, small-group, and whole-class groupings,
- grouping by learning need or interest, and
- grouping by mixed-ability (e.g., co-operative and collaborative learning).

**Collaboration and co-operative learning** provide support before students are expected to work independently. Interaction with other children is critically important for ESL learners, since it helps them acquire communication skills.

**Integration of language and content** is particularly important for ESL students, whose need to learn academic language should be addressed specifically.

**Building connections** enables students to build on their existing knowledge and strengths and integrate new information. Teachers help students acquire a range of strategies for accessing prior knowledge, such as brainstorming, webbing, and Know-Wonder-Learned (KWL). They also seek ways to help students connect new learning to life experiences and to make connections across curriculum areas.

**Shared experiences/individual responses** allow children to respond in different ways, from a range of options, or choose their own form of response. Children are not obliged to respond in a uniform or standardized way.

**Variety in representations and genres** makes allowances for different learning styles and abilities and encourages children to try out new ways of learning and expressing ideas. Visual forms such as graphic organizers and key visuals decrease the language load in spoken and written activities. They are helpful for students who speak English as a second language or who are struggling with reading.

**Opportunistic teaching and reteaching** help children make connections with what they have learned in a lesson to contexts where they can apply their learning. Learners benefit from informal instruction in the context of teacher-led group learning activities, collaborative small-group activities, and independent work projects.

**Systematic, explicit instruction** can be planned using information gained through ongoing assessment of children's learning needs and designed to be appropriately challenging. Instruction is explicit when children know what they are learning and why. Explicit instruction works best when supplemented with activities that allow for individual differences or for students to make meaningful, personal connections.

Grouping children according to interest rather than ability increases motivation and allows children to learn from each other.

## Grouping for instruction

In grouping for instruction, teachers consider the needs of both individuals and the group. They choose a grouping strategy appropriate to the purpose of the activity. Flexible grouping allows the teacher to support children in ways that address both interests and learning needs (Anderson and Chapman 1994; Chapman 1995b; Flood, Lapp, Flood, and Nagel 1992).

Long-term, fixed-ability grouping has detrimental effects (Allington 1983; Eder 1981; Kulik and Kulik 1982). Ability groups increase the risk faced by low-achieving children (Allington and Cunningham 1996) and actually widen the gap between less able and more able learners (Shannon 1985). However, short-term grouping of children with similar learning needs for focused instruction is beneficial.

Frequent use of heterogeneous (mixed-ability) grouping is an effective way to maximize student success (Johnson and Johnson 1991; Kagan1992). Grouping children according to interest rather than ability increases motivation and allows children to learn from each other. It also helps them learn to work co-operatively and collaboratively.

## Instructional Groups

**WHOLE-CLASS EXPERIENCES**

- Community building (e.g., class meetings)
- Sharing experiences (e.g., shared reading)
- Planning, making decisions, and solving problems
- Introducing new concepts, skills, or forms of representation
- Engaging in reading/writing/thinking strategies (e.g., Know-Wonder-Learned)
- Explicit teaching
- Processing and reflecting (e.g., debriefing)
- Opening and closing activities
- Celebrating

(Note: Many of these experiences can also be used in small groups.)

**STUDENT-LED SMALL GROUPS**

- Co-operative learning activities
- Supported practice (students helping each other)
- Shared or collaborative tasks
- Common interest
- Sharing work done in activity time

**TEACHER-LED SMALL GROUPS**

- Common need (e.g., understanding 3-digit place value)
- Guided practice for students who need continued support
- Group conferences (e.g., Reading and Writing Club)
- Literature circles

**PARTNERS OR "BUDDIES"**

- Supported practice (e.g., "Buddy reading")
- Mentoring
- Tutoring
- Shared task
- Common interest

**INDIVIDUALIZED TEACHING AND ASSESSMENT**

- One-on-one instruction
- "On-the-spot mini-lessons"
- Individual assessment (e.g., running records)

**INDEPENDENT ACTIVITIES**

- Independent practice (e.g., silent reading)
- Individual response (e.g., to a shared experience)

## Approaches and programs for specific populations

Apart from applying these grouping strategies to address diversity in the classroom, effective teachers respond to the specific needs of student populations within their classrooms (see Chapter 2, Learners and Learning, for a discussion of those needs).

### TEACHING CHILDREN OF ABORIGINAL HERITAGE

Aboriginal children need knowledge and skills for success in the larger Canadian society, while still valuing and sustaining their own languages and heritage. Establishing communication between the home and school will support a collaborative approach necessary for mutual understanding and respect. Parents and teachers can work together to benefit aboriginal children. More information about teaching these children is available in the following Ministry of Education publications:

- *Shared Learnings: Integrating BC Aboriginal Content K–10 (1998)*
- *Strategies for Teaching Reading across the Curriculum K–10*
- *Starting Points for Early Intervention: A Research Summary for Schools Planning Intervention Programs*

### TEACHING FRANCOPHONE AND FRENCH IMMERSION STUDENTS

Students in Programme francophone are francophone students who are entitled to instruction in their first language. The goal of Programme francophone is to transmit the French language and culture and to develop among students with a francophone family background a cultural identity, sense of belonging, skills, and critical outlook that will enable them to help reinforce the francophone culture. Francophone education is focused on enabling students to express themselves accurately within a wide range of intellectual and creative pursuits. Through the integration of culture in all aspects of the curriculum, as well as in extra-curricular activities and school life, francophone students are provided with a dynamic environment where they can "live" their language.

Students in French immersion programs are part of a second language program in which all or a major part of the curriculum is taught in French. The students speak English or another language other than French as their first language. Immersion programs aim to develop high levels of French language skills and positive attitudes toward French language and culture, as well as to foster normal growth in English language skills and age-appropriate levels of achievement in academic subjects.

In immersion programs, the French language is viewed as a resource for learning, and the classroom is seen as a rich context for linguistic and cognitive development. The teacher mediates meaningful and interactive language experiences, which allow the students to develop the knowledge, learning processes, skills, and attitudes needed to communicate effectively and confidently.

The primary years of French immersion focus largely on French language arts. Through the integration of language studies and other subjects, as well as the communicative/experiential approach to language teaching, the students learn lifelong communication skills. They gain a broader view of the world, a better comprehension of francophone cultures, an appreciation of all human cultures, and an expanded view of their own culture.

Information of particular use to teachers who work with francophone and French immersion students appears in the following Ministry of Education publications:

Through the integration of culture in all aspects of the curriculum, as well as in extra-curricular activities and school life, francophone students are provided with a dynamic environment where they can "live" their language.

Today most classrooms have students whose second, rather than first, language is English (ESL) or who speak English as a second dialect (ESD) or as an additional language (EAL).

- *Français langue première de la maternelle à la 7e année: Ensemble de ressources intégrées 1995* (Integrated Resource Package containing provincially prescribed curriculum)
- *Français langue seconde — immersion de la maternelle à la 7e année: Ensemble de ressources intégrées 1997* (Integrated Resource Package containing provincially prescribed curriculum)
- *Français langue première de la matern-elle à la 12e année — Document d'appui* (1996)
- *L'art du langage: Français langue maternelle — Apreçu de la recherche* (1994)
- *L'art du langage en immersion — Document d'appui* (1993)
- *Guides d'évaluation* (1994) (translation of the *Assessment Handbooks* series)

**TEACHING CHILDREN WHO SPEAK ENGLISH AS A SECOND LANGUAGE**

*"English as a Second Language students are those whose primary language(s) or language(s) of the home, is/are other than English, and who may therefore require additional services in order to develop their individual potential within British Columbia's school system. Some students speak variations of English that differ significantly from the English used in the broader Canadian society and in school; they may require ESL support.*[i]

[i] *In some literature, this is referred to as English as an Additional Language (EAL).*

[ii] *In some literature, this is referred to as English as a Second Dialect (ESD)."*

— From *ESL Policy Framework*, Ministry of Education, 1999

Today most classrooms have students whose second, rather than first, language is English (ESL) or who speak English as a second dialect (ESD) or as an additional language (EAL). This situation varies from one or two students in a class to schools that are made up almost entirely of ESL or non-mainstream speakers of English. Research indicates that these children will learn interpersonal language skills in English mostly by interacting with English-speaking peers.

Learning a second language takes much more time than previously thought, and although second language acquisition is similar in some ways to learning a first language, the process is not identical. Second language (L2) development varies; for example, ESL learners may seem to pick up vocabulary quite quickly and yet use English words with grammatical structures from their first language (L1). This example of what is called "L1 interference" reveals that the learner is sorting out the linguistic systems of both languages. Like all children, ESL students make a series of approximations that reveal their emerging understanding.

ESL children also need to learn curriculum content and related academic language to be successful in school. Although linguists agree that no dialect is superior to another, children need to develop skills in Standard English for easy access to higher education and career success. Because the standard dialect of English is more like its written form than non-standard dialects, children who speak a form of English which differs from Standard English have particular needs when it comes to developing academic language.

Although ESL students may not yet be proficient in Standard English, this does not mean that they know nothing about a particular topic. ESL students have knowledge and skills from their first language or dialect. Just as native speakers of English have varying abilities and background experiences, so too do ESL students.

Teachers can help ESL students make connections by allowing them to use their first languages or dialects. Using their first language benefits students in many ways, so access to it should not be denied them. A student's proficiency in the first language (oral

and written) affects the acquisition of a second language. As students develop understanding of the general features of language through their first language, they can bring this knowledge to learning a second language. Student learning is enhanced by the judicious use of two or more languages. Learning English need not diminish a child's first language — English should be an additional language rather than a replacement for the first. Likewise, Standard English should be seen as a particular form of English that should not supplant a person's first dialect.

For more information on supporting ESL children, teachers may refer to the following Ministry of Education publications:

- *ESL Learners: A Guide for Classroom Teachers* (RB 0074, 1999)
- *ESL Learners: A Guide for ESL Specialists* (RB 0075, 1999)

## TEACHING CHILDREN WHO EXPERIENCE DIFFICULTY IN THE CORE LEARNING AREAS

Although 80–85 percent of children meet with success, some children struggle in the core learning areas of social responsibility, literacy, and numeracy. Identifying children who are not yet meeting expectations is crucial. They need extra support or some form of intervention to be successful.

Children who are experiencing difficulty may benefit from additional learning support through **scaffolding**. Scaffolding involves several activities and tasks, such as these:

- interesting the child in the task;
- reducing the number of steps required to solve a problem, so that a child can manage components of the process and recognize when a fit with task requirements is achieved;
- maintaining the pursuit of the goal, through motivation of the child and direction of the activity;
- marking critical features of discrepancies between what a child has produced and the ideal solution;
- controlling frustration and risk in problem solving; and
- demonstrating an idealized version of the act to be performed. (National Research Council 1999, p. 92)

It is important not to assume that a child who is struggling is "learning disabled" since many such children do not have learning disabilities (Roller 1996; Shaywitz 1992; Spear-Swerling & Sternberg 1996). Children may find learning difficult for a variety of reasons, such as poverty, ill health, a lack of experience with similar activities at home, or cultural and linguistic differences between home and school. Development varies between boys and girls, and some children have unique learning styles. Most children who struggle do so due to "variability, not disability" (Roller 1996). Nevertheless, some children have difficulty with the core areas due to some kind of special need such as a learning or an intellectual disability.

Whether children struggle in the core learning areas because of variability or some type of special need, teachers and schools need to provide varied types of learning opportunities and instruction for all students, in order to meet their varied needs and remain alert to the possible need for identification, assessment, and intervention with particular students (see "Early Intervention," under Policies and Structures That Promote Success for All Students, further in this chapter; see also the Ministry report, *Starting Points for Early Intervention: A Research Summary for Schools Planning Intervention Programs*, 1998).

Identifying children who are not yet meeting expectations is crucial. They need extra support or some form of intervention to be successful.

Teaching strategies that are open-ended and flexible allow children who are advanced in their learning to refine, extend, and deepen their thinking.

## TEACHING CHILDREN WHO EXCEED EXPECTATIONS

Some children exceed expectations for their age in one or more spheres of learning, and their needs to learn to their fullest potential must be accommodated. Teaching strategies that are open-ended and flexible allow children who are advanced in their learning to refine, extend, and deepen their thinking. Co-operative and collaborative experiences enable these children to consolidate their learning and enhance their metacognition. Such students also benefit from opportunities to explore topics of personal interest independently or with guidance from mentors who can further their learning. For information on teaching students who exceed expectations, teachers may refer to these publications:

- *Special Education Services: A Manual of Policies, Procedures and Guidelines* (the section on students with gifts and talents)
- *Gifted Education: A Resource Guide for Teachers* (RB 0050)

# Policies and Structures That Promote Success for All Students

*What we need most is consistently high-quality classroom instruction that better addresses the needs of all children (Allington & Cunningham 1994). We will also need responsive extraordinary interventions that actually meet the needs of children who find learning [...] difficult. Unlike past efforts, however, we must create a broader array of interventions, efforts that are more personalized, more intensive, and more coherent than most that have been found in the schools we have.*

— Allington & Cunningham 1996, p. 21

Statistical studies show that in British Columbia, almost 20 percent of children do not succeed in school. Some of these struggling students have identified special needs. Special education support services are provided to students with special needs. These supports are documented in an Individual Education Plan (IEP). Schools also have learning assistance services, which are school based, non-categorical resource services designed to support classroom teachers and their students who have mild to moderate difficulties with learning and behaviour.

There are various reasons for students' lack of success: they may find school boring or not challenging; they may lack in interest and motivation and sit quietly disengaged; they may be experiencing family problems or other social, emotional, or health-related difficulties. Some students learn in ways that are different from those of their peers and may not respond to teaching approaches offered in standard classrooms; others require more time to learn important concepts or to complete their work. Some students come from homes where reading and writing are less likely to be valued and where parents are less likely to read to children or for their own pleasure. Others come from homes that are culturally different from the norm of the school. Some students do not see themselves as successful learners. In a study of children aged seven to nine, Perry (1998) found that some children adopt defensive and self-handicapping strategies such as procrastinating, giving up easily, and avoiding tasks because they perceive themselves as having low ability. They are afraid to fail.

In *Addressing Student Differences: Next Steps* (1997), the following principles are identified as a basis for action:

- **high standards**
  Students learn best in a school environment where all students are valued and are challenged by high standards and expectations.
- **the principles of learning**
  Learning requires the active participation of the student; students learn in different ways and at different rates; learning is both an individual and a group process.
- **early intervention**
  Addressing student learning difficulties early is more successful than responding to accumulated difficulties later.
- **instructional strategies**
  The diversity of student needs can be met through the implementation of a wide range of instructional strategies based on best professional practice.
- **parent and community support**
  Student success rates improve when teachers, parents, and the community work collaboratively toward common educational goals.

Students learn best in a school environment where all students are valued and are challenged by high standards and expectations.

The Ministry of Education defines **early intervention** as "any planned, systematic program of services necessary to prevent or minimize the effects of significant learning difficulties for children and their families."

## Early intervention

Detecting and addressing student learning difficulties early will reduce the number of students who experience learning difficulties later in their schooling. Early intervention is also important from a broader societal perspective: failure to address literacy and numeracy problems can lead to significant social and economic costs later on. The Ministry of Education has identified the importance of providing primary students with a firm foundation of knowledge and skills in their core areas of learning: reading, writing, numeracy, and social responsibility.

Ongoing assessment and appropriate intervention strategies to address student difficulties will do much to determine students' future success. Assessment takes into account the developmental variations typically found among children, while maintaining high expectations of success for all students. The Ministry has developed performance standards for each of the four core learning areas to assist educators in monitoring and reporting individual student progress. It has also made a commitment to small class sizes in primary so that children may receive the individual attention they need.

Grade 3 students who are struggling to read are likely to become unmotivated and low in self-esteem. They are often referred to long-term learning assistance or special education programs where they remain for many years. At the same time, the evidence suggests that almost all children (except the small percentage of children with the most severe learning difficulties) can succeed if appropriate programs and services are provided.

The prevention of learning difficulties is the first-line strategy. The learner-centred approach and the specific strategies suggested in *The Primary Program* effectively address the needs of diverse learners. When teachers provide instruction that is developmentally appropriate and culturally responsive, more students are likely to succeed. Even so, a percentage of children may experience difficulties and will require some intervention. The type and intensity of the intervention will vary according to the child's needs. Teachers and parents should be careful not to minimize the seriousness of problems, or assume that the child will naturally "catch up" given extra time and support.

The Ministry of Education defines **early intervention** as "any planned, systematic program of services necessary to prevent or minimize the effects of significant learning difficulties for children and their families." It is important to keep in mind that intervention takes into account both the existing instructional program and the assessment of the child's difficulties. A first step is to evaluate the effectiveness of the instructional program in meeting the child's needs and explore possibilities for effective intervention for a child who is struggling.

The accompanying chart ("Approaches to Intervention to Address Literacy Problems") suggests a way of assessing the effectiveness of a child's instructional program. It also identifies possibilities for action and intervention. The focus questions are based on the principles of learning and evidence from research on effective instruction for diverse learners. While the questions are grouped by principle, none is discrete since positive attitudes (motivation, self-efficacy) and dispositions (persistence, self-regulation) are interrelated with acquisition of knowledge, skills, and processes. All must be taken into account to help students avoid a cycle of failure. While the chart focuses particularly on reading and writing, a similar process might be used to plan interventions for numeracy and social responsibility.

## Approaches to Intervention to Address Literacy Problems

| Focus Questions | Possibilities for Action and Intervention |
|---|---|
| **ACTIVE PARTICIPATION**<br><br>Are there sufficient opportunities for the child's active participation in learning through<br>• engagement?<br>• play?<br>• representing?<br>• reflection?<br><br>How might engaged time be increased in ways that are meaningful to the learner?<br><br>How might the learner develop more effective literacy knowledge and skills through literate engagement?<br><br>How might the learner develop greater awareness of reading and writing processes and become more self-regulated and motivated? | • Develop phonological awareness through language and literacy play (e.g., games with rhymes).<br>• Develop awareness of purposes of print and "how print works" through increased reading and writing in the context of everyday routines and use of literacy materials in the dramatic play centre.<br>• Devote increased time to reading and writing to develop word recognition and fluency.<br>• Develop phonemic awareness and phonics knowledge through guided and interactive writing in small groups or one-on-one and increased independent writing (with invented spelling).<br>• Ensure appropriate reading materials for independent practice to develop fluency and comprehension. Provide patterned and predictable books but not "decodable" texts that make reading harder.<br>• Choose reading materials slightly ahead of the child's independent level for instructional purposes; increase difficulty gradually.<br>• Provide a daily take-home reading program for extra practice.<br>• Place increased emphasis on silent reading.<br>• Make increased use of open-ended activities that allow children to communicate ideas in a variety of ways.<br>• Use increased teacher think-aloud during modelling of reading and writing.<br>• Talk about thinking processes related to reading and writing; encourage children to talk about their own thinking.<br>• Teach strategies to develop awareness and self-regulation of one's own reading and writing processes (e.g., retrospective miscue analysis, Goodman 1998).<br>• Use miscue analysis, retellings, and running records to determine how the child approaches reading and how to get the reader "on track."<br>• Conduct a dynamic assessment to determine the type and degree of support the child needs to be successful.<br>• Regularly analyse the child's independent writing to establish an ongoing assessment of the child's phonological awareness and knowledge of phonics. |

How might the learner develop greater awareness of reading and writing processes and become more self-regulated and motivated?

Is the content relevant to the child's interests and cultural background?

## Approaches to Intervention to Address Literacy Problems

| Focus Questions | Possibilities for Action and Intervention |
|---|---|
| **LEARNING IN VARIOUS WAYS AND AT DIFFERENT RATES**<br><br>Are the learning experiences appropriate for this child's ways and rates of learning and particular learning needs?<br><br>How might the child's rate of learning be accelerated?<br><br>Does the program include a range of approaches?<br><br>Is the content relevant to the child's interests and cultural background? | • Try a different instructional approach and some new strategies.<br>• Consider a reading style assessment (Carbo et al. 1986).<br>• Use key visuals and graphic organizers.<br>• Find topics of interest to the child to "hook" him/her on reading.<br>• Use culturally relevant reading materials (e.g., First Nations tales for Aboriginal children).<br>• Have the children create their own reading materials by sharing personal stories and writing.<br>• Use drama, music, and movement to involve children in literature.<br>• Use concrete materials and pictures to help children grasp abstract concepts.<br>• Try tactile materials.<br>• Use a variety of non-fiction as well as fiction materials.<br>• Have children do "research" to learn information and write about what they have learned.<br>• Increase instructional time, especially small-group and one-on-one.<br>• Combine structure and routine with flexible responsiveness for children with special learning needs.<br>• Consult the school-based team for possible assessments that might provide insights about the child's learning needs.<br>• Consider ways that the environment might be adapted to better address the child's learning needs ("adapted" means that the learning outcomes remain the same but that some aspect of the instructional environment might be changed).<br>• Consider ways that the curriculum might be modified to address the child's learning needs ( "modified" means that the learning outcomes are changed in some way, either quantitatively or qualitatively, and that an IEP is thus required). |

## Approaches to Intervention to Address Literacy Problems

| Focus Questions | Possibilities for Action and Intervention |
|---|---|
| **LEARNING AS PERSONAL AND SOCIAL PROCESSES**<br><br>Does the instructional program help the child develop personal "ownership" of learning?<br><br>Does the program allow the child to pursue some topics of personal interest?<br><br>Does the program allow the child to make connections and construct meaning?<br><br>Who might support the child in his/her learning?<br><br>What kinds of groupings might be used to support the child's learning? | • Allow students some choice in their reading and writing.<br>• Integrate learning of skills with meaningful contexts (real reading and writing).<br>• Use onsets and rimes and spelling by analogy to help learners work with chunks of meanings and patterns (rather than letter-by-letter).<br>• Use word-sort and brainstorm-categorize activities to help students discern patterns.<br>• Use brainstorm/cloze to help learners integrate cues.<br>• Use strategies that activate prior knowledge and generate purposes for reading (e.g., KWL).<br>• Use thematic units to develop ideas and vocabulary in an integrated way.<br>• Use reading and writing for a variety of functions and in a variety of genres.<br>• Try partner and collaborative activities.<br>• Try older/younger buddies.<br>• Use various co-operative learning techniques.<br>• Balance group work and individual activities so students get sufficient independent practice.<br>• Use a variety of instructional techniques, including scaffolding, guided reading, explicit instruction, emphasizing connections to real reading and writing, while avoiding isolated exercises.<br>• Design instruction according to learners' needs, in small group or one-on-one instruction (e.g., interactive writing with one child).<br>• Use flexible groupings for particular purposes.<br>• Make learning explicit so students know what they are learning and why.<br>• Encourage children to talk about their learning.<br>• Provide additional support through teacher assistants and other professionals.<br>• Encourage parental involvement in home literacy experiences. |

What kinds of groupings might be used to support the child's learning?

In any classroom, there will likely be significant diversity in the students' knowledge, skills, and attitudes. The responsibility for accommodating this range ultimately belongs to the classroom teacher.

## Supporting students with special needs

Some children will already have been identified as having special needs before entering the school system. To facilitate a smooth transition into the Primary Program for them and promote effective planning of instruction and necessary support services, teachers and other school staff need to collaborate with the professionals who have been working with the child and family during the preschool years (e.g., supported child-care consultants, speech and language pathologists, and pediatricians).

In British Columbia, schools support the principle of inclusion, equitable access to learning by all students, and the opportunity for students to pursue their goals in all aspects of their education. Inclusion for students with special needs transcends physical location and encompasses participation, friendship, and interaction.

Integration is one way to achieve inclusion. Integration encourages students with special needs to interact fully with other students in neighbourhood schools and to develop friendships. It means placing students with special needs in classrooms with their age and grade peers, then providing them with necessary support, adaptations, or modifications — determined on an individual basis — to enable them to be successful. Integration does not mean, however, that students with special needs must spend 100 percent of every day in neighbourhood school class placements with their age and grade peers. The goal is to meet their educational needs as well as those of the other students. Educating students with special needs in neighbourhood school classrooms does not preclude the appropriate use of resource rooms, self-contained classes, community-based training, and other specialized settings.

There are some important provincial policies that affect the instruction of students with special needs.

- Each school district has primary students who meet the Ministry of Education definition for special needs. These students have a disability of an intellectual, physical, sensory, emotional, or behavioural nature; a learning disability; or exceptional gifts or talents.
- A student with special needs must be provided with an education program in a classroom where that student is integrated with other students who do not have special needs. This policy direction applies except when the educational needs of the student with special needs or other students indicate that the education program for the student with special needs should be provided otherwise.
- A student with special needs usually has an Individual Education Plan (IEP). This plan may contain the additional adaptations or services that will be provided to enable the student to take part in the prescribed curriculum. Or, it may list the plan that modifies or replaces the prescribed learning outcomes set out in the curriculum. The IEP should contain specific, individual goals and objectives and the expected outcomes for the student. When an IEP modifies or replaces the provincially prescribed curriculum, the school is required to inform parents on the written report.
- Learning activities for a student with special needs must be provided in accordance with the IEP designed for that student.

Teachers are responsible for instructing, assessing, and evaluating all of their students. In any classroom, there will be significant diversity in students' knowledge, skills, and attitudes. The responsibility for accommodating this range ultimately belongs to the classroom teacher. Since students vary in the way

they learn and behave, teachers may require specific, systematic strategies and supports for the learners. Teachers are encouraged to collaborate with other professionals in and out of their school to meet the needs of all the students in their class.

School districts have processes in place to provide this assistance to teachers. Most schools have school-based teams, which function as a forum for problem solving and program development when the classroom teacher needs assistance. An array of support services may also be available at either the school, school district, or provincial level.

IEPs are written collaboratively through a process that includes the classroom teacher, any special support personnel in the school or district assisting with that student, and the parent. It is important that the IEP addresses goals that the family and school both see as relevant and high priority growth areas for that student. An IEP must identify

- what the student is able to do,
- where the student requires further attention or development, and
- how the student's learning can be supported in relation to the expected learning outcomes set out in the IEP.

School districts receive supplemental special education funding to support the programming for their students with special needs from the Ministry of Education. The services provided by the school and district may vary based on the needs of the students and local priorities. Most schools have some school-based specialist teaching staff and may have some teaching assistant staff. Often, school districts have itinerant personnel available to assist with speech and language therapy, occupational therapy, programming for students with vision and hearing needs, and individual psycho-educational assessments.

British Columbia has provincial outreach programs that can provide consultation to schools about specific student needs. Some of them are, as follows:

- Provincial Outreach Program for Students with Deafblindness (PRP)
- Gateway Program for Autism and Related Disorders
- Special Education Technology (SET-BC)
- Provincial Integration Support Program (support for schools with students who have severe/profound multiple physical and cognitive disabilities)
- Provincial Resource Centre for the Visually Impaired (PRCVI)

More information on these outreach programs and all aspects of special education can be found in the Ministry of Education document *Special Education Services: A Manual of Policies, Procedures and Guidelines.*

The Ministry has produced several resource handbooks for classroom teachers that will support them in teaching some types of students with special needs. Each handbook focuses on specific information to help students who have particular special needs. All schools in the province will have received at least one copy of these handbooks, but copies are also available to be downloaded and printed from the Special Programs Branch Web site: http://www.bced.gov.bc.ca/specialed/docs.htm.

- *Special Education Services: A Manual of Policies, Procedures and Guidelines* (RB 0054 — 1995)
- *Individual Education Planning for Students with Special Needs* (RB 0061)
- *Teaching Students with Learning and Behavioural Differences: A Resource Guide for Teachers* (RB 0063 — 1996)
- *Gifted Education: A Resource Guide for Teachers* (RB 0050)
- *Teaching Students with Attention-Deficit/Hyperactivity Disorder* (RB 0070)

Research demonstrates that it is better to promote children with their age peers in regular classrooms and address their learning difficulties with appropriate interventions than it is to retain children in a grade.

## research directions

### RETENTION, TRANSITION CLASSES, SOCIAL PROMOTION, AND INTERVENTION

> *The overly simplistic view of retention as a panacea for education woes ignores its negative impact on children … A body of research exists on the subject of retention, and it should guide our practice.* (Owings & Magliaro 1998, pp. 86, 88)

Retention increases the risk that children face in schools. It is a practice that arrived with the advent of graded schools at the turn of the last century. Ultimately, retained children become older underachievers. Students who are retained drop out of high school at a rate four times that of other students. (Allington & Cunningham 1996)

The evidence gathered over 60 years (from 1930–1990) clearly indicates the best policy is to keep children with their age peers. Decades of research on retention summarized by Shepard and Smith (1988) indicate that

- retained children fare more poorly than they would had they been promoted without repeating a grade;
- children view retention as punishment for being bad or not learning successfully;
- children who are retained have lower levels of self-esteem than other students; and
- almost any alternative, including remedial help, summer school, and peer tutoring, is more effective than retention.

Retention harms an at-risk population cognitively and affectively (Owings & Magliaro 1998, p. 87). In comparison to children of similar abilities who are not retained, retained students may have more behavioural problems (Meisels 1993) and may continue to decline in reading achievement over time (Reynolds 1992).

Social promotion has fewer negative effects than retention but it does little to address the pattern of low achievement since low-achieving children who are simply promoted continue to flounder.

> *Waiting for development to occur rarely fosters development. For children to develop concepts about print and literacy knowledge and skills, children need to be immersed in literate activity and literate environments. This does not mean worksheets and drills, but a chance to develop the same understandings that their more advantaged peers developed in their homes.*(Allington & Cunningham 1996)

Transition classes, a form of tracking, have consistently shown to be disadvantageous to at-risk children's cognitive, social, and emotional development. Children in transition classes receive less effective instruction and have lower achievement than at-risk children placed in regular classrooms (Allington & Cunningham 1996; Shepard & Smith 1988).

Children who find learning difficult need interventions to accelerate their learning (Slavin et al. 1993). Initiatives such as more focused time, individualized instruction, tutoring, or other individual strategies are useful for accelerating children's learning (Ross et al. 1995; Shepard & Smith 1988).

> *When social promotion is coupled with access to extraordinary educational intervention, achievement is enhanced. The intervention might provide extended instructional time through an after-school program or a summer-school program. It might provide short-term tutorial assistance designed to accelerate development. While few studies report on programs that combine social promotion with intensive intervention, those available suggest that increasing the intensity of instruction works far better than either retention or social promotion by themselves* (Shepard & Smith 1988). (Allington & Cunningham 1996, p. 13)

Research demonstrates that it is better to promote children with their age peers in regular classrooms and address their learning difficulties with appropriate interventions than it is to retain children in a grade.

- *Awareness of Chronic Health Conditions: What the Teacher Needs to Know* (RB 0057, two volumes)
- *Students with Intellectual Disabilities: A Resource Guide for Teachers* (RB 0060 — 1995)
- *Teaching Students with Fetal Alcohol Syndrome/Effects* (RB 0059 — 1996)
- *Students with Hearing Loss: A Resource Guide to Support Classroom Teachers* (RB 0033)
- *Students with Visual Impairments* (RB 0047 — 1996)
- *Adapted School Workspaces for Students with Special Needs* (RB 0073 — 1997)

## Organization of the school

There is no single model of classroom organization that will meet the needs of every school. Through collaborative planning, each school staff makes decisions to design the best possible organization for their students. The child's placement during the primary years is determined at the school and/or district level with consideration given to each child's needs, the capabilities of the school, and local priorities. The key forms of organization that can be effectively implemented are identified below.

- **single grade classes**
  Students are assigned to classes in single grade groups in accordance with district and provincial contractual agreements.
- **combined classes**
  Students are assigned to classes with two or more grades in the same class. This organization may be chosen to create a good fit between the numbers of students at particular grade levels and the availability of teaching staff. The term "combined classes" (unlike the term "split classes") can create the mindset for working with students as a group of learners with a range of needs and interests rather than focusing on the differences between the grades.
- **multi-age classes**
  Students in multi-age classes may encompass a grade range of two or more years. While combined classes may occur due to the numbers of students in the school, multi-age classes are an organization chosen by educators who believe that this structure is advantageous for children.
- **looping**
  When students stay with the same teacher for two successive grades, looping is in place. Teachers in multi-age classes make this arrangement to keep their younger group of students for two or more years

Research at the primary level has supported advantages to multi-age groupings on the basis of both academic and social criteria (Pratt 1983, p. 18).

while the oldest students in the group move on to another class. Looping can also occur when two teachers agree to set up a cycle in which they each keep students for two years (e.g., a teacher has Grade 1 the first year, takes those students on to Grade 2 the second year, then returns to Grade 1 for a new group of Grade 1s).

## research directions

### MULTI-AGE GROUPINGS

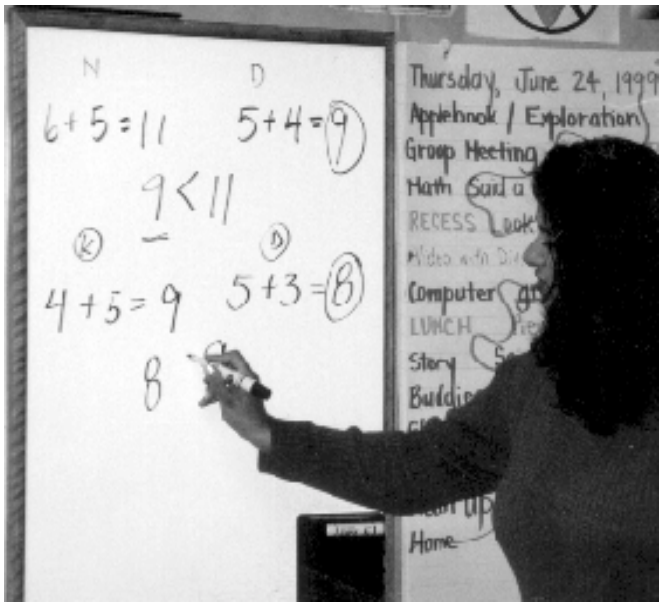
*Research at the primary level has supported advantages to multi-age groupings on the basis of both academic and social criteria* (Pratt 1983, p. 18).

**Academic advantages of multi-age grouping**

- A multi-age grouping facilitates a developmentally appropriate learning environment by allowing students of diverse abilities and backgrounds to proceed at their own pace (Miller 1994).
- The organization leads to improved affective and academic growth (students become more intrinsically motivated and positive about learning, which in turn facilitates their academic growth).
- Interactions with younger peers enhance older children's motivation and self-confidence (Kim 1990).
- Older children in mixed-age groups provide "scaffolding" for younger children (Chapman 1994; Wertsch 1985).
- Younger children engage in more interactive and complex types of play when older peers are accessible to them than when they are in homogeneous groups (Goldman 1981).
- Younger children have opportunities to observe and learn from others while older children have leadership opportunities (Katz 1990).

**Social advantages of multi-age grouping**

- Such a grouping promotes a family-like climate (Miller 1994).
- Students are socialized into a community of learners.
- Helping and co-operative behaviours are promoted.
- Mixed age groups provide appropriate contexts in which children can practice leadership skills (Chapman 1994; Stright & French 1988); self-regulation of behaviour increases in older children as a result of their leadership role (Lougee & Graziano 1986).
- Mixed age groupings increase older students' social responsibility (Graziano et al. 1986).
- This form of organization promotes acceptance and a valuing of diversity (Miller 1994); differences based on age and academic performance are diminished, while students learn to value differences in a heterogeneous student community.
- The grouping creates social and academic continuity (Miller 1994).
- A multi-age grouping promotes bonding between students, teachers, and parents.
- Students transfer content and class-management knowledge across years.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D
6+5=11
5+4=9
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8
Thursday, June 24, 1999
Applehook / Exploration
Group Meeting
Math
RECESS
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LUNCH
Story
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## Summary: Teachers and Teaching

Teachers face the challenge of teaching students with greatly differing needs and abilities so that all will enjoy success. They must consider students from specific populations, such as the Aboriginal, ESL, or struggling academic, and respond in developmentally appropriate ways that address individual needs.

Some policies have proven to be more effective than others in promoting student success. Early identification of students with learning difficulties and appropriate intervention are essential. All models of classroom organization offer some benefits.


# Enhancing Children's Growth in Social Responsibility

## Key Points in This Chapter

- Families and schools share the responsibility for developing children's sense of citizenship and "community mindedness."
- A classroom can be a caring community of learners where children's social responsibility is enhanced by learning communication and interpersonal skills, career skills, and citizenship skills.
- Learning together requires that the needs of all children are met.
- Nelson, Lott, and Glenn, in *Positive Discipline in the Classroom*, identify "three empowering perceptions and four essential skills" for peaceful problem solving.
- An important aspect of social responsibility is learning to understand and value diversity.
- Multicultural and anti-racism education further social justice.
- Teachers should be sure to provide equal access to learning for both boys and girls. There are several ways to do this.

# Fostering Social Responsibility

**Social responsibility is developed, practiced, and reinforced in all activities throughout the school day. It permeates learning in all school subjects and extends beyond the classroom to the entire school and its grounds.**

LEARNING TO INTERACT AND WORK with others is essential for success in school and beyond. The main function of the school is to enhance students' learning. But optimal learning in school cannot occur unless children can learn to work and play effectively with other children, to respect limits, and to adhere to expectations for conduct that enable everyone to learn.

Families and schools share the responsibility for developing the knowledge, skills, and attitudes associated with citizenship and "community mindedness." Enhancing children's social responsibility begins with the home. The school's contribution begins with children's first day in Kindergarten and continues until they leave school. Social responsibility is developed, practiced, and reinforced in all activities throughout the school day. It permeates learning in all school subjects and extends beyond the classroom to the entire school and its grounds. Social responsibility is enhanced when teachers and parents convey consistent messages about socially responsible behaviour and work together in guiding the child toward common goals.

Social responsibility is both "caught and taught." Teachers model appropriate behaviours for them in the way they interact with children and other adults and through use of language. Teachers provide instruction in particular aspects of social responsibility and help children make connections between what they are learning and how they are acting. They create opportunities for children to learn and practice social responsibility. They also offer children guidance, feedback, and support to enable them to make effective choices about their behaviour. They help children move from an egocentric view of the world to consider others, the community, and the world.

Like other aspects of learning, acquiring a sense of social responsibility is a developmental process that reflects the interplay of the individual and the environment. The B.C. performance standards, which are consistent with provincially prescribed learning outcomes, draw together from across the curricula and illustrate in specific terms the developmentally appropriate expectations for primary children in each of the four core learning areas. Development of social responsibility is one of those core learning areas. The draft "aspects of social responsibility," together with expectations for primary children from *B.C. Performance Standards,* 2000 are shown in the chart on the following page. For more information on the B.C. performance standards, see "B.C. Performance Standards" in Chapter 8, Assessment, Evaluation, and Reporting.

## Summary of Draft Expectations for Social Responsibility

| Aspects of Social Responsibility | Expectations at Primary Level |
|---|---|
| contributes to the community<br>• takes responsibility for the shared community (classroom) environment, both physical and social<br>• contributes ideas and effort toward shared goals/projects<br>• works co-operatively<br>• supports and encourages others<br>• shows leadership | The child:<br>• is usually welcoming, friendly, kind, and cheerful; often helps and shares<br>• cleans up personal and communal space when asked<br>• participates and contributes in most activities<br>• follows basic expectations for working with others |
| solves problems in a peaceful way<br>• shows empathy<br>• takes responsibility for managing conflict<br>• has strategies for debating, disagreeing; uses appropriate language<br>• listens openly and considers more than one point of view; can articulate more than one viewpoint on an issue<br>• identifies and clarifies issues<br>• generates and evaluates potential solutions, strategies<br>• reflects on/evaluates outcomes | The child:<br>• shows empathy in obvious situations<br>• sometimes tries to solve problems; tends to rely on adult intervention<br>• with support, tries to express feelings honestly, manages anger appropriately, listens politely<br>• generates strategies to address class problems<br>• with support, evaluates own behaviour |
| values diversity and defends human rights<br>• treats others fairly and respectfully<br>• respects and values diversity; recognizes that diversity has shaped Canada<br>• recognizes and defends human rights<br>• understands how stereotypes, especially gender stereotypes, limit learning and social and personal development | The child:<br>• is respectful; is increasingly interested in fairness<br>• identifies some cultures within the local community |
| exercises democratic rights and responsibilities<br>• knows/exercises rights and responsibilities<br>• is willing to get involved; offer views; take action<br>• understands functions of government<br>• makes responsible choices<br>• is able to take an increasingly broad view (global perspective)<br>• can articulate a preferred future for the community, nation, planet | The child:<br>• generally follows classroom expectations; can explain basic responsibilities<br>• tries to use resources wisely; is inconsistent |

— From *B.C. Performance Standards,* 2000

# Creating a Learning Community

A classroom is a special kind of community, a community of learners. It provides a social support system that embodies interdependence and caring — a co-operative spirit rather than individualism or competition.

*New developments in the science of learning suggest that the degree to which environments are community centered is also important for learning. Especially important are norms for people learning from one another and continually attempting to improve. We use the term community centered to refer to several aspects of community, including the classroom as a community, the school as a community, and the degree to which students, teachers and administrators feel connected to the larger community of homes, businesses, states, the nation, and even the world.*

— National Research Council 1999, pp. 132–133

A classroom is a special kind of community, a community of learners. It provides a social support system that embodies interdependence and caring — a co-operative spirit rather than individualism or competition. A caring community of learners enhances children's social responsibility where students learn communication and interpersonal skills, career skills, and citizenship skills. It also furthers their emotional, social, and intellectual development.

## SUPPORTING POSITION STATEMENT

### Creating a Caring Community of Learners

- The early childhood setting functions as a community of learners in which all participants consider and contribute to each other's well-being and learning.
- Consistent, positive relationships with a limited number of adults and other children are a fundamental determinant of human development and provide the context for children to learn about themselves and their world and also how to develop positive, constructive relationships with other people. The early childhood classroom is a community in which each child is valued. Children learn to respect and acknowledge differences in abilities and talents and to value each person for his or her strengths.
- Social relationships are an important context for learning. Each child has strengths or interests that contribute to the overall functioning of the group. When children have opportunities to play together, work on projects in small groups, and talk with other children and adults, their own development and learning are enhanced. Interacting with other children in small groups provides a context for children to operate on the edge of their developing capacities. The learning environment enables children to construct understanding through interactions with adults and other children.
- The learning environment is designed to protect children's health and safety and is supportive of children's physiological needs for activity, sensory stimulation, fresh air, rest, and nourishment. The program provides a balance of rest and active movement for children throughout the program day. Outdoor experiences are provided for children of all ages. The program protects children's psychological safety; that is, children feel secure, relaxed, and comfortable rather than disengaged, frightened, worried, or stressed.
- Children experience an organized environment and an orderly routine that provides an overall structure in which learning takes place; the environment is dynamic and changing but predictable and comprehensible from a child's point of view. The learning environment provides a variety of materials and opportunities for children to have firsthand, meaningful experiences.

— National Association for the Education of Young Children (1996), pp. 1–2

Building community establishes a feeling of belonging and the concept of team membership. Teachers can build community in a number of ways, such as the following:

- developing a sense of "shared history" by creating opportunities for shared experiences, such as story time, collaborative writing, singing as a group, field trips, and viewing photographs of the class in various activities;
- establishing routines for bringing children together, especially at the beginning and the end of the school day;
- enlisting children's help in the management of the classroom (e.g., leading the morning opening activities, tidying up classroom learning centres);
- involving children in planning and decision making for activities such as field trips and student-led conferences;
- initiating reflective discussions (debriefings) as part of learning activities;
- sharing and celebrating accomplishments (e.g., at the end of a unit of study);
- encouraging children to help each other before seeking assistance from the teacher;
- establishing a "buddy system" or teams of older and younger students in a mixed-age or combined class;
- inviting children to participate in welcoming new members of the class and helping them adjust to their new classroom and school; and
- involving children in saying farewell to children who move away (e.g., making a "memory book" for the child who is leaving).

For more information on building community, teachers may want to refer to the *English Language Arts K to 7 Integrated Resource Package 1996* (pp. 32–33 and 54–55) and Reference Sets for *Evaluating Problem Solving Across Curriculum* (RB 0053 1995) and *Evaluating Group Communication Skills Across Curriculum* (RB 0051 1995).

Building community establishes a feeling of belonging and the concept of team membership.

## research directions

### ACADEMIC AND SOCIAL BENEFITS OF CARING CLASSROOMS

Students work harder, achieve more, and attribute more importance to schoolwork in classes in which they feel liked, accepted, and respected by the teacher and fellow students. Warm, supportive relationships also enable students to risk the new ideas and mistakes so critical to intellectual growth. (Lewis & Schaps 1996, p. 20) In a review of research, Lewis and Schaps (1996) noted positive outcomes in schools where there was a strong sense of "community":

- higher educational expectations and academic performance
- stronger motivation to learn
- greater liking for school
- less absenteeism
- greater social competence
- fewer conduct problems
- reduced drug use and delinquency
- greater commitment to democratic values

*Like a family, the caring classroom provides a sense of belonging that allows lively, critical discussions and risk-taking* (Lewis & Schaps 1996, p. 21).

# Learning Together

By moving beyond the imposition of lists of teacher's rules and taking time to establish classroom agreements (Cameron et al. 1997), teachers help children build the social skills necessary for success in any situation.

Effective teachers work with children to create an inclusive classroom in which all children can do and be their best. Realizing that "management" constantly requires monitoring, teachers enable students to take part in making their classroom a safe, productive learning community. By moving beyond the imposition of lists of teacher's rules and taking time to establish classroom agreements (Cameron et al. 1997), teachers help children build the social skills necessary for success in any situation.

Learning together requires that the needs of all class members are met. Glasser's (1998a; 1998b) view of basic human needs for self-efficacy, belonging, choice, and fun provides a useful framework for creating and evaluating classroom environments. When teachers and children work together so that each child has a sense of control over his or her own learning, problems and power struggles are more likely avoided. More time for working and learning together results.

The teacher can help children learn together by doing, as follows:

- helping children take increasing responsibility for setting their own goals, taking steps to achieve those goals, and monitoring and assessing their own progress;
- helping children who are having difficulty coping with change to develop new strategies for doing so (e.g., reflecting about change, verbalizing feelings);
- modelling, reinforcing, and teaching appropriate social attitudes, skills, and behaviours through interaction with the children;
- providing opportunities to practice behaviours such as taking turns, sharing, contributing to discussion, following group directions and ideas, and being sensitive to the needs and feelings of others;
- setting reasonable expectations for levels of co-operation and sharing for each child, recognizing that children's social behaviour is influenced by their maturity, language competence, problem-solving abilities, and overall learning needs;
- using instructional techniques that involve collaboration and co-operative learning; and
- designing group-work activities.

For more information on learning together, teachers may want to refer to the *English Language Arts K to 7 Integrated Resource Package 1996* (pp. 30–31 and 52–53).

# Learning to Solve Problems Peacefully

Children need to understand that they can choose how they solve problems. They also need to learn dispositions, skills, and strategies for effective and peaceful problem solving.

Children learn the skills of problem solving and peaceful conflict resolution in the context of a supportive, caring community (Kreidler 1984, p. 3). Kreidler lists the causes of conflict in schools as competitive atmosphere, intolerant and mistrustful atmosphere, poor communication, inappropriate expression of emotion, misuse of power by the teacher (e.g., inappropriate expectations for students, inflexible rules), and lack of conflict resolution skills. He suggests teachers show children they can settle disputes in different ways and teach them strategies for solving problems they encounter in their relationships with others. Kreidler recommends teachers consider four things when dealing with a conflict situation:

1. **Who's involved?** What are the ages and levels of maturity of the students? What are their needs?
2. **Is the time right?** Is there time to work out the problem now? Do the participants need to cool off first? Is it too late to talk it out?
3. **How appropriate is the particular resolution technique?** What is the problem? Will this technique help solve the problem? Does the technique require systematic instruction before students can use it?
4. **Should the resolution be public or private?** Would the individual and/or class benefit from class involvement? Could the class help with the resolution?

For primary children, learning to solve problems peacefully begins with their relationships with classmates and friends. Children need to understand that they can choose how they solve problems. They also need to learn dispositions, skills, and strategies for effective and peaceful problem solving. In *Positive Discipline in the Classroom*, Nelsen, Lott, and Glenn (1993) list "three empowering perceptions and four essential skills" they refer to as the "Significant Seven":

1. **perception of personal capabilities:** "I am capable."
2. **perception of significance:** "I contribute in meaningful ways, and I am genuinely needed."
3. **perception of personal power of influence over my life:** "I can influence what happens to me."
4. **intrapersonal skill:** the ability to understand personal emotions, to use that understanding to develop self-discipline and self-control and learn from experiences.
5. **interpersonal skill:** the ability to work with others through listening, communicating, co-operating, negotiating, sharing, and empathizing.
6. **strategic skill:** the ability to respond to the limits and consequences of everyday life with responsibility, adaptability, flexibility, and integrity.
7. **judgment skill:** the ability to develop wisdom and evaluate situations according to appropriate values. (p. 4)

Class meetings, which can begin as early as Kindergarten, serve to help children learn to exercise their rights and responsibilities in appropriate ways. Such class meetings can

- focus on solutions instead of consequences;
- allow students and teachers to create the agenda;

Class meetings, which can begin as early as Kindergarten, serve to help children learn to exercise their rights and responsibilities in appropriate ways.

- provide students with practice in giving compliments and showing appreciation;
- provide opportunities for students to learn problem-solving skills through role playing and brainstorming;
- enable the class as a whole to generate possible solutions and, with guidance from the teacher, discuss the benefits and disadvantages of each proposal;
- enable students to learn the reasons why people do what they do; and
- allow the individual who put an item on the agenda to choose the solution he or she thinks will be helpful, thus increasing the feeling of empowerment and accountability for that student. (Nelsen, Lott, & Glenn 1993)

For more information on solving personal and interpersonal problems and on social responsibility, teachers may want to refer to the *Personal Planning K to 7 Integrated Resource Package 1998* and the *Social Studies K to 7 Integrated Resource Package 1999*.

# Learning to Value Diversity

Social studies provides children with many opportunities to learn about cultural diversity by focusing on families and communities and diversity of heritage in British Columbia.

For primary children, an important aspect of social responsibility is learning to understand and value diversity, including culture, language, gender, race, and ability. Teachers help children increase their awareness of themselves and others by drawing attention to the similarities that all people share. Effective teachers can help children develop a respect for cultural similarities and differences, while recognizing and validating the children's own cultural backgrounds and experiences. Gradually, children learn to understand that differences add richness and diversity to our society.

Social studies provides children with many opportunities to learn about cultural diversity by focusing on families and communities and diversity of heritage in British Columbia. Teachers may also use children's literature to help children learn about their own and other cultures. Stories provide the major link between our own sense of self and our sense of others in the social world around us.

Stories, drama, and role-play let children use their imaginations and see things from different perspectives. Narratives may be fictional or relate to real life, encompassing history (other times), geography (other places), and important social issues.

For more information, teachers may want to refer to the *Social Studies K to 7 Integrated Resource Package 1998*.

## Multicultural and anti-racism education

Multicultural and anti-racism education depend on collaboration among students, parents, educators, and communities working toward social justice. In multicultural education, students come to

- recognize that everyone belongs to a cultural group;
- accept and appreciate cultural diversity as a positive feature of our society;
- affirm that all cultural groups are equal within our society;
- understand that multicultural education is for all of them;
- recognize that similarities across cultures are much greater than differences and that cultural pluralism is a positive aspect in our society;
- affirm and enhance self-esteem through pride in heritage, as well as learn to appreciate the cultural heritages of others; and
- develop cross-cultural understanding, a sense of citizenship, and a feeling of racial harmony.

Anti-racism education promotes the elimination of racism through identifying attitudes and behaviours that spread racism. It also focuses on changing policies and practices, as required. In anti-racism education, students

- learn about their own attitudes on race and anti-racism;
- understand what causes racism in order to achieve equality;
- identify and address racism at both the personal and institutional levels;

- take individual responsibility for eliminating racism;
- work toward removing barriers that marginalize groups of people; and
- act to get rid of all forms of racism, including stereotypes, prejudice, and discrimination.

## Gender equity

In the context of the school, gender equity means students' expectations and opportunities are not influenced or limited by gender. Characteristics traditionally associated with girls and women, such as caring and support, or traditionally associated with boys and men, such as risk taking and leadership, are important for all children. Gender-equitable teaching seeks to get rid of bias based on gender stereotypes and to provide students with the critical thinking skills needed to challenge the stereotypes they observe and experience.

In the context of the school, gender equity means students' expectations and opportunities are not influenced or limited by gender.

Gender bias can be created or reinforced through choice of topics or learning resources, through the organization of student groups, or through the "hidden curriculum" of attitudes and values that permeate school structure and organization. To counter it, teachers can promote gender equity and provide equal access to learning for both boys and girls in these ways:

- by ensuring that resources show both women and men in non-traditional roles;
- by modelling non-biased behaviour and using parallel or gender-sensitive language;
- by questioning and coaching girls and boys with the same specificity, frequency, and depth and allowing quiet students sufficient time to respond to questions;
- by conveying consistent messages about gender equity through expectations for classroom behaviour and play and structuring of learning activities;
- by inviting and encouraging all children to participate in all activities;
- by encouraging discussion of situations where gender bias or stereotyping is apparent; and
- by being aware of factors that enhance boys' learning, such as informal learning environments and opportunities for choice.

# Learning Responsibility

Contemporary society is faced with problems of great complexity. Ultimately, individuals require a combination of thoughtful dispositions and wise actions.

To become responsible citizens, children need to develop an understanding of their individual and collective rights and responsibilities as members of Canadian society. Class meetings throughout the year and involvement in classroom decision making and planning allow children to learn about rights and responsibilities in developmentally appropriate ways, supported by guidance from the teacher.

At the beginning of the school year, teachers might work with children to develop a class agreement, promise, or code of conduct rather than imposing a set of rules (Cameron et al. 1997). In this way, children learn not only what is expected of them, but why it is. They also come to understand the nature of responsible behaviour: taking responsibility for their actions and making thoughtful choices rather than simply obeying someone else.

Contemporary society is faced with problems of great complexity. Ultimately, individuals require a combination of thoughtful dispositions and wise actions. By inviting students to think about problems relevant to their own lives, to the lives of others, and to society in general, effective teachers can promote children's development in social responsibility.

Sometimes children with specific learning needs related to emotional and social development require additional support or particular types of interventions to enable them to work and learn more effectively. For further information in this regard, teachers may wish to refer to the following documents:

- *Supporting Our Students: A Resource for School Personnel Responding to Child Abuse (RB 0081)*
- *Problem Sexual Behaviour in Elementary School Settings (RB 0078)*
- *Focus on Bullying (RB 0077)*
- *Teaching Students with Learning and Behavioural Differences: A Resource Guide for Teachers (RB 0063)*

If we want to nurture students who will grow into lifelong learners, into self-directed seekers, into the kind of adults who are responsible even when someone is not looking, then we need to give them opportunities to practice making choices and reflecting on the outcomes. (Schneider 1996, p. 26)

## research directions

### FOSTERING SOCIAL RESPONSIBILITY

> *Everything about schooling — curriculum, teaching method, discipline, interpersonal relationships — teaches children about the human qualities that we value* (Lewis & Schaps 1996, p. 19).

A significant part of development in social responsibility comes through dialogue, reflecting on experience, and looking at how our behaviour affects others (Kohlberg 1989).

> *If we want to nurture students who will grow into lifelong learners, into self-directed seekers, into the kind of adults who are responsible even when someone is not looking, then we need to give them opportunities to practice making choices and reflecting on the outcomes. Responsibility means owning one's failures and successes — small, medium, and large* (Schneider 1996, p. 26).

Berreth and Berman (1997) identified the characteristics of schools that enhance children's social responsibility and citizenship:

- Students develop skills in goal setting, problem solving, co-operation, conflict resolution, and decision making.
- Students take part in decision making within their classroom and school.
- Educators use a problem-solving approach for discipline.
- School communities provide opportunities for service — within and outside of the school.
- Students and staff members appreciate diversity in cultures and beliefs through both study and direct experience.
- At least one caring adult is personally connected with each child.

Mixed-age groupings are particularly beneficial in enhancing children's social responsibility in a number of ways, such as these:

- creating a family-like climate that promotes helping and co-operative behaviours (Miller 1994),
- providing younger children with opportunities to observe and learn from others while older children have leadership opportunities (Chapman 1994; Katz 1990; Stright & French 1988),
- increasing older students' social responsibility (Graziano et al. 1986) and self-regulation as a result of their leadership role (Lougee & Graziano 1986), and
- creating social and academic continuity (Miller 1994).

Child-centred classrooms enhance children's social responsibility to a greater extent than skills-based classrooms (DeVries et al. 1991). Lasting difficulties related to social responsibility are highly correlated with scripted, direct instruction programs (Schweinhart & Weikart 1998). When genuinely acknowledged for their efforts and achievements, students develop socially responsible behaviour. In optimal learning environments, students feel they belong, and that they are valued and respected; they are friendlier to others and become more respectful and caring toward their peers (Kohn 1993; Lumsden 1994).

## Summary: Enhancing Children's Growth in Social Responsibility

Families and schools share the responsibility for helping students develop a sense of community mindedness. This quality, readily learned by example as well as by instruction, relates closely to citizenship values and an appreciation of gender and racial equity. Especially through social studies, teachers can help children learn to respect and appreciate cultural diversity. They can also create opportunities, such as class meetings, whereby students can exercise clearly identified rights and responsibilities, reflecting a sense of interdependence.


# Enhancing Children's Growth in Language and Literacy

## Key Points in This Chapter

- Literacy develops in real-life settings for real-life activities in order to "get things done."
- Teachers can watch for seven signs of emergent literacy, as identified by researchers Allington and Cunningham.
- The four major stages of literacy development are (1) pre-conventional, (2) emergent, (3) early, and (4) fluent. Characteristics are outlined in this chapter.
- Readers use various cueing systems, including pragmatics, semantics, syntax, and graphophonics, to construct meaning.
- As children do more writing, they tend to write in more conventional and precise ways.
- Engagement in reading and writing is the best way to improve those skills.
- A large-scale study found that exemplary instruction of first-grade students included much reading and writing, academically demanding literacy tasks, holistic approaches that integrate explicit instruction, and a positive environment.
- Phonics instruction needs to be properly timed. It should be part of the second stage of literacy learning — accuracy — not seen as the first strategy for teaching children to read.

# Developing Communication Skills

*Research shows several dimensions to the process of becoming literate, so a multi-dimensional program is the best option, rather than a balance created by synthesizing extreme positions or giving equal attention to them …*

— Joyce 1999, p. 670

LANGUAGE, IN ITS BROADEST SENSE, encompasses oral, written, and visual modes of communication.

Communication skills develop in a social environment that encourages children to communicate in natural, meaningful ways. The effective teacher promotes and develops communication by

- consciously planning learning opportunities with communication as a focus;
- modelling a caring, thoughtful, and sensitive tone in interactions with children;
- demonstrating a personal commitment to language development; and
- establishing a supportive environment.

Communication is a social process. The first goal of instruction in communication is to have students learn to communicate effectively, and the second, to have them learn about communication. Creating opportunities that encourage students to interact with the teacher, with each other, and with others in the school and community will help students to realize these goals. As well as interpersonal skills, children also need to learn academic language, the language used in thinking and learning in the various curriculum areas.

As children listen, speak, read, write, or represent, they construct meaning through language. In order to derive meaning from spoken or written words the child must actively search for meaning, and bring meaning to the experience. Effective teachers focus on meaning and communication in language rather than overemphasizing surface features such as neatness of printing.

People communicate for a purpose, and this purpose controls the type of language used. (See the discussion of genre in the "Language, Literacy, and the Curriculum" in Chapter 3, Curriculum and Context.) In order to foster language development, effective teachers provide opportunities for children to use language for a variety of functions, as shown in the next-page chart (in Chapman 1997; adapted from Halliday 1973, Smith 1977, and Tough 1976).

From infancy, children often show orientations to particular uses of language. Some children initially prefer to use language socially while others show more interest in learning language related to the physical world. Emphasizing expressive and imaginative uses of language over informative or epistemic functions may contribute to the gender gap in literacy achievement. In large-scale assessments of reading and writing, boys consistently lag behind girls through the elementary and secondary years. Teachers who are aware of gender issues in language try to ensure that boys and girls have access to a wide range of language functions.

| | Comprehending/ Understanding | Composing/ Expressing |
|---|---|---|
| **Oral** | listening | speaking |
| **Written** | reading | writing |
| **Visual** | viewing | representing |

## Language Functions and Genres

| Type of Function | Examples of Genres |
|---|---|
| **SELF-MAINTAINING**<br>to satisfy needs and wants | persuasive letters, requests |
| **DIRECTING**<br>to monitor own actions and direct/control actions of others | rules, procedures, directions, plans, agendas, contracts, reminders |
| **EXPRESSIVE**<br>to express individuality, feelings, and opinions | responses to reading, friendship notes, poems, journals of thoughts and feelings, apologies |
| **INTERPERSONAL**<br>to establish, define, and maintain social relationships | conversations, interviews, letters, invitations, thank-you notes, contests, celebrations, dialogue journals |
| **IMAGINATIVE**<br>to create images or imaginative situations; to engage in make-believe | imaginative stories, poems, role-plays, puppet plays, story drama, writing in role, scripts, storyboards |
| **INFORMATIVE**<br>to communicate information, report facts or conclusions | labels, captions, descriptions, retellings, reports, summaries, instructions, directions, explanations, timelines, messages, recipes, diagrams |
| **ENTERTAINING**<br>to enjoy; to amuse oneself and others | word play, jokes, riddles, puns; humorous descriptions, stories, situations, poems, songs; rebuses, acrostics, cartoons |
| **RECORDING**<br>to record or preserve ideas, events, and feelings | reminders, lists, graphs, charts, recollections, memory books, journals of ideas or events |
| **EPISTEMIC**<br>to explore, investigate; acquire knowledge and understanding; make personal meaning or sense of something | collections; webs, clusters, mind-maps; hypotheses, predictions; KWL (Know-Wonder-Learned); reflections; learning logs |

In order to foster language development, effective teachers provide opportunities for children to use language for a variety of functions.

# Emergent Literacy

Although children's learning about literacy can be described in terms of generalized stages, children can pass through these stages in a variety of ways and at different ages.

Becoming literate is a developmental process. Teale and Sulzby (1986) present the following key ideas about an emergent literacy perspective that are important in a discussion of learning and teaching literacy in the primary years:

- Literacy development begins long before children enter school. Children are doing critical cognitive work in this area during the years from birth to six.
- *Literacy development* is a more appropriate term than *reading readiness* because children develop as writers/readers. Furthermore, listening, speaking, reading, and writing abilities develop concurrently in an interrelated manner, rather than sequen-tially.
- Literacy develops in real-life settings for real-life activities in order to "get things done." Thus, learning about the functions of literacy is as much a part of learning about writing and reading as is learning about form.
- Children learn written language through active engagement with their world. They interact with adults in writing and reading situations, and explore print on their own. Children benefit from the modelling of literacy by significant adults, particularly their parents.
- Although children's learning about literacy can be described in terms of generalized stages, children can pass through these stages in a variety of ways and at different ages. Any attempt to "scope and sequence" instruction should take this developmental variation into account. (p. xviii)

Allington and Cunningham (1994) suggest teachers watch for these "seven signs of emergent literacy" in young children:

1. They "pretend read" favorite books and poems/songs/chants.
2. They "write" and can read what they wrote even if no one else can.
3. They can "track print" — that is, show you what to read and point to the words using left-right/top-bottom conventions.
4. They know critical [terminology] such as "word" and "letter," can point to just one word, the first word in the sentence, one letter, the first letter in the word, the longest word, etc.
5. They recognize some concrete words, their names and names of other children, [and] favorite words from books, poems, and chants.
6. They recognize if words rhyme and can make up rhymes.
7. They can name many letters and can tell you words that begin with the common initial sounds. (p. 143)

As children become literate, they learn to read and write in an integrated way. The chart on the next two pages provides an overview of children's literacy development. Teachers can use it in understanding and evaluating children's literacy development and in planning relevant experiences for children.

## Literacy Development

| | PRE-CONVENTIONAL | EMERGENT |
|---|---|---|
| Knowledge of written language | ***The child:***<br>• knows reading and writing are things people do for some purpose<br>• is aware of visual aspects of written language (e.g., the looping characteristics of cursive writing)<br>• is aware of some forms of print (e.g., letters, especially capital letters)<br>• knows books contain stories<br>• may not realize that print "tells the story"<br>• knows books are sources of information and enjoyment<br>• knows front-to-back directionality<br>• is beginning to develop phonological awareness (e.g., syllabic awareness) | ***The child:***<br>• understands the alphabetic principle<br>• understands writing as "talk written down"<br>• understands that text, as well as illustrations, carries the message<br>• is aware of some forms or genres (e.g., labels, stories)<br>• is learning letter names<br>• is developing awareness of left-to-right directionality, capitals, and punctuation<br>• is developing awareness of the phonetic principle (that there are consistent sound/symbol relationships)<br>• is developing awareness of onsets and rimes (e.g., c-at; br-ing)<br>• is developing phonemic awareness (e.g., b-r-i-ng) |
| Reading processes and skills | **Pragmatics**<br>• reads pictures rather than print (moving from labelling to telling the story)<br>• approximates some environmental print, such as signs and labels, in context<br>• relies on another person to read the text aloud<br>• sometimes uses "book language" in retellings and play | **Pragmatics**<br>• begins print-governed reading<br>• uses pictures to predict text<br>**Semantics**<br>• is growing in ability to predict meanings<br>• is developing strategies to check predictions against other cues, such as the illustration and the print itself<br>**Syntax**<br>• is developing an awareness of syntax and uses this to construct meaning<br>**Graphophonics**<br>• is establishing directionality in tracking print from left-to-right and top-to-bottom<br>• tries to match voice and print while reading (spoken words to written words) |
| Writing processes and skills | **Pragmatics**<br>• combines drawing and writing, with the drawing conveying most of the meaning<br>• may not intend to convey a particular message<br>• may ask "What does this say?" of own writing<br>**Graphophonics**<br>• may use non-conventional forms, including "loopy" writing and /or letter-like forms<br>• may produce some conventional letter forms (especially capital letters)<br>• may write familiar words, such as own name, Mom, Dad<br>• may write with non-conventional directionality<br>• may use one symbol to represent one syllable (no phonetic correspondence) | **Pragmatics**<br>• combines drawing and writing, with writing supporting and supported by the picture<br>**Semantics and Syntax**<br>• can write a caption or label to accompany drawing<br>• may read the "gist" of own writing rather than exact words<br>• writes words, phrases, or simple sentences<br>**Graphophonics**<br>• makes letters that are mostly conventional<br>• matches some letters to speech sounds, moving from initial consonants to most consonants to inclusion of vowels to all phonemes represented<br>• uses a letter name strategy<br>• may use some non-conventional word spacing |
| | **Kindergarten children are typically *pre-conventional* or *emergent* readers/writers.** | **Grade 1 children are typically *emergent* readers/writers, with most becoming *early* readers/writers by the end of the year.** |

## Literacy Development

### Knowledge of written language

#### EARLY

***The child:***

- understands writing can stand alone to convey meaning
- begins to understand writing as "ideas written down"
- understands the importance of a self-improving system in progressing as a reader
- is aware of more genres (e.g., notes, poems, lists)
- knows letter names
- is aware of phonemes in spoken words
- is increasing in knowledge of spelling patterns
- is gaining some knowledge of terminology (e.g., "letter," "word," sentence")
- shows beginning awareness of needs of an audience

#### FLUENT

***The child:***

- begins to understand writing as "ideas written down"
- understands most graphophonic patterns (word families)
- knows many writing terms (e.g., names of punctuation marks, paragraph)
- shows increasing awareness of needs of an audience/reader
- is aware of an increasing number of genres (e.g., reports, descriptions)
- shows a beginning awareness of differences between speaking and writing

### Reading processes and skills

**Pragmatics**

- uses pictures for checking rather than prediction

**Semantics**

- integrates a variety of cues to construct meaning (pictures, word meanings, context)
- makes, checks, and confirms predictions with semantic cues (knows when reading "makes sense")

**Syntax**

- makes, checks, and confirms predictions with syntax (knows when reading "sounds right")

**Graphophonics**

- has a rapidly growing sight vocabulary
- makes, checks, and confirms predictions with visual (graphophonic) cues

**Pragmatics**

- uses prior knowledge effectively to make predictions
- can read a range of genres and for a variety of purposes
- is able to read more demanding texts, including children's novels

**Semantics and Syntax**

- uses all the cueing systems in an integrated way to construct meaning (predicting, checking, and confirming/revising)
- has a variety of reading strategies for making and monitoring meaning

**Graphophonics**

- has extensive sight vocabulary (automatic recognition of many words)

### Writing processes and skills

**Pragmatics**

- combines drawing and writing; writing can stand alone to convey meaning
- is able to read own writing
- is beginning to write for different purposes
- may be willing to make some changes in own writing

**Semantics and Syntax**

- can "think aloud" on paper, jot notes, keep a journal
- can write three or more sentences in a logical sequence

**Graphophonics**

- uses invented spelling to write independently (with approximations becoming increasingly accurate)
- spells an increasing number of words conventionally
- uses some capitalization and punctuation

**Pragmatics**

- can convey meaning in writing alone, when appropriate to purpose
- is able to write for an increasing range of purposes
- is developing ability to edit and proofread

**Semantics and Syntax**

- can choose words for particular effects
- is beginning to develop "voice" as a writer
- writes a full page or more
- elaborates and supports ideas with relevant details
- uses a variety of sentence lengths and structures

**Graphophonics**

- produces mostly conventional writing
- uses classroom aids to check spelling during the proofreading stage

**Grade 2 children are typically *early* readers/writers.**

**Most Grade 3 children are *fluent* readers/writers by the end of the year.**

# Learning About Written Language

Learning about written language means becoming aware of the nature of written language, its functions and forms. In other words, learners develop **metalinguistic awareness** or **concepts of print**.

*Making rhymes and playing with words is one of the most reliable indicators that children are learning to control language. They are becoming aware of words and sounds and can manipulate these things to express themselves — and to impress others!*

— Allington & Cunningham 1994, p. 129

Learning about written language means becoming aware of the nature of written language, its functions and forms. In other words, learners develop **metalinguistic awareness** or **concepts of print**. Children develop these concepts primarily in the context of purposeful experiences, especially through independent explorations of reading and writing and through literate interactions with others. Although they come to school with vast differences in their amount of knowledge, depending on their literacy experiences (Adams 1990), all children have some knowledge about written language.

Much has been written about the importance of phonological awareness in learning to read. While it is of critical importance (Adams 1990), phonemic awareness, or the ability to hear individual speech sounds in spoken words, is but one concept among many. The chart on the following page shows the many layers of metalinguistic awareness, that concepts are nested within other concepts. It also shows how phonological awareness and phonemic awareness fit within the larger domain of metalinguistic awareness (Chapman 1999).

Effective teachers avoid fostering children's phonological and phonemic awareness in ways that interfere with other aspects of metalinguistic awareness. They instead select activities that are meaningful to the child and that help the child make connections to real reading and writing. Isolated phonemic awareness exercises are of little benefit and may actually confuse the child (Chapman 1999; Downing 1971-72; Tumner, et al. 1988).

Independent writing is one of the best sources of information as to what a child knows about written language. For example, children's non-standard spellings reveal their knowledge of alphabetic and phonetic principles, level of phonological awareness (including phonemic awareness), and knowledge of the spelling system. (See the preceding Literacy Development chart. See also the Research Directions box, "Fostering Phonemic Awareness," further in this chapter.)

Effective readers predict, sample, and confirm hypotheses about the text as they read.

## Phonological and Phonemic Awareness in Context

**Metalinguistic awareness** pertains to understanding the nature and purposes of written language. It encompasses

- **functions** (uses)
- **visual/perceptual features** (what print looks like)
- **structural characteristics** (e.g., sentence patterns, story elements)
- **procedures** (e.g., directionality, spacing, spelling, punctuation)
- **metalanguage** (language about language, such as "letter," "sound," and "word")
- **the symbolic nature of writing** (including oral-written language relationships
  - the *alphabetic principle*, that there is a relationship between printed letters and speech sounds (e.g., talk can be written down and what has been written can be read or spoken)
  - the *phonetic principle*, that there is a high consistency between sound and letter patterns (e.g., when children use letter names to figure out spelling)
  - *phonological awareness*, an awareness of sound aspects of oral language, including abilities to
    - ~ hear and create **rhyming words**
    - ~ hear and create **alliterations**
    - ~ segment the flow of speech into separate words (**concept of word**)
    - ~ hear **syllables** as "chunks" in spoken words
    - ~ separate spoken words into **onsets and rimes** (e.g., c-at; dr-ink)
    - ~ segment spoken words into phonemes — *phonemic awareness* (e.g., c / a / t and d / r / i / ng / k )
    - ~ blend phonemes into words — *phonemic awareness*

Chapman (1999b)

# The Process of Reading and Learning to Read

*"Reading is the process of constructing meaning from a written text. It is an active process involving the constant interaction between the mind of the reader, the text, and the context."*
**— National Council of Teachers of English, 1997**

Reading experts generally agree that reading is "the complex process of understanding written texts" (International Reading Association 1997). Or, as the National Council of Teachers of English (1997) put it: "Reading is the process of constructing meaning from a written text. It is an active process involving the constant interaction between the mind of the reader, the text, and the context."

Effective readers predict, sample, and confirm hypotheses about the text as they read. To do this they integrate and coordinate many interrelated sources of information. These sources, often referred to as **cueing systems**, include **pragmatics**, the context of use; **semantics**, words and their meanings; **syntax**, or structure; and **graphophonics**, conventions of print. To become effective readers, children must learn to use these sources of meaning in an integrated, balanced way. (See the diagram, "Dimensions of Written Language: Cueing Systems," on the following page.)

In their comprehensive review of research, *Building a Knowledge Base in Reading*, Braunger and Lewis (1997) propose the following core understandings about reading and learning to read:

- Reading is a construction of meaning from written text. It is an active, cognitive, and affective process.
- Background knowledge and prior experience are critical to the reading process.
- Social interaction is essential in learning to read.
- Reading and writing develop together.
- Reading involves complex thinking.
- Environments rich in literacy experiences, resources, and models facilitate reading development.
- Engagement in the reading task is a key in successfully learning to read.
- Children's understandings of print are not the same as adults'.

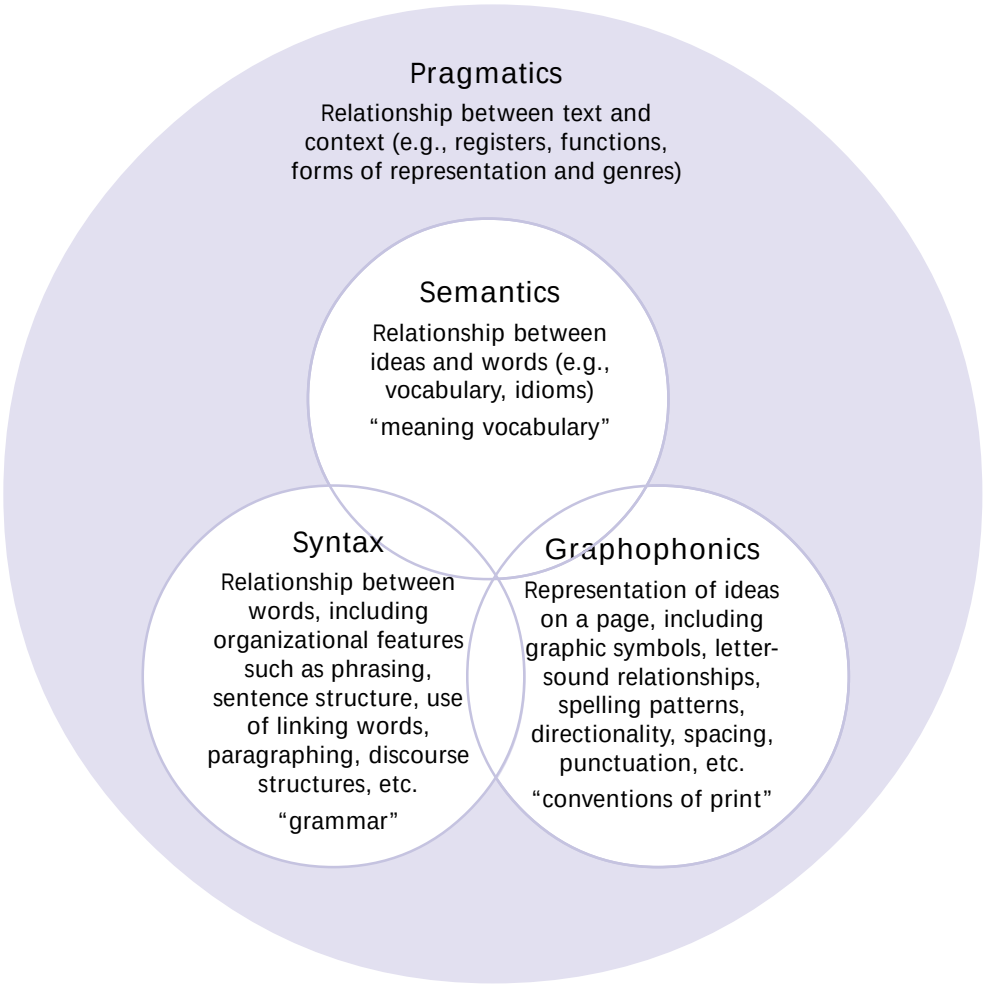
Children need to learn much about written language — the effect of context on writing (**pragmatics**), meaningful vocabulary (**semantics**), a variety of sentence patterns (**syntax**) and genres — and how the notational system, or **graphophonics**, works.

- Children develop phonemic awareness and knowledge of phonics through a variety of literacy opportunities, models, and demonstrations.
- Children learn successful reading strategies in the context of real reading.
- Children learn best when teachers employ a variety of strategies to model and demonstrate reading knowledge, strategy, and skills.
- Children need the opportunity to read, read, read.
- Monitoring the development of reading processes is vital to student success. (p. 5)

*All* children learn something about reading before they come to school, whether they come from the mainstream or minority groups, simply because so much print is in our society. Some children enter school as "pre-conventional" readers, some can be described as "emergent" readers, while others may be well on their way to developing reading fluency. The following resources provide further information about children's reading development:

- *B.C. Performance Standards*, 2000: (Reading, Grades 1 and 3)
- *Reading 44: A Core Reading Framework* — SD No. 44 (North Vancouver) Primary Program

## Dimensions of Written Language: Cueing Systems



# The Process of Writing and Learning to Write

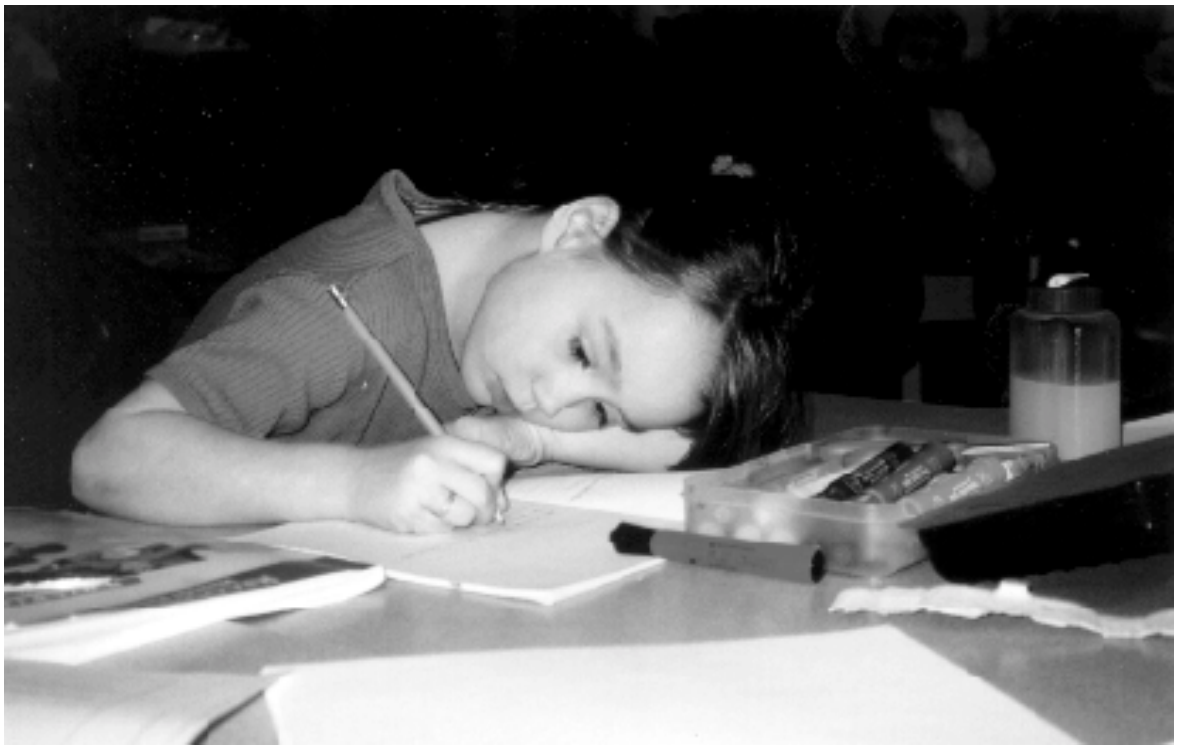
Learning to write is a complex process that involves learning to coordinate and integrate **composing**, the construction of meaning, and **encoding**, the recording or representation of ideas in written symbols on the page.

When people write, they draw on the same sources of information as in reading. Learning to write is a complex process that involves learning to coordinate and integrate **composing**, the construction of meaning, and **encoding**, the recording or representation of ideas in written symbols on the page. To do this, children need to learn much about written language — the effect of context on writing (**pragmatics**), meaningful vocabulary (**semantics**), a variety of sentence patterns (**syntax**) and genres — and how the notational system, or **graphophonics**, works. (See the figure, "Dimensions of Written Language," on the previous page.)

As children gain experience with written language, they come to know more, and their concepts change, usually becoming more conventional or precise. Their writing moves from more unconventional and gross approximations to more conventional and specific ones. Children's fluency in putting ideas into words on a page increases, they begin to use writing in more complex and sophisticated ways, and their spelling becomes more conventional. It is often difficult to see beyond this latter aspect of writing to consider less striking dimensions such as function, text structure, and elaboration of ideas.

The following resource provides further information about children's writing development:

- *B.C. Performance Standards*, 2000 (Writing, Grades 1 and 3)



Engagement with learning in general and with reading in particular enhances students' likelihood of success in school (National Academy of Education 1991, cited in Braunger & Lewis 1997).

# Learning Through Engagement in Literacy Experiences

Today we realize that reading and writing are the best forms of "literacy practice," and that through these activities, children can learn about themselves and their world.

## Learning through reading

Engagement with learning in general and with reading in particular enhances students' likelihood of success in school (National Academy of Education 1991, cited in Braunger & Lewis 1997). Guthrie (1997, cited in Braunger & Lewis 1997) explains the centrality of literate engagement with the following principles:

- Children learn to be literate through engagement.
- Engaged learners want to understand.
- Children possess intrinsic motivations for interacting with text.
- Readers [and writers] use cognitive skills to understand and share knowledge by talking with students and peers.
- Engagements are valuable in themselves, but they also lead to achievement.
- Unfortunately, some students disengage: If students struggle with learning to read and write, they lose the desire to read [and write].
- If reading [or writing] is not pursued meaningfully, children lose their interest and a decrease in achievement ensues. (pp. 35–36)

Braunger and Lewis (1997) summarize findings from research studies that show the "practice effect" of learning to read through reading.

- "Just plain reading" improves students' comprehension, vocabulary knowledge, and ability to monitor their own reading for sense and disposition to read independently.
- Access to libraries (public and school) increases reading achievement.
- To best support children, books need to be available through classroom collections and school libraries.
- Daily scheduled time for reading enhances reading skills and attitudes.
- Teacher modelling during reading time increases students' reading achievement. (pp. 54–55)

## SUPPORTING POSITION STATEMENT

### Learning to Read and Write: Developmentally Appropriate Practices for Young Children

All teachers of young children need good, foundational knowledge in language acquisition, including second-language learning, the processes of reading and writing, early literacy development, and experiences and teaching practices contributing to optimal development. (p. 197)

Learning to read and write is a complex, multifaceted process that requires a wide variety of instructional approaches … Like other complex skills, reading and writing are outcomes that result from the continual interplay of development and learning. (pp. 206–207)

The picture that emerges from research in these first years of children's reading and writing is one that emphasizes wide exposure to print and developing concepts about its forms and functions. Classrooms filled with print, language and literacy play, storybook reading, and writing allow children to experience the joy and power associated with reading and writing while mastering basic concepts about print that research has shown are strong predictors of achievement. (p. 203)

Although children's facility in *phonemic awareness* has been shown to be strongly related to later reading achievement, the precise role it plays in these early years is not fully understood. Training studies have demonstrated that phonemic awareness can be taught to children as young as age 5 … Yet, whether such training is appropriate for younger children is highly suspect. Other scholars have found that children benefit most from such training only after they have learned some letter names, shapes, and sounds and can apply what they learn to real reading in meaningful contexts (Cunningham 1990; Foorman, Novy, Francis, & Liberman 1991). Even at this later age, however, many children acquire phonemic awareness skills without specific training but as a consequence of learning to read (Ehri 1994; Wagner & Torgeson 1987). (p. 202)

Developmentally appropriate practices in reading and writing are ways of teaching that consider:

- what is generally known about children's development and learning to set achievable but challenging goals for literacy learning and to plan learning experiences and teaching strategies that vary with the age and experience of the learners;

- results of ongoing assessment of individual children's progress in reading and writing to plan next steps or to adapt instruction when children fail to make expected progress or are not at advanced levels; and
- social and cultural contexts in which children live so as to help them make sense of their learning experiences in relation to what they already know and are able to do. To teach in developmentally appropriate ways, teachers must understand *both* the continuum of reading and writing development *and* children's individual and cultural variations. Teachers must recognize when variation is within the typical range and when intervention is necessary, because early intervention is more effective and less costly than later remediation. (p. 211)

Estimating where each child is developmentally and building on that base, a key feature of all good teaching, is particularly important for the kindergarten teacher. (p. 203)

Children who are *learning English as a second language* are more likely to become readers and writers of English when they are familiar with the vocabulary and concepts in their primary language. In this respect, oral and written language experiences should be regarded as an additive process, ensuring children are able to maintain their home language while also learning to speak and read English (p. 199).

Recommended teaching practices … in kindergarten and primary grades include:

- daily experiences of being read to and independently reading meaningful texts, engaging stories and informational texts;
- a balanced instructional program that includes systematic code instruction along with meaningful reading and writing activities;
- daily opportunities and teacher support to write many kinds of texts for different purposes, including stories, lists, messages to others, poems, reports, and responses to literature;
- writing experiences that allow the flexibility to use non-conventional forms of writing at first (invented or phonic spelling) and over time to move to conventional forms;
- opportunities to work in small groups for focused instruction and collaboration with other children;
- an intellectually engaging and challenging [program of activities] that expands knowledge of the world and vocabulary; and
- adaptation of instructional strategies or more individualized instruction if the child fails to make expected progress in reading or when literacy skills are advanced. (p. 209) The IRA and NAEYC believe that early childhood teachers need to understand the developmental continuum of reading and writing and be skilled in a variety of strategies to assess and support individual children's development and learning across the continuum. At the same time, teachers must set developmentally appropriate goals for young children and then adapt instructional strategies for children whose learning and development are advanced or lag behind those goals. Good teachers make instructional decisions based on their knowledge of reading and writing, current research, appropriate expectations, and their knowledge of individual children's needs. A continuum of reading and writing development is useful for identifying challenging but achievable goals or benchmarks for children's literacy learning, remembering that individual variation is to be expected and supported. Using a developmental continuum enables teachers to assess individual children's progress against realistic goals and then adapt instruction to ensure that children continue to progress. (p. 207)

— A Joint Position Statement of the International Reading Association (IRA) and the National Association for the Education of Young Children (NAEYC) (1998)

## Learning through writing

Young children's first explorations of print often occur in writing rather than reading. These explorations allow children to experiment with written language and construct understanding of literacy concepts. When a child writes, he or she must

- attend very closely to features of letters;
- construct his or her own words, letter by letter;
- direct attention to spatial concepts;
- work within the order and constraints of print;
- break down the task to its smallest segments while at the same time synthesizing them into words and sentences; and
- engage in his or her own form of segmenting sounds in words in order to write them. (Clay 1991, p. 109)

Clay explains that the "building-up processes [in writing] complement the visual analysis of text which is a breaking-down process, and although both … occur in reading, the constructive nature … of writing is probably more obvious to the young child" (p. 109). Attention to individual sounds in words and matching sounds and symbols, as occurs in invented spelling, enhances children's spelling and decoding, with low achievers benefiting the most (Clarke 1988).

The amount of writing children do in school is correlated with their reading achievement. Both narrative and content area writing are beneficial, but content area writing makes an especially important contribution to success in reading (Dickinson & DiGisi 1998).

# Learning Through Literacy Instruction

[Effective teachers] make instructional decisions based on knowledge of the nature and purposes of literacy and the ways people become literate, research on effective literacy instruction and knowledge of the children they teach.

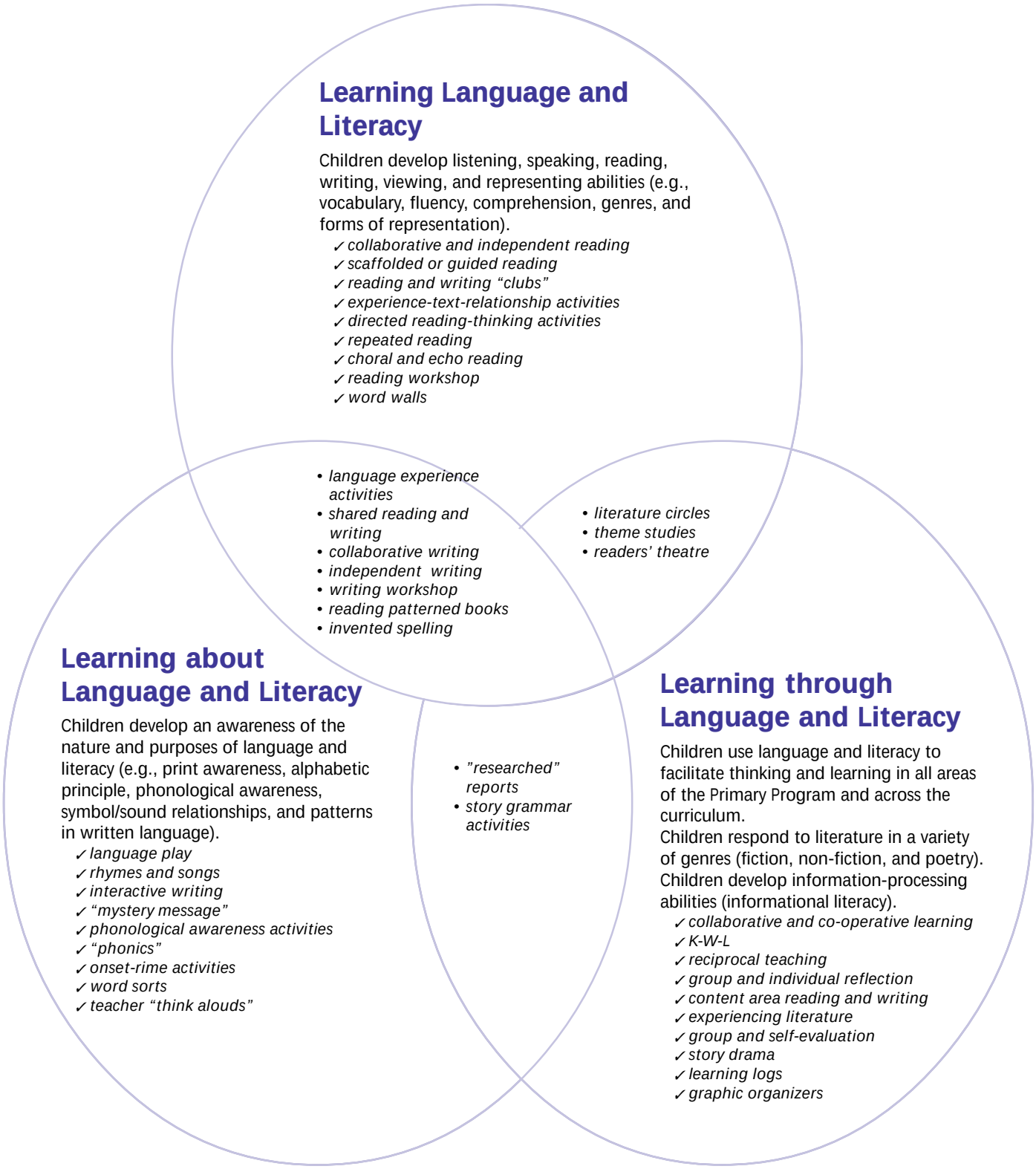
Teachers have an important role to play in helping children become effective readers and writers. They do this by designing rich literacy environments, creating opportunities for guided, collaborative, independent literacy experiences, and providing instruction. In *Unfulfilled Expectations: Home and School Influences on Literacy*, Snow et al. (1991) reported on a large study of children from low-income families. Their findings demonstrate the importance of consistently high-quality classroom instruction, particularly for children from homes in which parents do not provide high levels of support.

Effective teachers use a variety of approaches to enhance children's literacy development and learning. They make instructional decisions based on knowledge of the nature and purposes of literacy and the ways people become literate, research on effective literacy instruction and knowledge of the children they teach. Making decisions about which method to use with which children and when can be seen as "principled eclecticism" (Stahl 1997) or "thoughtful eclecticism" (Duffy & Hoffman 1999).

"Research shows several dimensions to the process of becoming literate, so a multidimensional program is the best option, rather than a balance created by synthesizing extreme positions or giving equal attention to them … We need a massive effort to implement multidimensional curricula that empower children by providing them with multiple learning skills" (Joyce 1999, p. 670).

The chart on the following page provides a repertoire of instructional possibilities that teachers might use to address children's language and literacy learning in a comprehensive and multidimensional way (Chapman 1999a).

# Multiple Dimensions of Language and Literacy Instruction




Chapman 1999

Effective literacy programs for diverse learners are comprehensive and integrated. They emphasize the construction of meaning through reading and writing and integrate skills instruction into a meaning-centred approach.

## Literacy instruction for diverse learners

*Effective literacy instruction focuses on literacy, broadly defined, and integrates language and literacy across modes of language and across disciplines. Further, it attends to reading, writing, and other kinds of skills and strategies in context, that is, in the context of reading, writing, and learning from texts that children themselves find meaningful. It also reflects a coherent integration of the best research available.*

—Weaver 1998b, p. 4

In a large-scale study that explored "exemplary first grade literacy instruction," the Center for English Learning and Achievement (CELA 1998) found common factors in the practices of teachers whose students from diverse backgrounds had high levels of literacy achievement.

- **There is high academic engagement and competence.**

  Literacy tasks are academically demanding. Ninety percent of the children are actually *doing* reading and writing — 90 percent of the children are engaged 90 percent of the time. Much teacher planning is evident and teachers believe they can and do make a difference.

- **Classroom management is excellent.**

  Expectations are clear and monitoring by teachers is evident; teachers make sure that their aides and assistants use approaches that are consistent with their expectations and actions.

- **A positive, reinforcing, co-operative environment prevails.**

  There is a sense of caring community and few discipline problems. Children help each other but learn "wait time" so they don't take over others' learning.

- **Children's self-regulation is fostered.**

  Children know why they do what they do (see Chapter 2, Learners and Learning).

- **Teachers use holistic approaches that integrate explicit skills instruction.**

  Children learn skills through lots of opportunistic teaching and reteaching. Reasonable invented spellings are accepted and high-frequency words corrected, with expectations varied according to student abilities. Among other things, children learn to use multiple cues rather than rely too much on one, such as phonics. They learn comprehension skills and strategies, common word patterns and word families, and process writing. And they learn about words, for example, through Cunningham's "making words" and word walls, and the use of spelling resources.

- **The emphasis is on literature rather than basals.**

  Teachers read outstanding literature (fiction and non-fiction); literacy themes such as author studies are intertwined with content area themes.

- **There is a lot of real reading and writing.**

  Children read easy books for independent practice and big books in shared reading; there is also buddy reading.

- **There is a match of accelerating demands to students' competence and a great deal of scaffolding.**

- **There are strong connections within the language arts and across the curriculum.**

Effective literacy programs for diverse learners are comprehensive and integrated. They emphasize the construction of meaning through reading and writing and integrate skills instruction into a meaning-centred approach. Au's (1998) research with Hawaiian children over the past 24 years demonstrates how phonics and phonemic awareness fit into the larger picture of literacy instruction for diverse learners. Her work provides insights into ways that teachers might promote literacy achievement for children

who come from diverse linguistic and cultural backgrounds, particularly aboriginal and ESL students.

- **Ownership is the overarching goal within a broad view of the curriculum.**

  A broad view of the curriculum integrates comprehension, composition and literacy aspects, and language conventions. Language conventions include text-based conventions (of which phonics is only one part) and social conventions (including conventions for participating in literacy events). Motivation for learning to read and write comes from understanding why people read and write.

- **Constructivist approaches improve both word identification and higher level thinking about text.**

  "Comprehension does not result naturally as a consequence of students being able to decode every word in a text" (p. 7). Constructivist approaches call for extensive independent reading, thus increasing students' fluency and accuracy in word identification.

- **Phonics instruction needs to be properly timed.**

  Au refers to Stahl's (1997) developmental schema, which suggests that phonics should not be the first strategy for teaching children to read. In fact, an overemphasis on phonics may prevent children from learning essential concepts of print. Stahl's sequence of literacy learning is as follows:

  **1.** awareness
     a) functions of print
     b) conventions of print
     c) forms of print (e.g., letters)
     d) awareness of phonemes
  **2.** accuracy
  **3.** automaticity

  Children need to develop all aspects of awareness (not just phonemic awareness) to become successful readers. Phonics instruction is most appropriate during the accuracy stage. In Kindergarten, many students of diverse backgrounds are in the awareness stage. An emphasis on phonics in isolation may be harmful to these students.

- **Writing makes a significant contribution to children's learning of phonics.**

  Writing, especially with invented spelling, provides the best context for teaching children letter-sound correspondences. Many research studies suggest that "children who have the opportunity to use invented spelling eventually become better spellers than children who are taught spelling by rote memorization and never have the opportunity to infer for themselves how the English spelling system works. In the case of both spelling and phonics, it is not just a matter of learning skills but of applying these skills in the context of real reading and writing" (p.10).

- **Phonics should be embedded in meaningful contexts.**

  Phonics instruction is effective when it is systematic, but this does not imply a rigid program. Instruction is systematic when it is planned, deliberate in application, and proceeds in an orderly manner. Rather than a rigid progression of one-size-fits-all teaching, it means a thoughtfully planned program that accounts for learner variability. Instruction on any particular skill or strategy should be based on need; thus, intensity will vary with individuals and groups.

  There is no scientifically validated sequence for teaching particular concepts or skills. Instead, effective phonics instruction

There is no scientifically validated sequence for teaching particular concepts or skills. Instead, effective phonics instruction is based on ongoing assessment and decision making about what makes sense for this child to learn next.

is based on ongoing assessment and decision making about what makes sense for this child to learn next. Documenting and monitoring student learning enable the teacher to determine the order in which skills should be addressed and the level of intensity required. Invented spellings, running records, and miscue analysis provide a good basis for decision making.

- **Literacy learning is supported by a continuum of instructional approaches rather than a single approach.**

  Possible approaches include teacher read-alouds, directed reading, guided discussion, and use of literature discussion groups.

## research directions

### WHAT MAKES LEARNING TO READ EASIER OR HARDER?

Braunger and Lewis (1997), Flippo (1997), and Strickland (1998) have identified the following agreements from diverse philosophical perspectives on teaching reading.

*Learning to read is enhanced by*

- integrating the language arts,
- integrating skills and meaning,
- talking about and sharing different kinds of reading,
- focusing on using reading as a tool for learning,
- making reading functional and purposeful,
- developing positive self-perceptions and expectations about reading, and
- using silent reading whenever possible and whenever appropriate to purpose.

*Learning to read is hindered by*

- emphasizing only phonics,
- drilling isolated letters and sounds,
- teaching letters and words one at a time,
- insisting on correctness,
- expecting students to spell correctly all the words they can read,
- making perfect oral reading the goal of reading instruction,
- focusing on skills rather than interpretation and comprehension,
- constantly using workbooks and worksheets,
- adopting fixed-ability grouping, and
- adhering rigidly to a basal program.

## research directions

### WHAT'S BEST IN BEGINNING READING?

Debates about the best ways to help children in the early stages of learning to read stem from differing views of reading. Phonics-first advocates consider reading to be word identification or decoding; those who propose a more comprehensive approach (of which word identification plays a part) view reading as a meaning-making process.

The latter approach informs the B.C. English Language Arts Curriculum and the Primary Program. Direct-instruction phonics may produce higher initial scores on phonemic awareness and word attack skills and sometimes on comprehension tests, particularly with children labelled at risk or reading disabled, when they are tutored one-on-one or in very small groups. However, this advantage seems not to last very long, particularly for comprehension tests.

> *Students in classrooms where skills are taught in the context of reading and writing whole texts have typically made substantially greater advances in a variety of literacy-related skills, strategies, behaviours, and attitudes. Thus, such teaching may be superior overall to skills-intensive and phonics-intensive teaching, at least for the majority of our children.* (Weaver 1998b, p. 39)

Children need to read texts at an appropriate level of difficulty (Hart-Hewing & Wells 1999; Pinnell & Fountas 1996). Books that are predictable, including patterned books, are beneficial for very young readers (McCormick & Mason 1986). However, there is no research that supports the use of "decodable texts" such as *Nan can fan the man* (Allington 1998; Pearson 1998c; Weaver 1998). Decodable texts are more difficult for children to read than texts with natural language patterns and a wider range of vocabulary (Weaver 1998). They do not engage children with ideas, which is what all print should do even at the youngest levels of schooling (Pearson 1998).

Research on beginning reading suggests that children learning to read need

- time for reading and learning;
- texts of all kinds and rich resources for learning to read;
- knowledgeable and supportive teachers;
- appropriate instruction in skills and strategies;
- demonstrations of how readers, writers, and texts work;
- other readers, both novice and expert; and
- opportunities to reflect on their own reading processes. (Braunger & Lewis 1997, p. 62)

> *Primary-level classroom environments in successful schools provide opportunities for students to apply what they have learned in teacher-guided instruction to everyday reading and writing. In these classrooms, teachers read books aloud and hold follow-up discussions, children read independently every day, and children write stories and keep journals. These events are monitored frequently by teachers, ensuring that time is well spent and that children receive feedback on their efforts. Teachers design these events carefully, using information from ongoing assessment of children's strengths and needs as the primary basis for new activities.* (International Reading Association 1998a, p. 3)

## research directions

### FOSTERING PHONEMIC AWARENESS

Phonemic awareness plays a critical role in learning to read (Adams 1990). Most children (80–85 percent) acquire phonemic awareness by the middle of Grade 1 as a result of typical experiences at home and at school (Allington 1997). Phonemic awareness is very likely to develop as a consequence of learning phonics, learning to read, and learning to write, especially when teachers encourage children to use invented spellings (Adams 1990; Allington & Cunningham 1996; Juel 1988; Snow, Burns, & Griffin 1998).

> *Children who are allowed and encouraged to "invent spell" develop an early and strong sense of phonological awareness. For too long, we have failed to recognize the potential of early and regular writing activities in developing children's awareness of print detail and their understanding of how speech and print are related.* (Allington & Cunningham 1996, p. 130)

Some children may need more explicit instruction in phonemic awareness, but in general the development of phonemic awareness in emergent readers and writers is supported by the following:

- *language play*, especially games that emphasize rhyming, and thinking about the structure of words, particularly at the onset/rime level rather than the individual phonemic level;
- *opportunities to help children notice and use letters and words* (e.g., alphabet centres, word walls);
- *invented spelling*, children's independent attempts at figuring out words when they write;
- *language experience*, dictation of children's own language;
- *reading [and writing] for meaning*, including modelling of how to use phonemic knowledge in figuring out words both in reading and writing, and providing manageable texts for beginning readers to apply their phonemic knowledge successfully; and
- *rich experiences with language, environmental print, patterned stories, and "Big Books"* that provide opportunities for modelling, demonstrating, and explicitly teaching phonemic awareness. (Braunger & Lewis 1997, pp. 42–43)

Children who are not developing phonemic awareness by the middle of Grade 1 need to be identified and offered intensive programs of support. However, researchers who have conducted re-analyses of the experimental research on phonemic awareness (e.g., Coles 2000; Allington et al. 1998; Taylor 1998; Troia 1999; Weaver 1998) caution that "we do not have adequate evidence that phonological awareness treatment programs are valid and effective in classroom environments" (Troia 1999). While some people advocate allocating large amounts of time to teaching phonemic awareness, no longitudinal studies support the effectiveness of this practice in increasing the reading achievement of children when they reach the intermediate grades (IRA 1998).

## research directions

### TEACHING PHONICS

*Effective teachers recognize phonics and phonemic awareness as useful tools for successful reading and writing. But they are also aware of the dangers of over-reliance on one method of word recognition and the potential deterrent to successful reading.* (Strickland 1998, p. 10)

Knowledge of the relationship between letters (or combinations of letters) and specific, spoken sounds can be taught effectively through a wide variety of methods of teaching phonics. However, there is little evidence that one form of phonics instruction is strongly superior to another (Allington 1998; Stahl, McKenna, & Pagnucco 1994).

In a position statement, *The Role of Phonics in Reading Instruction*, the International Reading Association (1997) affirms that phonics is an essential aspect of beginning reading instruction, one that teachers do value and do teach. It warns, however, that **"exaggerated claims of the failure of students in learning to read serve only to divert our attention, energies, and resources from the important issues we must face. Explanations that focus on simple solutions like more phonics instruction are misguided. The problems we face [in ensuring that all children learn to read] are complex and require inquiring minds."**

The IRA position statement asserts three basic principles regarding the role of phonics in the teaching of reading:

1. **The teaching of phonics is an important aspect of beginning reading**. There is nearly unanimous regard for its importance, but not unanimity in agreement as to methodology because no one method has been proven to be more effective than others.
2. **Classroom teachers in the primary grades do value and do teach phonics as part of their reading program.** Effective teachers make appropriate instructional decisions for the inclusion of phonics based upon their knowledge of children and their language development. The document concludes that "programs that constrain teachers from using their professional judgment in making instructional decisions about what is best in phonics instruction for students simply get in the way of good teaching practices."
3. **Phonics instruction, to be effective in promoting independence in reading, must be embedded in the context of a total reading/language arts program.** Specific instruction in phonics is meaningful for learners when it is within meaningful contexts of language use (e.g., interesting and informative books, nursery rhymes, poetry, and songs) that provide patterns and structures to support their understanding.

*The worst kind of phonics instruction … is devoid of meaning and isolated from real reading and writing. Furthermore, the letter-by-letter sounding it teaches is not consistent with what we know about how phonics actually works. (Cunningham 1995, p. 179)*

While there are good materials available to support literacy instruction, educators need to read promotional materials critically, especially "research" claims for effectiveness.

## research directions

### EVALUATING MATERIALS FOR READING INSTRUCTION

> *There is no "quick fix" for children who are struggling with reading, despite the claims made for many packages … If a phonics package implies that its instruction is all that is needed to turn children into readers, be cautious!* (Osborn, Stahl, & Stein 1997)

While there are good materials available to support literacy instruction, educators need to read promotional materials critically, especially "research" claims for effectiveness. Although publishers may state that their material is based on "scientific research," it may not meet the criteria established for the Primary Program (see Rationale). The "research" cited may, for example, have used measures that do not represent real reading (e.g., tests with lists of "pseudowords" or tests that equate accuracy of word reading with comprehension).

In analysing "research" that different American reading programs claim as proof of effectiveness, Allington and Woodside-Jiron (1997), Coles (2000), and Taylor (1998) found multiple ethical and procedural errors in the "research" reported, including conflicts of interests between some publishers and some researchers, critical flaws and biases in the research design and analyses, misrepresentation and exaggeration of results, and assertions of research findings without any supporting evidence. In a presentation to the U.S. National Reading Panel, Allington cautioned that research has shown consistently that there are "no proven programs" and that current "programs that are advertised as 'proven,' have uneven records of student achievement" (IRA 1998b, p. 6). Moreover, there is no research evidence to support the use of "decodable" texts.

In analysis of promotional materials for commercial phonics programs, Osborn, Stahl, and Stein (1997) noted some "disturbing trends":

- Advertising claims are often confusing and misleading.
- Materials are difficult to evaluate.
- Claims of effectiveness are almost impossible to verify. (p. 2)

The International Reading Association (1997) has developed research-based guidelines for evaluating commercial phonics packages. When considering the use of commercially produced materials for teaching phonics, the IRA suggests teachers keep in mind the characteristics of good reading instruction:

- Good phonics instruction is only one part of beginning reading instruction.
- Good phonics instruction helps children recognize the individual sounds that make up spoken words (phonemic awareness).
- Good phonics instruction helps children recognize letters and also understand the relationships between letters and the sounds they stand for.
- It provides related reading practice.
- It promotes spelling and writing practice.
- Good phonics programs offer a reasonable time schedule and sequence of lessons.
- Good programs are carefully developed and provide evidence of effectiveness.

## research directions

### SUPPORTING STRUGGLING READERS

Students may struggle with reading for a number of reasons, including social and cultural factors such as poverty, ability in speaking English, prior experiences with literacy, learning difficulties, and special needs. Some children have difficulty with phonemic awareness; some pay too little attention to word patterns or print features (Clay 1991). There is no one method that is appropriate for all children who struggle in learning to read. Thus, teachers must be aware of the child's background (social, economic, cultural) and needs (type of variability, learning style).

Braunger and Lewis (1997) identified factors critical to providing supportive environments for children who struggle with reading. These factors are reflected in programs that are successful in helping struggling readers:

- *access and opportunity to a wide variety of reading materials:* These materials need to reflect meaning and authenticity for individual readers as well as a manageable level of text.
- *reader motivation to want to read and want to engage in reading:* Readers need to see reasons and purposes for reading that relate to their perceptions of the world.
- *time to really read real texts:* Struggling readers need more time to read, and more time with high-quality instruction (Allington & Cunningham 1996).
- *supportive instruction in the "how-tos" of reading:* Teachers, peers, parents, and other sophisticated users offer demonstrations, guidance, and feedback in how to read.
- *self-esteem and confidence, which play integral roles in successful reading development:* Children need to feel positive about their attempts and their progress.
- *high expectations for success in a supported environment.* (p. 28)

Many studies support the notion that students whose first language is not English need programs that provide a balance of explicit instruction and student-directed activities, incorporating aspects of both traditional and meaning-based curricula (Goldenberg & Gallimore 1991; Goldenberg & Sullivan 1994, cited in Braunger & Lewis 1997). Instruction for cultural, ethnic, and linguistic minority students that is primarily skills-based may limit children's learning by failing to develop their analytical skills or conceptual skills or by failing to provide purposes for learning (Au 1993; Knapp & Shields 1990).

While many children in special education or remedial programs need some type of explicit skills instruction, "like any child learning to read they also require many other types of instruction to succeed. These include instruction in strategy use, practicing in appropriate texts, and employing metacognitive strategies" (Braunger & Lewis 1997).

Reading and writing are enhanced when they are taught and learned together (Shanahan & Lomax 1986).

## research directions

### ENHANCING CHILDREN'S WRITING DEVELOPMENT

> *Play serves as a way of exploring and transforming ideas when children were writing. Children played with language and its sounds and spellings. Role playing generated and extended ideas for writing and helped child writers make decisions about stories. These child-initiated playful interactions occurred spontaneously when young writers were free to explore meanings and interpret their experience through writing.* (Dahl & Farnan 1996, p. 26)

Young children, especially boys, write more, have more positive attitudes toward writing, and produce better writing in informal rather than formal environments (Graves 1975). Primary children need opportunities to write, many of them playful (Emig 1981).

As children learn to write, they grapple with the tensions between their imaginations and experiences (the world) and the written language conventions they need to communicate their meanings (the word) (Dyson 1991). They are learning not only about their own purposes and meanings but also the expectations and needs of others (Dyson 1995). "'One size fits all' writing assignments ignore the communicative function of writing and focus solely on technique. The job for teachers is to help students learn technique in the context of their communication." (Dahl & Farnan 1996, p. 33)

Reading and writing are enhanced when they are taught and learned together (Shanahan & Lomax 1986). To enhance thinking and learning from multiple perspectives, combining reading and writing is more effective teaching than either reading or writing alone (Tierney, Soter, O'Flahavan, & McGinley 1989).

"Prewriting is especially important for young children. As their writing develops, evidence of planning and rehearsal of ideas prior to writing begin to appear, and speaking aloud before and during composing disappears." (Dahl & Farnon 1996, p. 25) Elements of the writing process, especially prewriting strategies such as making lists, webs, or diagrams, enhance children's writing abilities (Goldstein & Carr 1996).

The most effective way to enhance children's growth in writing is to use a comprehensive writing program that provides children with

- many opportunities to write,
- independent and collaborative engagement,
- small-group problem-centred discussions concerning specific tasks, and
- instruction in strategies (such as prewriting and revision), especially teacher modelling with think-aloud explanations (Hillocks 1986).

There is a need for balance between complete teacher control and complete student autonomy; teacher guidance and scaffolding are central to the success of writing workshop approaches (Lensmire 1994).

Primary children are able to write for a variety of purposes and in various genres; their writing development is enhanced by experiences in a range of situations that incorporate writing (Chapman 1995). In addition to stories and personal writing (e.g., journals), children benefit from "classroom workplace" writing (e.g., reminders, plans), writing across the curriculum (e.g., reports, descriptions), and writing to learn (e.g., learning logs).

Interactive, thought-engaging lessons are more productive than spelling lists and tests (Cunningham 1995; Wilde 1992).

## research directions

### HELPING CHILDREN LEARN TO SPELL

Learning to spell is a developmental "process of coming to understand how words work — the conventions that govern their structure and how their structure signals sound *and* meaning (Berninger 1994, 1995; Brown & Ellis 1994; Read & Hodges 1982; Templeton & Bear 1992; Templeton & Morris, in press)" (Templeton & Morris 1999, pp. 102–103). At each stage of development, children spell by analogy (Cunningham 1995). Templeton and Morris conclude as follows:

> *As with any other type of learning, learning about spelling of words is* conceptual *learning and proceeds from a more concrete to a more abstract level of understanding and analysis … Reading and writing are the conditions in which spelling knowledge is developed and exercised most fully. For most students, however, the explicit examination and exploration of words outside of actual reading and writing are necessary.* (p. 105)

> *Instructional emphasis is placed on the exploration of* patterns *that can be determined in the sound, structure, and meaning features of words — as opposed to the single-minded focus on learning how to spell the 5,000 plus most frequently occurring words in writing or particular words that may be problematic for individual students.* (p. 103)

> *Explicit instruction involves teacher-directed as well as student-directed examination of words. Teacher-directed does not mean teaching spelling rules — in fact, trying to teach spelling through rules is one of the least effective approaches once can take (Hanna et al. 1966; Horn 1969). What teacher-directed learning* does *involve is organizing the examination of words in such a way as to guide students to an understanding of how particular spelling features and patterns operate.* (pp. 108–109)

Emergent writers explore the *alphabetic layer* of spelling by making connections between the sounds they hear and the alphabet letters (Read 1975; Templeton & Morris 1999). Exploration of conventional spelling may begin once children "have attained full phonemic awareness … and are representing consonants and vowels in their invented spelling" (Templeton & Morris 1999, p. 108). Emergent writers learn consonant sounds easily; instruction should focus on confusing short-vowel spellings as well as several consonant blends and digraphs (e.g., onsets and rimes) (Allen 1998).

Next, children begin to explore the *pattern layer*, which is "more conceptually advanced because learners come to understand that spelling does not always work in a strictly left-to-right fashion; groups or *patterns* of letters work together to represent sounds" (Templeton & Morris 1999, p. 105). At this stage, children can benefit from instruction in long-vowel patterns since they now have the underlying word knowledge and conception of how the system works (Templeton & Morris 1999). More advanced students can begin to explore syllable patterns and spelling-meaning relationships.

At the primary level, word study should focus on words children know as sight words in reading and be limited to 10 words or fewer per week. Interactive, thought-engaging lessons are more productive than spelling lists and tests (Cunningham 1995; Wilde 1992).

## Summary: Enhancing Children's Growth in Language and Literacy

Much research, reflected in this chapter, has gone into the vitally important curriculum area of language and literacy. This chapter featured a series of Research Directions boxes which address such issues as the factors that make learning to read easier or harder, the importance of phonemic awareness, the nature of effective phonics teaching, ways to support struggling readers and young spellers, and insights into enhancing children's writing development. Teachers may wish to share these research summaries with other educators and parents.


# Enhancing Children's Growth in Numeracy

## Key Points in This Chapter

- Numerate individuals understand mathematics in personally meaningful terms and feel confident about drawing on their knowledge and applying it as necessary.
- Mathematics helps people make sense of the world.
- Some of the major aspects of mathematical knowledge that go beyond dealing with numbers and operations include number sense, spatial sense, statistical sense, and sense of patterns and relationships.
- Numeracy takes into account the intuitive and constructive nature of early mathematical thinking which grows from children's need to describe various elements of their world.
- There are important similarities between numeracy and literacy.
- Children benefit from seeing how new conceptual tools can more efficiently help them achieve their desired goal. Effective teaching enables them to connect new learning with prior knowledge.
- Number sense is the most important foundation for numeracy. As students develop it, they gain the ability to visualize number, to have a sense of relative values, and a sense for what is reasonable. They move beyond counting by ones to use known facts, patterns, and relationships in meaningful ways.
- Teachers can foster students' mathematical understanding by recognizing and highlighting clear thinking, creative solutions, reflective thinking, meaningful reasoning, and children's attempts to use what they know to figure out what they don't know.

# Numeracy

**[Numerate individuals] have a sense of number, space, pattern, and relationship that enables them to see mathematics in all aspects of their lives.**

NUMERACY IS MORE THAN MATHEmatics,and certainly more than computation. Numerate individuals not only "know" mathematics, but understand it in personally meaningful terms. They use mathematics to help them make sense of the world. They have a sense of number, space, probability, pattern, and relationship that enables them to see mathematics in all aspects of their lives. They feel competent about their ability to draw on the necessary knowledge and apply it with confidence in new and unexpected ways. Children become numerate as they integrate their new learning and use it as part of their being rather than perceiving it as inert knowledge.

Both literacy and numeracy are essential skills in modern society, a wide range of people both inside and outside the educational system are beginning to recognize numeracy as a necessary literacy for the next century. Just as there is more to literacy than teaching the rules and procedures of language, however, there is more to numeracy than teaching the rules and procedures of mathematics. Indeed, for many young children passing through the school system, it is not "the algorithms for subtraction [etc.] that are absent but rather the knowledge about when to invoke these skills and the inclination to do so productively in one's daily life" (Gardner 1991, p. 187).

Numeracy develops at the intersection of the child's intuition and the real world. It provides a means to make sense when words alone fail. Children dividing a chocolate bar recognize *equal* parts, though they may be unfamiliar with the standard meaning for "equals." The challenge is connecting this intuitive knowledge with the conventional language of mathematics. Although this process begins at birth, the primary years are critical in establishing relationships among the child's intuition, mathematics, and the real world.

## Numeracy and literacy — the similarities

The development of numeracy has much in common with the development of literacy. Like learning to read, learning to "do" mathematics (reason mathematically, solve problems with the help of mathematics, etc.) requires children to integrate and coordinate context, meaning, structure, and convention. Numeracy develops as children learn to balance these sources of meaning, and are willing and able to call upon and apply their understanding of mathematics in their present and future lives.

Just as they need to understand the use of letters, words, and sentences in order to read and write, children must also learn the abstract symbolic conventions used in mathematics to represent concepts (e.g., +, =). They must know these before they can fully and effectively communicate their thinking in this domain. To extend the analogy between literacy and numeracy, number sense is comparable to the oral/aural language base — an essential precursor to further numeracy/literacy development.

The primary teacher has as critical a role in helping students become numerate as in helping them become literate. Likewise, the list of core understandings about reading and learning to read can be easily adapted to apply to learning to do mathematics:

- Mathematics involves the construction of meaning. It is an active, cognitive, and affective process that is dedicated to describing and making sense of the quantitative and spatial nature of the world.
- Background knowledge and prior experience are critical to the ongoing development of mathematical understanding.
- Social interaction helps ensure students understand the place of mathematics in their lives and in the life of their community.
- Instructional contexts that encourage risk-taking, experimenting, and playing with or manipulating objects and numbers support the development of numeracy.
- Numeracy involves complex thinking that draws on relevant mathematical content and appropriate mathematical processes.
- The patterns and relationships among mathematical ideas are as important as the techniques used to derive specific answers.
- Children learn successful strategies when they are able to connect mathematics with the real world.
- Children require multiple, varied experiences to learn mathematical concepts and skills.
- Early concept development is critical as a foundation for subsequent mathematical understanding. Teachers need to carefully monitor the development of children's understanding of quantitative and spatial concepts to ensure a solid foundation for future learning.

The primary teacher has as critical a role in helping students become numerate as in helping them become literate.

"Children learn by doing, their actions helping construct their personal knowledge. Involvement in learning increases, as does long-term retention. Active, exploratory learning works as well in mathematics as it does in science."
*— Steen 1991*

## Numeracy and communication

Developing numeracy goes hand in hand with developing the capacity to communicate with others about mathematical concepts. Thoughtful and strategic planning will help to create a learning environment that will encourage the full development of communicative numeracy. An effective teacher strives to develop a class where communication promotes numeracy, as follows:

- planning individual and group learning activities that use communication to develop the mathematics;
- using a caring, thoughtful, and sensitive tone in interactions intended to foster children's emerging numeracy;
- modelling a personal curiosity and commitment to numeracy development; and
- continuously conducting formative evaluations of the extent to which individual primary students have developed number sense (and secondarily, spatial sense, statistical sense, and sense of pattern and relationship).

Children learn any new language by using it to construct meaning in the world they inhabit (see "Constructing Meaning" in Chapter 2, Learners and Learning). As children are introduced to the cultural legacy known as mathematics, they must be given opportunities to bring and discover personal meaning using the "words, phrases, and metaphors" of their new language.

"Children learn by doing, their actions helping construct their personal knowledge. Involvement in learning increases, as does long-term retention. Active, exploratory learning works as well in mathematics as it does in science" (Steen 1991).

The previous statement emphasizes the importance of providing students with a context in which to extend and reflect on their learning. If mathematics is just memorization and calculations, the only meaning for students may simply be whether they pass or fail in performing the operation. The challenge is to provide a social setting where students can guess at, discuss, defend, and refine their own intuitive ideas, as they move from the concrete world of comparing and counting to the abstract world of conventional mathematics.

By using mathematical skills in their interactions with each other, the teacher, and others in the school and community, children develop mathematical fluency and come to understand the real-world applications of mathematics.

# Fostering Numeracy

The rudiments of mathematical thinking grow from the child's need to describe the quantitative, spatial, or chance elements of his or her world.

## Emergent numeracy

The rudiments of mathematical thinking grow from the child's need to describe the quantitative, spatial, or chance elements of his or her world. The following key ideas reflect that numeracy is a naturally developing process which must be understood for the teaching and learning of mathematics in the primary years.

- Numeracy development starts long before children enter school. Children do critical cognitive work in this area from birth to age six.
- The term *numeracy* is, perhaps, more useful than *mathematics* in describing this emerging "readiness" because it takes into account the intuitive and constructive nature of early mathematical thinking. The conventions of mathematics are the tools that complement this thinking; they do not, however, fully constitute the thinking.
- Numeracy develops as children "experience the world." As they "get things done" they learn the language, phrases, and metaphors that describe the relationships among things (e.g., more than, the same as).
- The knowledge and skills associated with numeracy are interrelated and are not necessarily acquired in any particular sequence.
- Although there are stages of numeracy development, children experience them in different ways and at different ages.
- Much of numeracy is learned as children interact with adults in situations calling for mathematics (Anderson 1997). The modelling of numeracy by adults, particularly parents, has a powerful effect on children's attitude about and achievement in mathematics (Leder 1992).

The B.C. performance standards for numeracy provide further information about children's developing numeracy skills. The performance standards focus on four aspects of numeracy:

- concepts and applications
- strategies and approaches
- accuracy
- representation and communication

### Signs of Emergent Numeracy

***The child***

- uses mathematical terms to describe the world (half, equal, seven, bigger, more)
- begins to use numbers to describe his or her thinking although the numbers may not be accurately used
- sorts and groups favourite things, can recognize differences among similar items, and can reclassify a group based on a second characteristic
- shows curiosity and a willingness to take risks in problems encountered
- can manipulate three-dimensional and two-dimensional objects (e.g., puzzles, toys, tools) to achieve some objectives
- begins to anticipate expected outcomes in situations of chance (cards, dice)
- can express his or her thinking when problem-solving and provide alternative solutions
- can express her or his thinking about what is happening in a mathematical situation

Children gain a deeper understanding of their new mathematical learning when they use it to describe, make sense of, and solve problems that they can recognize as important and relevant to their own lives.

## Mathematical readiness

Children arrive at school with a great variation in their readiness to do mathematics. Aptitude, experience, and even personality can influence a child's readiness for mathematical learning. For effective growth in numeracy skills, learning should develop naturally as a partnership between the child's intuitive and conventional understanding. Children gain a deeper understanding of their new mathematical learning when they use it to describe, make sense of, and solve problems that they can recognize as important and relevant to their own lives. By helping children make the mathematics "work for them" rather than have them "work for the mathematics," teachers empower children to understand and explain the quantitative and spatial aspects of their world.

The development of numeracy in children depends on a readiness for the new learning. Children need to feel a comfort and confidence with the understanding and skills they are already using to make sense of the world. When introducing mathematical concepts or skills, effective teachers allow sufficient time for children to integrate the new learning with understandings they already possess. Doing so allows them to consolidate understanding as well as develop technique.

As children mature, their understanding of concepts such as "similar," "bigger," "ordering," and "grouping" supports their learning of processes such as counting (e.g., the significance of two-digit and three-digit numbers), addition, and eventually multiplication. When new concepts and processes are introduced, children benefit from seeing how their existing repertoires of conceptual tools are no longer as helpful in achieving the desired goal. For example, multiplication makes sense when children begin to find addition a laborious way of combining several identical groups to determine a total quantity. What they are learning, then, is more than just another layer of conventional language and procedure, but a way of dealing effectively with the real world.

If children are encouraged to see situations in more than one way, they develop more flexible thinking and a richer repertoire of problem-solving strategies. Flexible approaches help students understand that the use of mathematical procedures and conventional descriptions depends on context and purpose. Open-ended activities and questions stimulate discussion, risk taking, and curiosity, and contribute to self-confidence (Spungin 1996; Liedtke, Kallio, and O'Brien 1999).

## Introducing mathematics

Children require concrete experience with mathematics in order to become numerate. This concrete experience takes two forms:

1. the use of manipulatives and physical materials that enable children to visualize concepts; and
2. real-world situations in which the value of mathematics becomes evident to children and in which the numbers and operations are meaningful and relevant to their curiosity and interests.

An important characteristic of numerate children is an inclination to draw upon their mathematical knowledge and apply it in new contexts. To facilitate development of this capacity, the abstract and conventional operations of mathematics should be introduced in contexts that captivate children's imaginations and connect to their experience.

A common misconception about mathematics instruction is that if children learn the skills well, they will be able to draw upon them later and apply them to deal with some real-world problem. However, in order to do so, they need opportunities to discover how people in various walks of life actually use mathematics. They also need direction to look for the mathematics in real-world situations. When children are introduced to the concepts and corresponding skills in an appropriate and timely way, and when they are given enough time to internalize key concepts, they are more likely to become numerate. Effective teachers actively and intentionally guide children to see the relationships between their own intuition, the real world, and the concepts and skills of mathematics.

Even the youngest children do mathematical tasks naturally as part of their play.

### MATHEMATICAL DISPOSITION

The inclination or disposition to make sense is a critical aspect of numeracy. In the Curriculum and Education Standards (National Council of Teachers of Mathematics 1989, p. 233), seven components of mathematical disposition are identified:

### Teaching for Numeracy

***Effective teaching reflects the following trends:***

| Moving from | Moving toward |
|---|---|
| • students always working in isolation | • more use of co-operative groups |
| • the entire emphasis put on accuracy of calculations | • an emphasis on ability to estimate and assess the reasonableness of answers |
| • an emphasis on getting the right answer ("product" approach) | • an emphasis on flexible approaches to solving problems and on the ability to explain reasoning ("process" approach) |
| • the use of contrived problem situations to teach mathematics | • the use of real-life situations that require mathematics |
| • discrete and decontextualized teaching of mathematical operations and processes (computation drill worksheets) | • the fostering of all aspects of numeracy — the abilities to grasp concepts, explain operations, carry out procedures, and describe their applications |

Effective teachers actively and intentionally guide children to see the relationships between their own intuition, the real world, and the concepts and skills of mathematics.

1. *confidence* in using mathematics
2. *flexibility* in exploring mathematical ideas
3. willingness to *persevere*
4. interest, *curiosity*, and inventiveness
5. inclination to monitor and *reflect on own thinking*
6. *valuing* the application of mathematics
7. *appreciation* of the role of mathematics

## THINKING STRATEGIES AND PROCESSES

Greenwood (1995) has developed criteria for mathematical thinking. A child is thinking mathematically when he or she does the following:

- takes steps that make sense
- identifies errors in answers and thinking
- uses a minimum of counting for computations
- uses a minimum of rote pencil-paper calculations
- considers trying another strategy when one strategy is not working
- extends or changes a problem situation to get "unstuck"

An effective approach to fostering numeracy will emphasize connecting and mathematical thinking. **Connecting** involves linking numeracy concepts and skills with other subjects, hobbies, work, and even other mathematics. Hodgson (1995) considers connecting a problem-solving tool. A definition of a fluent learner might be "one who can connect or apply the mathematics she has learned in a variety of ways."

Providing learning activities that enable children to connect concrete experiences with abstract symbols and concepts helps them become numerate. Like all instructional activities for young children, those aimed at fostering their capacity to make connections will prove most effective if they take account of children's attention span and capacity for sustained focus. Children show they know how to make connections when they make connections between:

- concrete experience and abstract concepts;
- ideas and procedures or skills;
- mathematical ideas and previous, ongoing, and future learning;
- mathematics and other curriculum areas;
- mathematics and personal experiences; and
- mathematics and the experiences of others in the community and beyond.

Teachers may wish to use the types of connections noted above to establish criteria for evaluating children's numeracy development.

## NUMBER SENSE

Number sense is the most important foundation for the development of numeracy. It is here that children discover the relationships between intuition and convention and between the real world and abstraction. At this stage, in particular, children may demonstrate different approaches to learning mathematics. Some quickly pick up the pattern-making side of mathematics, others enjoy doing routine computation, while others want to apply their learning to the real world. Some may do all or none of these activities.

Howden (1989, p. 11) expresses the view that number sense develops gradually as a result of exploring numbers and visualizing them in a variety of contexts. This development is more likely to be enhanced if students have the self-confidence and the willingness to take risks that come from doing tasks that are open-ended rather than closed (e.g., asking "How many ways can you make $1 with coins?").

A "feel for" the relative magnitude of numbers enables students to make meaningful predictions and check the reasonableness of answers as operations are performed.

In settings that foster development of number sense, children understand the nature of the numbers and learn the basic facts for the four operations (+, -, x, ¸). By having a familiar and rich sense of number, they can "re-invent" a forgotten answer. For example, with a little confidence and some flexible thinking a child might find many ways to reconstruct the answer for 8 plus 7. This illustration of flexible thinking is not a result of lessons that focused on teaching students "how to think" but rather of teaching them how to use what they know to figure out what they don't know.

Counting develops into number sense if the child is not rushed through each new idea and operation. Given time and support, children gradually move from a reliance on counting to using grouping and number relationships in creative ways. Reys et al. (1999) state that number sense "results in a view of numbers as meaningful entries and the expectation that mathematical manipulations and outcomes should make sense" (p. 61). Van de Walle (1990, p. 63) concludes that, "without a major commitment by a curriculum to experiences that develop number sense, many children will never understand numbers in any way other than counting" (p.64).

**ESTIMATION**

Estimation and mental mathematics can be done routinely (even daily) as a means of developing numeracy in children. As children develop strategies that are consistent with their personal stage of numeracy, they improve in their abilities to make reasonable estimates. This progression is preferable to imposing strategies that try to teach children how to think about mathematical problems. To illustrate this important notion, consider the request to estimate the answers to 248 + 769 and 624 ¸ 13. There are many ways that estimation can be used to approach these two questions.

Students need to learn how to decide what constitutes a good estimate. Teachers can allow them to decide among themselves what a reasonable estimate might be. For example, if students have a notion about the relative magnitude of numbers, they are likely to know whether their estimates are greater than or less than the actual answers, an ability whose development should be encouraged. Through reflective process of this sort (e.g., group discussion), accuracy of estimation will improve. Effective teachers reconize that students will use the numbers that are indicative of their present sense of number and encourage them to use numbers that they feel comfortable with. The goal should be to foster flexible use and refinement of estimation strategies.

Flexible thinking can be part of activities that involve mental mathematics. Rather than prescribing a procedure, give students an opportunity to experiment with different approaches and then compare results with those of their peers. Once they understand how the approaches are constructed, children should have opportunities to use and practice these skills as part of engaging games and activities that demand the use of appropriate mental mathematics. The games' "magical ingredient" is neither drill nor reasoning; it is autonomy. Without it the games don't work. Piaget argues that "children must do their own thinking autonomously to construct logico-mathematical knowledge … because this knowledge must be constructed from within." In addition, the effective teacher promotes numeracy through games by

- connecting children's learning with real-world situations;
- playing with the numbers;
- playing games with students so they can see relationships;
- using dice, chips, and dominoes;
- improvising with found objects to create a mathematical game;

Given time and support, children gradually move from a reliance on counting to using grouping and number relationships in creative ways.

Learning about the abstract nature of mathematics, developing mathematical thinking skills, and building number sense can all occur at the same time.

- building on games that interest the children and giving them the confidence to build a numeracy foundation; and
- supporting developmentally appropriate strategies, such as counting, until students are ready to move on.

## Learning about the nature of mathematics

*Learning about the nature of mathematics, developing mathematical thinking and problem-solving skills, and building number sense are all important aspects of teaching for numeracy. Instruction can best foster these developments when it focuses on, guides, and supports children's personal construction of ideas. Such instruction encourages students to invent, test, and refine their own ideas rather than to exclusively follow procedures given to them by others. Research clearly shows that such "construction-focused" mathematics instruction produces more powerful mathematical thinkers.*

— Battista 1999

By extension, mathematics instruction will also prove more effective for most children if it allows them to solve problems and make decisions about the world around them. Attention to the form of the mathematics alone is inadequate for many children unless these symbols are connected to real-world situations or quantities.

As children solve problems and make decisions in personally meaningful contexts, they will engage in two complementary and supportive processes:

- **abstraction/reflection** — coordinating and combining perceptions to arrive at generalizations, recognizing and describing patterns, creating conceptual models, and registering them in memory; also, the conscious process of mentally replaying experiences, actions, or mental processes and considering their results or how they are composed
- **meaningful reasoning** — extending thinking by creating or using symbol systems, problem-solving procedures, conceptual or schematic/physical models, etc.

Teachers can help children better understand the nature of mathematics when they explicitly draw attention to children's use of mathematical thinking processes.

## Summary: Enhancing Children's Growth in Numeracy

British Columbia works with a broad definition of numeracy, which encompasses understanding mathematics in personally meaningful terms. Mathematics is a way of thinking that helps people make sense of the world.There are many parallels between the development of numeracy and that of literacy. Teachers seek to produce numerate children who can confidently apply their mathematical learning in everyday situations.


# Assessment, Evaluation, and Reporting

## Key Points in This Chapter

- Assessment and evaluation are integral to the teaching-learning process.
- Teachers use criteria throughout the planning-teaching-assessment-evaluation-reporting cycle.
- Effective assessment is developmentally appropriate, collaborative, and dynamic. It also takes context into account.
- Evaluation is a process of interpreting and making decisions and judgments based on assessment evidence.
- Judgments made in evaluation are used in planning for instruction and in communicating children's progress to parents.
- *B.C. Performance Standards*, 2000 can assist teachers in assessing and evaluating children's progress in four core learning areas and in reporting to parents.
- Provincial policy requires that teachers communicate children's progress through three structured written reports and two informal reports each year.

**Assessment and evaluation are integral to the ongoing teaching-learning process.**

*AN IMPORTANT PART OF THE JOB OF A teacher — or of a parent in a teaching role — is to guide the child towards tasks where he will be able objectively to do well, but not too easily, not without putting forth some effort, not without difficulties to be mastered, errors to be overcome, creative solutions to be found. This means assessing his skills with sensitivity and accuracy, understanding the levels of his confidence and energy, and responding to his errors in helpful ways.*

— Donaldson 1984, pp. 114–115

Assessment and evaluation are often used interchangeably in everyday speech. In the school system, a distinction is made between the two:

**Assessment** is the process of gathering evidence of what a child knows, understands, and is able to do and identifying his or her learning needs.

**Evaluation** is the process of interpreting, making judgments, and forming decisions based on that evidence. The quality of information gained through assessment determines the quality of evaluation, that is, evaluation is only as good as the assessment on which it is based.

Assessment and evaluation are integral to the ongoing teaching-learning process. To further children's progress, they need to be thoughtful, sensitive, and supportive, so effective teachers assess and evaluate in a planned, strategic, and systematic way. Teachers use the information gained through assessment and evaluation to plan for instruction, design learning experiences, and determine the degree of support each child needs. They also use it for communicating with and reporting to parents.

Provincial reporting policy is set out in

- Ministerial Order 191/94 (M191/94)
- Policy Circular 97-04

# The Role of Criteria

Effective teachers use criteria to guide each step of the planning-teaching-assessment-evaluation-reporting cycle.

Effective teachers use criteria to guide each step of the planning-teaching-assessment-evaluation-reporting cycle. Teachers develop criteria by considering both the learning outcomes specified by the curriculum and knowledge of children's learning and development. To do so, they take into account age appropriateness and patterns of development (as outlined in "Literacy Development" in Chapter 6, Enhancing Children's Growth in Language and Literacy) and individual appropriateness — characteristics and learning needs of the particular children they teach. Referring to the foundation statements and learning descriptors may assist teachers in developing criteria.

## SUPPORTING POSITION STATEMENT

### Assessing Children's Learning and Development

- Assessment of young children's progress and achievement is ongoing, strategic, and purposeful. The results of the assessment are used to benefit children — in adapting curriculum and teaching to meet the developmental and learning needs of children, communicating with the child's family, and evaluating the program's effectiveness for the purpose of improving the program.
- The content of assessment reflects progress toward important learning and developmental goals. […] [Effective teachers use] a systematic plan for collecting and using assessment information that is integrated with curriculum planning.
- The methods of assessment are appropriate to the age and experiences of young children. Therefore, assessment of young children relies heavily on the results of observations of children's development, descriptive data, collections of representative work by children, and demonstrated performance during authentic, not contrived, activities. Input from families as well as children's evaluations of their own work are part of the overall assessment strategy.
- Assessments are tailored to a specific purpose and used only for the purpose for which they have been demonstrated to produce reliable, valid information.
- Decisions that have a major impact on children, such as enrolment or placement, are never made on the basis of a single developmental assessment or screening device but are based on multiple sources of relevant information, particularly observations by teachers and parents.
- To identify children who have special learning or developmental needs and to plan appropriate curriculum and teaching for them, developmental assessments and observations are used.
- Assessment recognizes individual variation in learners and allows for differences in styles and rates of learning. Assessment takes into consideration such factors as the child's facility in English, stage of language acquisition, and whether the child has had the time and opportunity to develop proficiency in his or her home language as well as English.
- Assessment legitimately addresses not only what children can do independently but what they can do with assistance from other children or adults. Teachers study children as individuals as well as in relationships to groups by documenting group projects and other collaborative work.

— National Association for the Education of Young Children (NAEYC) (1996), pp. 5–6

Because teachers make judgments and decisions when they evaluate, they need to compare information gathered through assessment to something else.

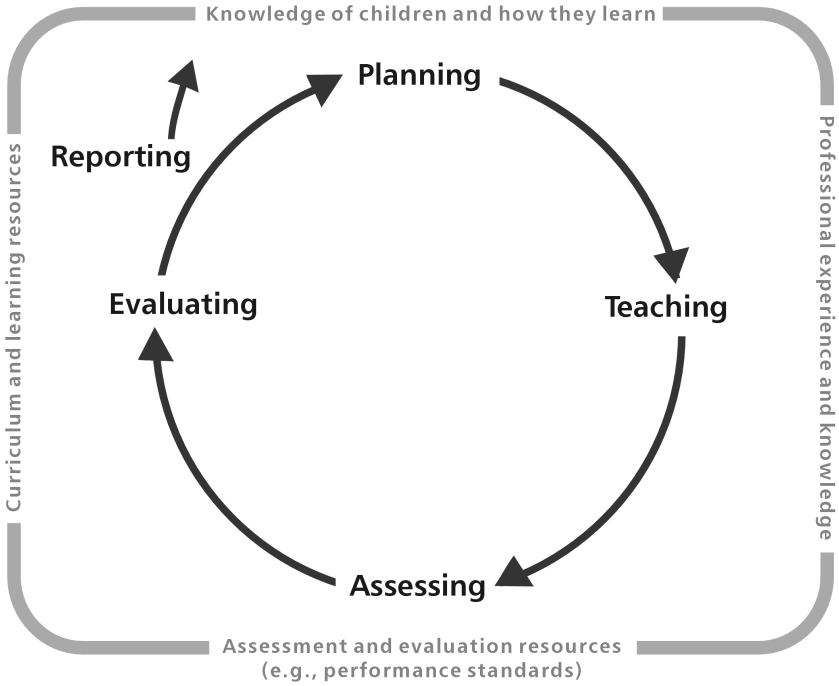
In the context of assessment, **criteria** are attributes teachers look for in student performance based on curricular expectations. General criteria in writing, for example, are meaning, style, form, and surface features or conventions. Specific criteria may be developed for particular tasks or for a particular age level or group of students. In some situations, some criteria are more important than others. In personal or journal writing, for example, teachers need to place more emphasis on meaning and ideas than on surface features.

Because teachers make judgments and decisions when they evaluate, they need to compare information gathered through assessment to something else. For criterion-referenced evaluation, they make comparisons to a clear standard or set of expectations. They will find the B.C. performance standards, discussed further in this chapter, helpful for evaluating children's learning in the core areas. In making judgments about students' progress, teachers compare what students currently know or can do to previous performance or to expectations based on common patterns of development.

Criteria are helpful for planning instruction that is focused on students' learning needs. When teachers identify explicit criteria and engage children in conversations about them (e.g., what criteria "look like" and "sound like"), students are more likely to succeed. Being explicit also helps students develop metacognitive awareness and self-regulation in their learning.

Using criteria in reporting enables teachers to decide on the "big ideas" of students' progress and achievement. The reporting process becomes more efficient for teachers in that criterion-referenced reporting is more focused and succinct. Such reporting also provides for more effective communication to parents.

## The Assessment Cycle



# Effective Assessment

To be effective, assessment must recognize the diversity of learners and allow for differences in styles and rates of learning.

## Developmentally appropriate assessment

Accurate assessment of young children is difficult: their learning and development are rapid, uneven, and embedded within specific cultural and linguistic contexts (National Association for the Education of Young Children 1996). To be effective, assessment must recognize the diversity of learners and allow for differences in styles and rates of learning. Such developmentally appropriate assessment calls for the use of a range of assessment strategies because young children are often unable to represent their understanding in conventional ways. The younger the child, the more important it is to adopt techniques other than pencil-paper tasks.

Developmentally appropriate assessment takes into account what children are trying to do and supports the risk taking that is an essential part of learning. The NAEYC (1996) position statement featured earlier in this chapter describes the characteristics of such assessment.

## Assessment in context

Assessment in context provides a strong foundation for evaluation. Occurring during ongoing learning activities in the classroom, it is curriculum and program based, that is, it is related to the prescribed learning outcomes in the Integrated Resource Packages and the foundation statements of the Primary Program. In this type of assessment, teachers document growth through the things children do, make, and say while engaged in familiar and comfortable experiences. The assessment reflects the complex nature of learning and thinking processes and is culturally and developmentally appropriate.

Whenever possible, teachers capitalize on regular classroom activities for collecting evidence of children's learning. When they cannot collect information in this way, they may design learning activities that serve as opportunities for performance assessment (Teale, Hiebert, & Chittenden 1987; Chapman 1997). Instruction and assessment are thereby meaningfully integrated.

*Assessments [need to be] tailored to a specific purpose and used only for the purpose for which they have been demonstrated to produce reliable, valid information.*
— NAEYC (1996), pp. 5–6

## Collaborative assessment

Effective teachers invite other perspectives on students' learning to help ensure accurate interpretations of what the assessment evidence might mean.

The child is an important participant in this process. By asking children about their learning, the teacher can gain insights that would not be otherwise available. Parents may also participate in the assessment process to provide the teacher with yet another perspective.

In some cases, a teacher may want to seek advice from other educational professionals such as school administrators, learning assistance teachers, and school psychologists. A team approach to assessment and evaluation is important, especially when teachers need information to help them make decisions about particular children who may need more support or interventions to improve their learning. When assessment and evaluation practices are carried out by professionals other than the classroom teacher, the teacher still has prime responsibility for the child and for ongoing classroom assessment and evaluation.

Encouraging students to reflect on their own actions, ideas, and creations enables them to further their own learning. Providing time and opportunities for children to reflect through talk or representing in a variety of ways fosters their awareness and understanding of their own learning processes. As children self-assess and clarify and use criteria on an ongoing basis, they will discover strengths they can build on and possibilities for further progress. Children who know the criteria for good work and who are accustomed to reflecting are more able to provide their teachers with insights about their learning.

For further information, teachers may refer to *Student Self-Assessment* in the ministry's *Assessment Handbooks* series (XX0249).

## Dynamic assessment

Many assessment measures are static in that they assess what students have already learned or what they can do independently.

**Dynamic assessment** refers to measuring what students are able to do in situations where they receive support or assistance from others. It focuses on "potential development or what the student is in the process of learning" (Dixon-Krauss 1996, pp. 125–126). Vygotsky's (1978) Theory of the Zone of Proximal Development, that learning is most effective when children engage in appropriately challenging activities accompanied by support, is the basis of dynamic assessment. Dynamic assessment helps teachers determine task difficulty and appropriate intervention.

- A student engages in a challenging task.
- The teacher assists in a variety of ways (e.g., prompting, asking questions, modelling) and takes note of the type and degree of assistance the student needs in order to succeed.

Because dynamic assessment incorporates teacher guidance and scaffolding, it is an instructional activity as well as an assessment measure. The *Reading Recovery Program* is an example of dynamic assessment.

Performance assessment serves a dual role as learning activity and assessment opportunity. It may involve informal observation or a structured situation. Performance tasks represent complex behaviours in which learners use and apply their knowledge. Examples include

- reading aloud and engaging in conversations about what they have read;
- solving problems in mathematics; and
- following directions in social studies.

Teachers may design performance assessments related to curriculum units or use standardized procedures such as informal reading inventories and tasks from B.C.'s performance standards.

Dynamic assessment refers to measuring what students are able to do in situations where they receive support or assistance from others. It focuses on "potential development or what the student is in the process of learning." (Dixon-Krauss 1996, pp. 125-126)

The teacher's task, for assessment and evaluation purposes, is to observe children, look at the "products" they create, talk with them, and create opportunities for children to assess themselves.

## Collecting assessment evidence

Children need to represent their thinking and learning in some way before the teacher can find out what they understand or are able to do: to provide evidence of their learning. The teacher's task, for assessment and evaluation purposes, is to observe children, look at the "products" they create, talk with them, and create opportunities for children to assess themselves. These occur as part of the learning and teaching activities in the classroom. In conducting assessments, teachers need to value objectivity and seek to avoid bias.

Teachers may use individually administered procedures such as running records, miscue analysis, and Clay's *Observation Survey* (1993). Procedures such as these are standardized to allow for reliable and valid interpretations of assessment information across different groups of students. They also provide useful and important information for instruction and program planning.

### OBSERVATIONS OF PROCESSES

Children demonstrate what they think, know, and are able to do in the way they interact with their world. As they play, talk, work, and relate to one another and to adults, they provide much for the teacher to observe. By observing children in the learning situation, the teacher gains insights into what and how individual children learn. The teacher may also record some of these observations in order to reflect upon and analyse them. The value of observational notes is that they record performance over time.

When teachers are "kid watchers" (Goodman 1985), they can gain important information from daily learning activities. Sometimes teachers collect information unobtrusively from naturally occurring situations. At other times they ask children questions to probe children's understanding and to find out about specific aspects of children's learning.

The teacher can gather most of the information needed during daily classroom routines. On occasion, he or she may also wish to structure a specific task to observe the processes children use and to look at the products they create. For example, the teacher may ask children to sort blocks and to talk about criteria they used to classify them.

### OBSERVATIONS OF PRODUCTS

The things children make or create provide another source of evidence of their progress. Each drawing, painting, graph construction, map, chart, or piece of writing a child creates is a representation of that child's knowledge and understanding. It is important to take into account both what children can do correctly and what they can't. Children's non-conventional forms of spelling, for example, reveal their phonological awareness and their developing knowledge of the spelling system. Their reading miscues indicate how they are thinking about reading and the degree to which they can integrate information from the various cueing systems. Similarly, children's explanations of the thinking that led to errors in mathematics can reveal their conceptual knowledge of the subject.

Samples of children's work collected over time can indicate patterns of growth and change. These samples, complemented by the teacher's notes on observations of the processes used, records of conversations and conferences, and students' self-assessment, are effective in demonstrating student learning.

### CONVERSATIONS AND CONFERENCES

Children reveal what they think and know through their talk. Often their learning precedes or exceeds their ability to talk about it (e.g., a child may know a concept but not be able to define or explain it). Conversation and

conferences between teacher and child provide the teacher with a wealth of information about the child and her or his learning. They also help the child clarify, extend, and enhance thinking and learning. Discussions during the process of learning activities and afterwards, as debriefing, provide important insights into children's understanding of content and concepts and also their learning processes.

Children's journals and learning logs can be a form of written conversation between teacher and child. As children gain confidence in writing, they become more able to express their thoughts this way.

For more information, teachers can refer to *Student-Centred Conferences* in the ministry's *Assessment Handbooks* series (XX0284).

### Collecting Authentic Evidence


## Standardized tests

There are no commercially produced group-administered standardized tests that fully match the B.C. curriculum. Such tests generally evaluate achievement in decontextualized ways, which is difficult for primary children. The constraints in the testing situation — a formal and unfamiliar atmosphere; time limitations; unfamiliarity with the type of task; restrictions on moving about, talking, or asking for help; a prohibition on responding in different ways — are often stressful for children. These restrictions prevent children from performing as well as they are usually able to do, and children who come from minority groups or who have learning difficulties are especially affected. There are also problems associated with the interpretation and use of standardized test scores (Johnson & Louis 1987).

- Grade equivalent scores are based on averages, not on individual performance, and have little or no predictive validity for individual children.
- The standard error of measurement must be taken into account in determining grade equivalent scores; the grade equivalent score represents a range for interpretation, not a precise measurement.

Individualized formal assessments are sometimes carried out by school psychologists or other specialized professionals to help teachers learn more about the strengths and needs of particular students. The normed standardized tests that these professionals use as part of their assessments are more reliable than group tests because they are administered on a one-to-one basis with the professional observing and interacting with the child during the testing. The results of the test instruments are supplemented by observation and interview information.

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The teacher and the child may negotiate what samples are to be kept and may collaborate to decide where and how samples will be stored. Doing this helps the child to become a responsible partner in the assessment and evaluation process.

## Organizing assessment information

A variety of time-management and organizational strategies will facilitate the ongoing process of organizing assessment information. Every teacher has a particular way of organizing information collected about students. Here are some ways to record information:

- at-a-glance sheets
- checklists and rating scales
- anecdotal comments
- two-column notes (i.e., observations and interpretations)
- structured record sheets (e.g., for reading conferences)

Collecting a variety of samples of children's work is important. Samples may include children's writing, artwork, photographs (e.g., of models or other two- and three-dimensional representations), audio-tapes (e.g., of oral presentations or oral reading), and computer discs. The teacher and the child may negotiate what samples are to be kept and may collaborate to decide where and how samples will be stored. Doing this helps the child to become a responsible partner in the assessment and evaluation process. Teachers may adopt various types of portfolios and progress folios (Cameron et al. 1997) to suit their needs and those of the children they teach.

For more information on assessment strategies and procedures, teachers may want to refer to the ministry's *Assessment Handbooks* series:

- *Performance Assessment* (XX0246)
- *Portfolio Assessment* (XX0247)

# Evaluating Children's Learning

The teacher has the primary responsibility for evaluation in the classroom. No one piece of information gathered through assessment is sufficient in itself and so teachers look at a collection of evidence from different sources. When teachers examine the assessment information, they need to interpret it and make judgments or decisions about students' performance and how they might best support and extend students' learning.

In the Primary Program, teachers can use the learning outcomes (as detailed in the IRPs and captured in general terms by the Primary Program foundation statements and learning descriptors), common patterns of literacy development (as described in the charts in Chapter 6, Enhancing Children's Growth in Language and Literacy), and *B.C. Performance Standards*, 2000 to interpret a child's learning and development.

## B.C. performance standards

Performance standards are intended to assist teachers in assessing, evaluating, and monitoring student progress in the core learning areas: reading, writing, numeracy, and social responsibility. Developed in consultation with groups of teachers in 21 school districts throughout the province, these standards

- describe educators' collective professional judgments about standards and expectations,
- facilitate identification of students who may benefit from intervention, and
- support a criterion-referenced approach to classroom assessment and evaluation.

*B.C. Performance Standards*, 2000 assessment packages combine performance assessment, criterion-referenced assessment, and standardized procedures. In addition, they contain samples of B.C. students' work at the appropriate grade levels to which teachers can compare the work of their students. With these components taken together, the B.C. performance standards put into practice the best of what is known about developmentally appropriate and culturally sensitive assessment and evaluation. Standards have been produced for several areas in Grades 1 to 3. (See the chart on the next page).

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### Areas For Which B.C. Performance Standards K-3 Have Been Produced

Grade 1
Reading
Writing from experience
Writing stories

Grade 2
Numeracy (data analysis, money, and measurement tasks)

Grade 3
Reading for information
Reading literature
Personal and impromptu writing
Writing to communicate ideas and information
Writing stories and poems

Kindergarten to Grade 3
Social Responsibility
- contributing to the classroom, school, community
- solving problems in peaceful ways
- valuing diversity and defending human rights
- exercising democratic rights and responsibilities

Performance standards will also help teachers plan instruction, prepare structured written reports, and communicate with parents. The materials, available on the ministry's Web site, include these elements:

- rating scales that describe in detail the performance for March/April of that grade level;

> Not yet within expectations
> Meets expectations at a minimal level
> Fully meets expectations
> Exceeds expectations

- sample tasks, with illustrations of student work at all four levels, along with teacher comments;
- Quick scales (a short version of the rating scale for daily use/quick reference and for sharing the standards with students and parents).

## Using evaluation for planning

Planning for instruction begins with assessment and evaluation of what learners know and can do and what they need to learn in relation to the provincially prescribed curriculum. Teachers may find the Primary Program foundation statements and related learning descriptors useful in evaluating students' progress for this purpose. They may also find it helpful to consider children's progress in relation to the common patterns of development outlined in the literacy development chart that appears in Chapter 6.

In most cases, children will be meeting or exceeding expectations; however, where they are not, keep in mind that evaluation needs to take into account a broad array of assessment evidence. Effective teachers look for patterns in the assessment evidence rather than making judgments about children's learning based on a single assessment. Doing this is especially important when making judgments about intervention.

# Communicating Children's Progress

Communicating with parents in a variety of ways serves to invite them into a partnership to promote their child's learning.

The teacher facilitates and enhances communication with parents about their child's learning by communicating with them in many different ways. These ways include talking informally, phoning, sending notes and samples of children's work home, sharing student self-evaluations, making home visits or receiving parents in the classroom, setting up conferences, and providing structured written reports. Communicating with parents in a variety of ways serves to invite them into a partnership to promote their child's learning.

## EXCERPTS FROM PROVINCIAL REPORTING POLICY

(Circular No. 97-04)

- During the school year, school boards will provide parents of students with at least five reports describing students' school progress. Three of the reports will be formal written reports and two will be informal reports.
- Informal reports may include: Telephone calls, student-led conferences, parent-teacher conferences, and the use of journals. Schools and teachers will determine how they will informally communicate with parents.

STUDENT PROGRESS REPORT ORDER
**Authority**: *School Act*, sections 79 (3), 85 (2) (j) and 168 (2)

Ministerial Order 191/94 (M191/94) ..... Effective September 1, 1994
Repeals M17/90

**Kindergarten to grade 3 reports**

2. (1) Student progress reports for students in kindergarten through grade 3 must be in writing and must, in relation to expected learning outcomes set out in the curriculum, describe
   - (a) what the student is able to do,
   - (b) the areas in which the student requires further attention or development, and
   - (c) ways of supporting the student in his or her learning.

   (2) In conjunction with the student progress reports required under subsection (1), parents of a student in kindergarten through grade 3 must be provided with oral or written comments on the student's school progress with reference to the expected development for students in a similar age range.

Effective reporting enhances learning. It requires choosing language that accurately describes the child's accomplishments and needs, and establishes the basis for dialogue.

Further information on provincial reporting policy may be found at the following Web sites:

- *Policy Manual*
  www.bced.gov.bc.ca/policy/plcy_man.htm
- *Manual of School Law*
  www.bced.gov.bc.ca/legislation
- *Reporting Policy*
  www.bced.gov.bc.ca/policy/97/04.htm
- *Guidelines for Student Reporting*
  www.bced.gov.bc.ca/reporting/

## Structured written reports

Just as assessment and evaluation are ongoing processes rather than events, structured written reports are part of the total process of communicating with children, parents, and families. When teachers accurately portray a child's progress in a succinct manner, the report is more effective. Details about planned activities are best communicated through newsletters, term outlines, and overviews that complement the report.

Effective reporting enhances learning. It requires choosing language that accurately describes the child's accomplishments and needs, and establishes the basis for dialogue. Some related effective practices include the following:

- involving the child in a conference with the teacher or parent and teacher, so that the child understands and informs the structured written report;
- asking parents, before the conference or before writing the report, to contribute their views of their child's strengths and needs and the ways they can provide support;
- holding a conference before the report is written in order to establish a foundation for ongoing communication;
- reviewing completed reports before they are given to children or parents to ensure they support each child's learning;
- reading and discussing the completed report with the child before it is sent home;
- having the child make a report to accompany the teacher's structured written report; and
- inviting parents to comment, express concerns, and ask questions once they have read the report.

A written report is most effective when it provides a "snapshot" of a child's learning at the time when it is written. The information needs to be brief, relevant, descriptive, free of jargon, and supported by evidence of the child's learning. Making references to things the child has done personalizes the report. Giving examples of the child at work and play, and quoting children's comments and writing, reinforces the teacher's statements and helps parents gain a picture of their child at school. Including illustrative samples of work the child has done is another way to provide parents with specific information. Parents need a sense of how their child is doing, what the child needs to do, and how they can help.

**Although checklists may seem to make reporting faster and easier for teachers, they do *not* meet the criteria for structured written reports.** The guidelines for structured written reports specify that when a learning need is indicated, the teacher also suggests ways to support the child's further learning. Checklists used for reporting tend to fragment evaluation and focus on isolated knowledge, skills, or behaviours. They fail to indicate the relative importance of each item. Though checklists provide details, they do not communicate an accurate picture of the child's progress. Complex learning cannot be reported in simplistic ways.

Reporting on individual learning outcomes would overwhelm teachers and make parents suffer from "information overload." A more effective way to communicate children's progress to parents is to provide a "bigger picture" of their children's learning. This can be achieved by drawing upon the foundation statements, learning descriptors, performance standards (e.g., phrases from the Quick scales), and charts on common patterns of child development.

At the end of the school year, the following information must be placed in each student's Permanent Student Record file:

- a copy of the formal reports and
- documentation of the oral or written statements provided to parents regarding the student's progress with reference to the expected development for students in a similar age range.

Although checklists may seem to make reporting faster and easier for teachers, they do *not* meet the criteria for structured written reports ... Though checklists provide details, they do not communicate an accurate picture of the child's progress. Complex learning cannot be reported in simplistic ways.

The purpose of [a conference] is to exchange information in order to develop a better understanding of the child's abilities, the child's learning needs, and plans for support.

## Using IEP goals in reporting

For students who are working on individualized outcome goals that are different from the prescribed learning outcomes of the curriculum, teachers must inform parents of the modification in the written reports. They must further report to parents on the students' progress in relation to these goals. If the IEPs are developed with built-in references to how the individual goals will be assessed, it is helpful for the reporting process. A report to parents can then be related directly to the child's IEP. When other professionals, such as language and speech therapists or resource teachers, provide part of a child's program, those people should comment on the student's progress within the report of the classroom teacher.

## Informal reports

As part of the ongoing communication between parents and teachers informal reporting takes place throughout the school year. The provincial *Student Reporting Policy* requires that teachers provide parents with two informal reports each school year in addition to the three formal reports. Teachers should keep a record of such communication.

Conferences provide an important exchange of information between home and school. It is effective practice for teachers to meet with parents at least once each school year to discuss student progress. The purpose of such meetings is to exchange information in order to develop a better understanding of the child's abilities, the child's learning needs, and plans for support. Conferences may be held before or after formal reports. Conferences are effective when:

- teachers, parents, and children prepare ahead of time;
- parents are asked to contribute information;
- children are included;
- samples of students' work are available;
- a positive focus in maintained;
- educational jargon is avoided;
- a record of the conference (major points) is kept;
- parties come to agreement in developing an action plan; and
- ongoing communication is fostered.

For additional information on student-led and three-way conferences, teachers may want to refer to *Guidelines for Student Reporting for the Kindergarten to Grade 12 Education Plan*, 1994 and to *Student-Centred Conferences* (XX0248) in the ministry's *Assessment Handbooks* series.

## Summary: Assessment, Evaluation, and Reporting

Assessment is an on-going process of gathering information about children's learning. Evaluation refers to the judgments teachers make based on assessment evidence. Assessment and evaluation are an integral part of the cycle of planning, teaching, assessing, and reporting. Teachers assess and report on children's progress in relation to the prescribed learning outcomes of the curriculum. Provincial policy requires teachers to communicate to parents by means of three structured written reports and two informal reports in each year. The *B.C. Performance Standards* document reflects continued support for criterion-referenced assessment and evaluation. The performance standards support teachers in determining students progress in the key areas of reading, writing, numeracy, and social responsibility.


# Parents, Families, and Communities

## Key Points in This Chapter

- Parents are a child's first and most important teachers.
- Parents are active partners in their child's education.
- Parental involvement in children's education benefits children.
- Home support for learning can extend and enhance what children learn at school.
- Communication with parents is most effective when it is ongoing.
- School-community links occur in several ways.
- Teachers and parents can turn to a variety of helpful resources.

**Educators direct the more formal aspects of the child's learning; parents are recognized as the child's first and most important teachers.**

THE RELATIONSHIP ESTABLISHED BETWEEN home and school is an important link in a child's education. Educators direct the more formal aspects of the child's learning; parents are recognized as the child's first and most important teachers. The community also plays an important role in supporting education and the well-being of children throughout their schooling.

## SUPPORTING POSITION STATEMENT

### Establishing Reciprocal Relationships with Families

- Reciprocal relationships between teachers and families require mutual respect, co-operation, shared responsibility, and negotiation of conflicts toward achievement of shared goals.
- Teachers work in collaborative partnerships with families, establishing and maintaining regular, frequent two-way communication with children's parents.
- Parents are welcome in the program and participate in decisions about their children's education.
- Teachers acknowledge parents' choices and goals for their children and respond with sensitivity and respect to parents' concerns without abdicating professional responsibility to children.
- Teachers and parents share their knowledge of the child and understanding of children's development and learning as part of ongoing communication and planned conferences.
- To ensure more accurate and complete information, the program involves families in assessing and planning for individual children.
- The program links families with a range of services, based on identified resources, priorities, and concerns.
- Teachers, parents, programs, social service and health agencies, and consultants who may have educational responsibility for the child at different times should, with family participation, share developmental information about children as they pass from one level of a program to another.

— National Association for the Education of Young Children (1996), pp. 6–7

# Parents' Roles and Relationships to the School

*Parents have the right and responsibility to participate in the process of determining the educational goals, policies and services provided for their children.*

*They have a primary responsibility to ensure that children are provided with the healthy and supportive environment necessary for learning. They have a responsibility to help shape and support the goals of the school system and to share the tasks of educating their youngsters.*

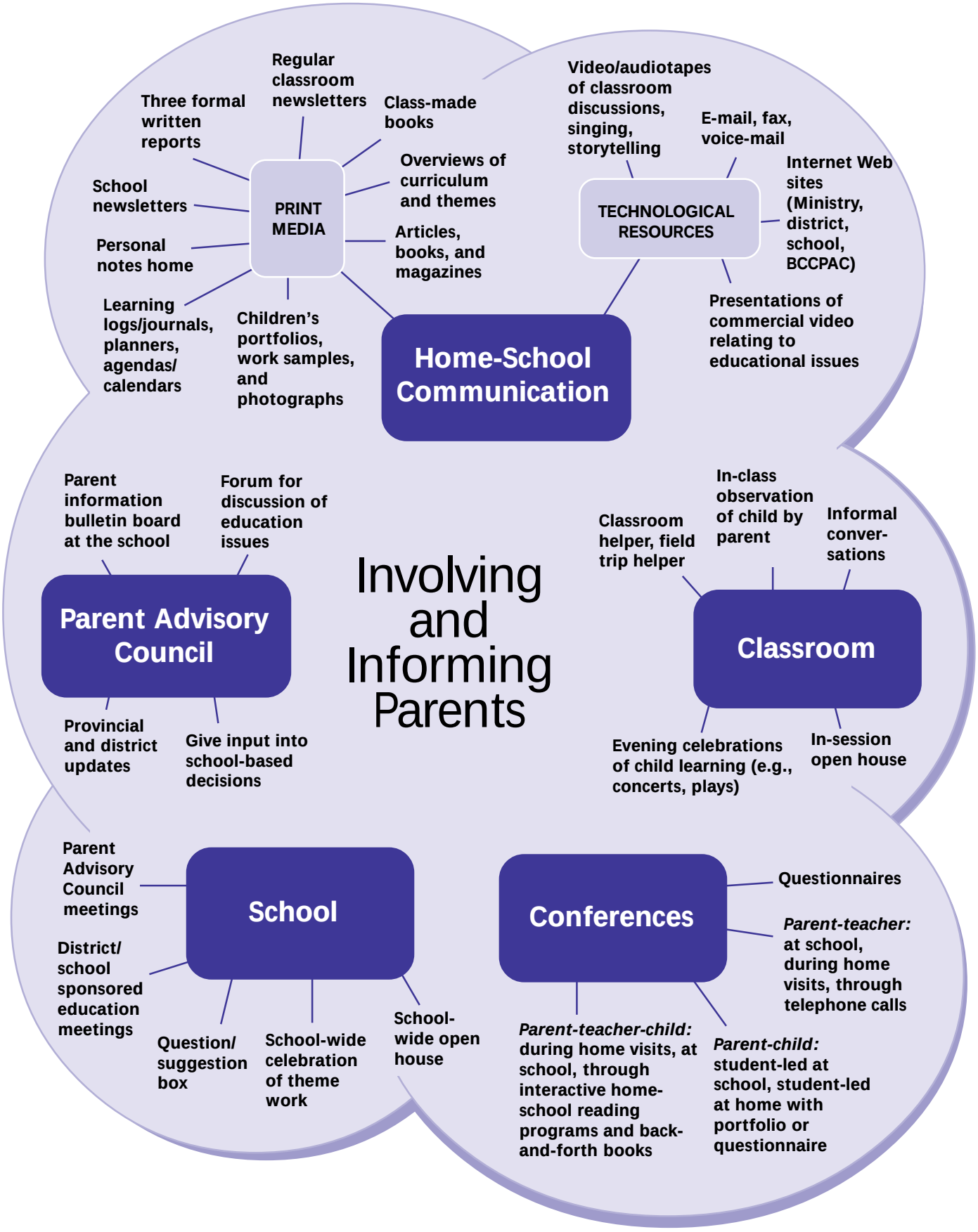
*— Statement of Education Policy Order, School Act, School Act Regulations and Ministerial Order* Cited in *Building Partnerships in Schools* (September 1996), p. 29

As the above quotation asserts, parents should become active partners in their child's education. There are many ways of doing this:

- modelling and demonstrating enthusiasm for learning;
- complementing the teacher's role by working with their child at home (see "Home Learning");
- maintaining ongoing dialogue with the school to share and exchange information about their child;
- planning and supporting school-wide special events;
- attending open houses, conferences, and other activities;
- taking part in the life of the classroom and the school in a variety of ways, such as working as parent helpers in collaboration with the teacher, helping on field trips, acting as a resource for a variety of personal, cultural, occupational, or specialized interest experiences; and
- participating on Parent Advisory Councils (PACs).

***Parents have the right and responsibility to participate in the process of determining the educational goals, policies and services provided for their children.***

**— From *Building Partnerships in Schools***


Involving and Informing Parents
Home-School Communication
PRINT MEDIA
Regular classroom newsletters
Three formal written reports
Class-made books
Overviews of curriculum and themes
School newsletters
Articles, books, and magazines
Personal notes home
Learning logs/journals, planners, agendas/ calendars
Children's portfolios, work samples, and photographs
TECHNOLOGICAL RESOURCES
Video/audiotapes of classroom discussions, singing, storytelling
E-mail, fax, voice-mail
Internet Web sites (Ministry, district, school, BCCPAC)
Presentations of commercial video relating to educational issues
Parent Advisory Council
Parent information bulletin board at the school
Forum for discussion of education issues
Provincial and district updates
Give input into school-based decisions
Classroom
Classroom helper, field trip helper
In-class observation of child by parent
Informal conver-sations
Evening celebrations of child learning (e.g., concerts, plays)
In-session open house
School
Parent Advisory Council meetings
District/ school sponsored education meetings
Question/ suggestion box
School-wide celebration of theme work
School-wide open house
Conferences
Questionnaires
Parent-teacher: at school, during home visits, through telephone calls
Parent-teacher-child: during home visits, at school, through interactive home-school reading programs and back-and-forth books
Parent-child: student-led at school, student-led at home with portfolio or questionnaire

## research directions

### THE IMPORTANCE OF PARENTAL INVOLVEMENT

In a summary of research into parent and family involvement and student success, Henderson and Berla (1995) conclude that "the evidence is now beyond dispute. When parents are involved in their children's education at home, their children do better in school." Specific research findings highlighted by Henderson and Berla include the following:

- When parents are involved, students achieve more, regardless of socio-economic status, ethnic/racial background, or the parents' education level.
- The more extensive the parental involvement, the higher the student achievement.
- When parents are involved, students exhibit more positive attitudes and behaviour.
- Different types of parent/family involvement produce different gains; to have long-lasting gains for students, parent activities must be well planned, inclusive, and comprehensive.
- Educators hold higher expectations of students whose parents collaborate with the teacher; they also hold higher opinions of those parents.
- In [early intervention] programs designed to involve parents in full partnerships, student achievement for disadvantaged children not only improves, it can reach levels that are standard for middle-class children; in addition, the children who are farthest behind make the greatest gains.
- Children from diverse cultural backgrounds tend to do better when parents and professionals collaborate to bridge the gap between the culture at home and the learning institution.
- The benefits of parental involvement are not confined to the early years; there are significant gains at all ages and grade levels.
- The most accurate predictor of a student's achievement in school is not income or social status, but the extent to which that student's family is able to
  (1) create a home environment that encourages learning;
  (2) communicate high, yet reasonable, expectations for their children's achievement and future careers; and
  (3) become involved in their children's education at school and in the community.

In addition, Epstein (1983) states that when teachers were committed to increasing parental involvement, the parents "… felt that they should help their children at home; … understood more about what their child was being taught in school; … were more positive about the teacher's interpersonal skills, and rated the teacher higher in overall teaching ability."

Parental engagement with children's learning at home is more important to children's achievement than parental involvement at the school (Wang et al. 1993). Researchers have identified several types of parental involvement in home learning that are consistently associated with improved school performance (Finn 1998):

- *actively organizing and monitoring the child's time*: regular home routines are associated with better school performance (Astone & Lanahan 1991);
- *discussing school matters with the child*: the nature of discussions is important to children's progress; it is important for parents to talk with children about their learning difficulties as well as their successes and play a supportive, encouraging role (Steinberg 1996); and
- *reading to and being read to by their children*: reading with children is crucial to their literacy development (Adams 1990); programs that help parents develop a regular structure for home-based literacy are beneficial (Edwards 1995).

The benefits of parental involvement are not confined to the early years; there are significant gains at all ages and grade levels.

# Parental Involvement in the School

While teachers are responsible for making the decisions about curriculum, assessment and evaluation, parents can make necessary and welcome contributions to our diverse classrooms.

*The most powerful outcomes [of parents' involvement in schools] appear to develop when there is true mutuality between the school and the community, such that each party learns to value and respect the knowledge, skills, and goals of the other.*

— Levin 1995

Teachers and parents working together enhance children's learning within the classroom. While teachers are responsible for making the decisions about curriculum, assessment, and evaluation, parents can make necessary and welcome contributions to our diverse classrooms. Here are some of the ways:

- working with small groups on special projects;
- sharing a skill such as cooking, sewing, woodworking, operating a computer application;
- sharing their backgrounds and culture;
- listening to children read and reading to children;
- scribing stories and captions on pictures for young children;
- playing appropriate math games; and
- helping with field trips, guest speakers, and performances.

## Guidelines for parents helping in the school

When parents volunteer in schools and classrooms, some guidelines on confidentiality need to be established from the outset. Individual districts or schools may have policies about volunteer help in the schools. The school staff needs to be sensitive about sharing personal observations about students. Teachers have the responsibility for their classrooms and will make decisions about appropriate parental involvement.

# Home Support for Learning

Many home-based activities provide children with experiences and opportunities to reinforce and support their learning in core areas.

*People think and learn within a community. When teachers work together to explore and reflect on ideas and strategies, when families reinforce classroom experiences and offer models to enhance students' thinking, and when teachers, families, and students work together to share insights and information, thoughtful learning is enhanced.*

— From *Thinking in the Classroom, volume 1: The Context for Thoughtful Learning* (1991), p. 2

There is no Ministry policy requiring homework. Students may, however, benefit from completing some school work with their parents' assistance. Short and varied sessions are effective. Many home-based activities provide children with experiences and opportunities to reinforce and support their learning in core areas.

Teachers might suggest the following home-based activities:

- reading with and to children (including languages other than English);
- sharing and reinforcing their cultural heritage (including language);
- engaging children in conversations (e.g., about school experiences, personal interests);
- using everyday activities and games to reinforce reading, writing, mathematics, and other thinking skills (e.g., parents may reinforce counting and addition of money by setting up a savings account or "piggy bank" for their child or, when the class is studying about the community, parents could take their children around the neighbourhood pointing out important or special locations);
- providing opportunities for children to be creative; and
- allowing children time for free play and physical activities, both individually and with other children.

Parents need to monitor their child's tolerance levels for doing school work at home. Although many children are willing and happy to continue school work at home, others are fatigued by the school day and need completely different experiences.

When students are encouraged by teachers to attend to the events in their daily lives outside school, they have a greater involvement with school … Astute teachers systematically support their students to integrate the real world with school experiences (Hill 1994).

## research directions

### MISCONCEPTIONS AND FACTS ABOUT HOMEWORK

In a review of research on homework, *Homework Is a Complicated Thing*, Corno (1996) identifies five widespread misconceptions about homework. She then provides facts about homework that are supported by evidence from research.

*Misconception:* The best teachers give homework regularly.
*Facts:* The best teachers vary their use of homework according to students' interests and capabilities. The best homework may be work done at home and brought into the school.

*Misconception:* More homework is better than less.
*Fact:* Time spent on homework predicts higher achievement only at the high school and junior high school levels.

*Misconception:* Parents want their children to have homework.
*Facts:* Parents are willing to have their children do homework because they believe it will lead to success in school. "Homework can be the bane of parents' existence in the early grades" (p. 29).

*Misconception:* Homework supports what children learn in school.
*Facts:* Homework supports school learning only when it is explicitly used with that purpose in mind. Homework can make some students avoid rather than enjoy school work.

*Misconception:* Homework fosters discipline and personal responsibility.
*Fact:* Homework fosters discipline and personal responsibility when parents systematically help support this goal through structure and supervision around homework, but homework is but one small piece of the bigger picture.

When students are encouraged by teachers to attend to the events in their daily lives outside school, they have a greater involvement with school … Astute teachers systematically support their students to integrate the real world with school experiences (Hill 1994). They help students build on these works brought from home and use them to provide direction in school work (Calkins 1994).

> *They also send students back home for more musings, well augmented by what gets taught in class. Hill's work shows that new understandings of home and school alike ensue when parents and teachers write to each other in journals about their children's homework.* (Corno 1996, p. 29)

# Communication with Parents

While parents are the child's best advocates, parents and teachers work together toward a common goal — the development and educational growth of the child.

Communication between home and school needs to be ongoing. While parents are the child's best advocates, parents and teachers work together toward a common goal — the development and educational growth of the child. They can share information about children in ways ranging from informal chats to written reports and planned conferences.

Orientation to the school system for parents is handled in diverse ways throughout the province. Individual districts and schools may have procedures for welcoming new students and their parents. Special consideration and information are often needed for Kindergarten parents and other first-time parents. Establishing communication with parents who are not comfortable or fluent in English presents some extra challenges. School districts often have supports in place for assistance. Resources are available through other ministries and local agencies. In communicating with families, there has to be a sensitivity to various cultural backgrounds. Often culturally specific resources are available.

Schools often have regular bulletins for parents. Individual teachers may provide curriculum overviews, weekly newsletters, and classroom agendas to help parents stay in touch. Many primary teachers have special evenings for parents to share and participate in their children's learning.

From time to time, parents may ask for information about specific facets of primary education. Questions about assessment, evaluation, reporting, and curriculum arise frequently. Teachers can refer parents to a number of sources for the answers to these queries (see "Helpful Resources" later in this chapter). Administrators, school district offices, and Parent Advisory Councils often have libraries of parent resources as well.

The *School Act* and Ministry of Education policy require teachers to provide three structured written reports and two informal reports each year. For more information about reporting, please refer to Chapter 8, Assessment, Evaluation, and Reporting. Parents of students who are experiencing difficulty in any aspect of school need to be included in planning and in making decisions about constructive intervention. This process is often accomplished through a school-based team approach.

# School-Community Links

As children interact with the people, places, and things in their immediate community and beyond, they extend their horizons and develop the attitudes, skills and knowledge they need to become effective citizens.

As the school has an impact on the community, so the community has an impact on the school. The school's major links to the community are the student's parents. According to the *School Act*, a school's Parent Advisory Council (PAC) is the official voice for parents of children attending that school. All parents are members of the local PAC, and the council executive is elected from the parent body. In some districts there is a District Parent Advisory Council (DPAC). The provincial organization is called the British Columbia Confederation of Parent Advisory Councils (BCCPAC).

Schools maintain contact with and are supported by other ministries and organizations in the community. These contacts are opportunities for professionals in the school system and in the community to build relationships based on trust. Their common focus is promoting children's healthy growth and development, and ability to learn in the context of their families.

Sometimes school and community-based professionals, such as child development counsellors, social workers, public health nurses, and psychologists, work together. They can thereby share information with one another about a child and his or her home environment, and about the impact of the home on the child's ability to learn and interact in the classroom. Professionals in the community often have a role in the school-based team, just as the school-based professionals are key to an integrated case management process that may be supporting the child and family in the home environment.

In the broader context, provincially and nationally, all systems, including the education system, have a responsibility to support all children. The *National Longitudinal Survey of Children and Youth* (ongoing, cited in *The Daily*, October 28, 1998, at Statistics Canada Web site: http://www.statcan.ca) emphasizes the impact of family stressors on a child's ability to learn. A great proportion of families experience stressors, and educators strive to support all children in the context of their family and community.

Partnerships in education provide a bridge from the school to community and from the community to the school. As children interact with the people, places, and things in their immediate community and beyond, they extend their horizons and develop the attitudes, skills, and knowledge they need to become effective citizens. Frequently, schools receive resource packages from other ministries and organizations. By adopting a special process they can implement curricula from sources other than the Ministry and introduce locally approved programs in the classrooms. Locally approved curricula might cover personal safety programs or focus on specific topics of interest to the community (e.g., reintroduction of the peregrine falcon to the Okanagan).

Partnerships can result in joint initiatives that benefit both the school and the community. Such initiatives can extend the boundaries of learning beyond the classroom and promote a mutual understanding of school and community needs. Possibilities include involving educators and the community in common goals such as community improvement projects, working together to meet future needs, making cultural presentations, offering programs for parents and tots, building links to community centres, providing after-school programs, and developing programs for seniors.

## Summary: Parents, Families, and Communities

Teachers recognize parents as active partners in promoting their children's education. Indeed, parents are their children's most important teachers, and when they become actively involved with their children's education, both at school and at home, children will benefit in many ways. In keeping with this recognition, teachers use a variety of formal and informal ways of communicating with parents on an ongoing basis.

Educators can also form dynamic partnerships with other professionals and resource people within the local community. These people can help in several ways, ranging from providing insight into children's home lives to offering locally relevant curriculum materials.

# APPENDICES

# APPENDIX A

# References and Resources

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## Resources for Parents

*Curriculum Handbooks for Parents* (B.C. Ministry of Education, 1998)
Handbooks that answer commonly asked questions about curriculum

*Integrated Resource Packages* (Ministry of Education, 1995–99)
Curriculum for each school subject, written in prescribed learning outcomes, suggested instructional strategies, suggested assessment strategies and recommended learning resources

*Better Learning* newsletters
Periodical Ministry communication to all in B.C.

*British Columbia Handbook for Action on Child Abuse and Neglect* (Ministry for Children and Families)

*Building Partnerships in Schools — A Handbook* (BCCPAC)
Information on the roles and responsibilities of all the partners

Individual school and district handbooks
General school handbooks; vary by school and district; may contain rules and policies, educational philosophy, listing of programs, contact information, etc.

## Resources Published by the Ministry of Education

For Ministry of Education materials and resources, please refer to the Ministry Web site at

http://www.bced.gov.bc.ca

# APPENDIX B

# Prescribed Learning Outcomes and the Primary Program

## The Relationship between Outcomes, Primary Foundation Statements, Learning Descriptors, and Areas of Development

*The Primary Program: A Framework for Teaching* identifies five key areas of student development that primary teachers need to attend to in order to effectively address the goals of education and the provincially prescribed curriculum for the primary years. This appendix explains in detail the relationship between the learning outcomes that constitute the provincially prescribed curriculum and these areas of student development:

- aesthetic and artistic
- emotional and social
- intellectual
- physical development and well-being
- social responsibility

All prescribed learning outcomes from all Kindergarten to Grade 3 subject areas are listed here, grouped under learning descriptors, general statements that summarize the common intention of several prescribed learning outcomes from different subject areas. The learning descriptors in turn are grouped under foundation statements, which summarize the learning descriptors and describe each area of development. Together, the Primary Program foundation statements and learning descriptors provide a cross-curricular organization of prescribed learning outcomes according to key areas of student development. There are several foundation statements for each area of development.

The foundation statements and learning descriptors were arrived at by grouping and regrouping prescribed learning outcomes until all were incorporated in logical and meaningful ways.

Many prescribed learning outcomes could fit under more than one heading. For example, many outcomes involve "compare and contrast." Where the outcome is intended to develop the process of comparing and contrasting, it is listed in that category. Where the outcome is related to specific content, it is included with that content. An asterisk (*) beside a prescribed learning outcome indicates that the outcome has been listed more than once, keeping repetitions to a minimum.

**The chart on page 59 provides an illustration of interrelationships among areas of development, foundation statements, learning descriptors, and learning outcomes.**

# Aesthetic and Artistic Development

*A VARIETY OF EXPERIENCES ENABLE THE CHILD TO:*

## develop enthusiasm and appreciation for the arts

### participate in the arts

**KINDERGARTEN TO GRADE 1**

*It is expected that students will:*

- demonstrate a willingness to perform dance [Dance]*
- demonstrate a willingness to participate in drama activities that explore the roles of community members [Drama]*
- demonstrate a willingness to participate in music experiences [Music]
- demonstrate a willingness to display individual and group artworks [Visual Arts]

**GRADES 2 TO 3**

*It is expected that students will:*

- demonstrate a willingness to rehearse and perform dance [Dance]
- demonstrate a willingness to participate in rehearsals and performances [Music]

### show appropriate performance skills and audience etiquette

**KINDERGARTEN TO GRADE 1**

*It is expected that students will:*

- demonstrate appropriate audience skills [Dance]
- demonstrate an awareness of appropriate performance skills and audience etiquette [Dance]
- identify appropriate audience and performance skills [Music]

**GRADES 2 TO 3**

*It is expected that students will:*

- demonstrate an awareness of appropriate performance skills and audience etiquette [Dance]
- demonstrate appropriate audience skills [Drama]
- demonstrate appropriate performance skills and audience etiquette [Music]
- demonstrate a willingness to display individual and group artworks in a variety of ways [Visual Arts]

### be aware of various art forms and various purposes for artworks

**KINDERGARTEN TO GRADE 1**

*It is expected that students will:*

- demonstrate an awareness of a variety of dances that exist [Dance]
- demonstrate an awareness of a variety of reasons why people dance [Dance]
- demonstrate an awareness of a variety of purposes for music [Music]
- suggest purposes for a variety of images [Visual Arts]
- describe the many forms that images take [Visual Arts]
- demonstrate an awareness that people make and use art [Visual Arts]
- demonstrate an awareness that images come from a variety of contexts [Visual Arts]
- demonstrate an awareness that an image can be an original artwork or a reproduction [Visual Arts]

**GRADES 2 TO 3**

*It is expected that students will:*

- describe a variety of reasons why people dance [Dance]
- identify similarities and differences between dances [Dance]
- describe a variety of purposes for music [Music]
- identify historical and cultural contexts of music [Music]
- demonstrate an awareness of a variety of reasons why people make and use art [Visual Arts]
- identify images from a variety of historical and cultural contexts [Visual Arts]
- identify differences between original artworks and reproductions [Visual Arts]
- suggest purposes for a variety of images [Visual Arts]

### give reasons for preferences in artworks and literature

**KINDERGARTEN TO GRADE 1**

*It is expected that students will:*

- explain their preferences for specific types of literary and informational works [English Language Arts]*
- demonstrate an awareness that particular images have personal value [Visual Arts]*
- demonstrate an awareness that there are reasons for preferences in artworks [Visual Arts]*

**GRADES 2 TO 3**

*It is expected that students will:*

- demonstrate a willingness to share information about their favourite authors and materials [English Language Arts]*
- demonstrate enjoyment of literature and mass media works by independently choosing from a range of materials [English Language Arts]*
- suggest reasons for preferences in artworks [Visual Arts]
- demonstrate an awareness that particular images have value in the community [Visual Arts]

# communicate through the arts

## apply artistic elements and principles to create original artworks or specific effects

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- identify appropriate environments for a dramatic work [Drama]
- use vocal elements (high-low, loud-soft), when developing roles [Drama]
- maintain a repeated rhythmic pattern in a simple texture [Music]
- perform rhythmic patterns from classroom repertoire [Music]
- create images emphasizing one or more elements and principles [Visual Arts]
- suggest reasons for the use of elements and principles in their work [Visual Arts]*

### GRADES 2 TO 3

*It is expected that students will:*

- create suitable environments for drama [Drama]
- demonstrate the ability to take on a role [Drama]
- tell stories that have a beginning, middle, and end [Drama]*
- use vocal elements appropriately when developing a variety of roles [Drama]*
- maintain a melody or repeated melodic pattern in a simple texture [Music]*
- use singing skills to reproduce melodies [Music]
- use symbols to represent metre and rhythmic patterns [Music]*
- maintain a repeated rhythmic pattern in a simple texture [Music]*
- perform rhythmic patterns from classroom repertoire [Music]*
- reproduce patterns using accented beats [Music]*
- demonstrate changes in pitch and melodic direction [Music]
- create images using the elements and principles to produce a particular effect [Visual Arts]
- make 2-D and 3-D images:
  -using a variety of design strategies, including multiplication -exploring a variety of media
  -to communicate experiences, moods, and stories
  -to illustrate and decorate
  -that engage more than one of the senses [Visual Arts]*

## create patterns and images for self-expression and to represent his or her world

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- create movements that represent patterns, characters, and other aspects of their world [Dance]*
- represent personal thoughts, images, and feelings experienced in classroom repertoire [Music]*
- create images:
  -in response to objects and other images they have experienced
  -in response to images from a variety of cultural contexts [Visual Arts]
- make 2-D and 3-D images:
  -using a variety of design strategies, including elaboration and magnification
  -exploring a variety of media
  -to communicate experiences and moods
  -to tell a story
  -that engage more than one of the senses [Visual Arts]*
- use feelings, observation, memory, and imagination as sources for images [Visual Arts]*
- identify a variety of image sources, their own and others [Visual Arts]

### GRADES 2 TO 3

*It is expected that students will:*

- create movement sequences based on patterns, characters, and stories [Dance]*
- move expressively to a variety of sounds and music [Dance]*
- move in time to a variety of rhythms, metres, and tempos [Dance]
- use a variety of movements to express an idea, mood, or role [Drama]*
- create images:
  -based on objects, places, events, or issues in their classroom, school, and community
  -in response to images from a variety of cultural contexts [Visual Arts]*
- use feelings, observation, memory, and imagination as sources for images [Visual Arts]*
- identify a variety of image sources, including feelings, imagination, memory, and observation [Visual Arts]

### use a variety of materials, tools, equipment, and processes to create artworks

**KINDERGARTEN TO GRADE 1**

*It is expected that students will:*

- use symbols to represent simple rhythmic patterns [Music]*
- use singing skills to reproduce melodies [Music]
- demonstrate a willingness to explore a range of materials, tools, equipment, and processes [Visual Arts]
- use a variety of materials, tools, equipment, and processes to make images [Visual Arts]
- use appropriate vocabulary to identify materials, tools, equipment, and processes used to create images [Visual Arts]
- demonstrate an awareness that a variety of materials, tools, equipment, and processes can be used to create images [Visual Arts]

**GRADES 2 TO 3**

*It is expected that students will:*

- demonstrate a willingness to explore a range of materials, tools, equipment, and processes [Visual Arts]
- use appropriate vocabulary to identify the materials, tools, equipment, and processes used to create particular images [Visual Arts]
- make images using a variety of materials, tools, equipment, and processes [Visual Arts]
- demonstrate an awareness that materials, tools, equipment, and processes can be used to create particular effects [Visual Arts]

## respond to the arts in imaginative ways

### recognize the elements and principles of the art form in a specific work

**KINDERGARTEN TO GRADE 1**

*It is expected that students will:*

- identify changes in pitch and melodic direction [Music]
- demonstrate an awareness of rhythmic phrases in classroom music [Music]
- identify form in terms of repetition and unity of rhythmic patterns [Music]*
- identify melodic phrases in classroom repertoire [Music]
- distinguish one melody from another [Music]
- identify the elements of colour, shape, line, and texture, and the principle of pattern in images and in their environment [Visual Arts]*

**GRADES 2 TO 3**

*It is expected that students will:*

- describe form in terms of repetition and unity of rhythmic phrases [Music]*
- describe form in terms of repetition and unity of melodic phrases [Music]*
- identify the elements of colour, shape, line, and texture and the principles of pattern and repetition in images and in natural and human-built environments [Visual Arts]*

### identify the expressive elements in a work of art

**KINDERGARTEN TO GRADE 1**

*It is expected that students will:*

- demonstrate an awareness of a variety of movements used to express an idea, mood, or role [Drama]
- identify elements of expression that evoke thoughts, images, and feelings [Music]
- demonstrate recognition of the expressive qualities of individual visual elements [Visual Arts]

**GRADES 2 TO 3**

*It is expected that students will:*

- identify ideas and emotions expressed in dramatic work from a variety of cultures [Drama]
- identify the expressive qualities of individual visual elements [Visual Arts]
- suggest reasons for the use of elements and principles in their work [Visual Arts]*

### respond to artworks in personal ways

**KINDERGARTEN TO GRADE 1**

*It is expected that students will:*

- describe their response to a dramatic work [Drama]
- move expressively to a variety of sounds and music [Dance]
- identify connections between their thoughts and feelings and their reading, viewing, or listening experiences [English Language Arts]*
- respond to beat in music [Music]

**GRADES 2 TO 3**

*It is expected that students will:*

- identify aspects of a dramatic work that evoke a response [Drama]
- describe their feelings and ideas to be used in a dramatic work [Drama]
- describe personal thoughts, images, and feelings experienced in classroom repertoire [Music]*
- demonstrate the relationship between the elements of expression and the thoughts, images, and feelings evoked by a selection of music [Music]

# Emotional and Social Development

*A VARIETY OF EXPERIENCES ENABLE THE CHILD TO:*

## develop a positive and realistic self-concept

### identify his or her personal attributes, skills, and successes

**KINDERGARTEN TO GRADE 1**

*It is expected that students will:*

- identify personal hopes and dreams [Personal Planning]
- describe their personal attributes, skills, and successes [Personal Planning]

**GRADES 2 TO 3**

*It is expected that students will:*

- demonstrate an appreciation for the attributes, skills, and successes of self and others [Personal Planning]

### show self-confidence

**KINDERGARTEN TO GRADE 1**

*It is expected that students will:*

- demonstrate self-confidence while participating in activities from different movement categories [Physical Education]
- demonstrate pride and satisfaction in using language to express their thoughts, ideas, and feelings [English Language Arts]*

**GRADES 2 TO 3**

*It is expected that students will:*

- demonstrate self-confidence while participating in activities from different movement categories [Physical Education]
- demonstrate pride and satisfaction in using language to express thoughts, ideas, and feelings using familiar forms [English Language Arts]*

## develop independence

### set goals and feel satisfaction in accomplishments and efforts

**KINDERGARTEN TO GRADE 1**

*It is expected that students will:*

- relate consequences to actions and decisions [Personal Planning]
- use a goal-setting process [Personal Planning]

**GRADES 2 TO 3**

*It is expected that students will:*

- describe and use a goal-setting process to set short-term goals [Personal Planning]
- identify progress in achieving their goals and modify goals as necessary [Personal Planning]

### make thoughtful choices and accept responsibility for decisions

**KINDERGARTEN TO GRADE 1**

*It is expected that students will:*

- demonstrate a readiness to make choices [Personal Planning]
- relate consequences to actions and decisions [Personal Planning]

**GRADES 2 TO 3**

*It is expected that students will:*

- identify the steps in a decision-making process [Personal Planning]
- distinguish between decisions they can make and decisions that are the responsibility of others [Personal Planning]
- choose a variety of language activities [English Language Arts]

### be aware of the influence of others on her or his attitudes and values

**KINDERGARTEN TO GRADE 1**

*It is expected that students will:*

- demonstrate an awareness of the influence of family on their attitudes and values regarding healthy living [Personal Planning]
- identify people and organizations that support children [Personal Planning]

**GRADES 2 TO 3**

*It is expected that students will:*

- describe the influence of family and peers on their attitudes and values regarding healthy living [Personal Planning]

# share, co-operate, and learn from others

## communicate a range of feelings and ideas

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- demonstrate a willingness to express their feelings and ideas [Drama]*
- demonstrate a willingness to present relevant ideas in discussions [English Language Arts]*
- demonstrate a willingness to communicate their feelings [Personal Planning]*
- identify and describe a wide range of feelings [Personal Planning]

### GRADES 2 TO 3

*It is expected that students will:*

- demonstrate a willingness to communicate a range of feelings and ideas [English Language Arts]*
- use appropriate vocabulary to express feelings [Personal Planning]
- describe responsible ways to act on various feelings [Personal Planning]

## interact and co-operate with others

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- demonstrate a willingness to work co-operatively [Drama]
- demonstrate an interest in sharing their work [English Language Arts]
- interact with others [English Language Arts]
- display a willingness to work with others [Physical Education]
- demonstrate a willingness to work co-operatively when using information technology tools [Information Technology]
- collaborate with others in the care of a plant or animal [Science]
- collaborate with others in scientific investigations [Science]
- speak in turn [English Language Arts]*
- agree and disagree appropriately [English Language Arts]
- listen actively, providing verbal and non-verbal responses appropriate to their stages of development and to their cultures [English Language Arts]*

### GRADES 2 TO 3

*It is expected that students will:*

- demonstrate co-operative effort in dramatic work [Drama]
- demonstrate a willingness to participate in a variety of shared activities that include reading and listening to stories and poems, dramatic play, and presenting their own work [English Language Arts]*
- demonstrate a willingness to work co-operatively when using information technology tools [Information Technology]
- identify thoughtful, caring behaviours [Personal Planning]
- display a willingness to work with others of various abilities, interests, and cultural backgrounds [Physical Education]
- display a willingness to share ideas, space, and equipment when participating co-operatively with others [Physical Education]
- provide constructive feedback to others, showing appreciation and support [English Language Arts]
- listen actively, responding verbally and non-verbally [English Language Arts]*
- contribute relevant ideas to discussions [English Language Arts]*
- demonstrate a willingness to support others by offering compliments and encouragement [English Language Arts]
- seek opinions and consider the responses of others [English Language Arts]*

## develop and maintain friendships

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- identify characteristics of friendship [Personal Planning]

### GRADES 2 TO 3

*It is expected that students will:*

- distinguish between positive and negative attributes of friendship [Personal Planning]

# Intellectual Development

*A VARIETY OF EXPERIENCES ENABLE THE CHILD TO:*

## develop strategies to facilitate thinking and learning

### use strategies to identify, clarify, and address problems and issues

**KINDERGARTEN TO GRADE 1**

*It is expected that students will:*

- suggest questions for investigations [Science]*
- identify and clarify a problem or issue [Social Studies]
- identify strategies to address problems [Social Studies]
- recognize when a problem exists [Personal Planning]

**GRADES 2 TO 3**

*It is expected that students will:*

- use various strategies for generating questions [English Language Arts]*
- identify an issue and provide several reasons to support a position [Social Studies]
- identify and implement strategies to address class problems or projects [Social Studies]*
- describe a problem-solving model [Personal Planning]

### categorize information, ideas, events, and objects according to specific criteria

**KINDERGARTEN TO GRADE 1**

*It is expected that students will:*

- sort information, including ideas, details, and events obtained from a variety of sources [English Language Arts]*
- sort objects to one attribute chosen by themselves or the teacher [Mathematics]

**GRADES 2 TO 3**

*It is expected that students will:*

- organize details and information to make simple charts, webs, or illustrations [English Language Arts]*
- sort and organize data by one or more attributes and by using graphic organizers such as lists and charts [Mathematics]*
- identify patterns and groupings to draw conclusions from information [Science]*

### compare and contrast information, ideas, objects, and concepts

**KINDERGARTEN TO GRADE 1**

*It is expected that students will:*

- identify similarities and differences in simple information from two sources [English Language Arts]*
- identify, reproduce, extend, create, and compare patterns using actions, manipulatives, diagrams, and spoken terms [Mathematics]*
- recognize, build, compare, and order sets of objects (0 to 50) using both comparative and numerical terms [Mathematics]*
- use comparative terms to describe time and temperature [Mathematics]*
- compare and sequence events according to the duration of time (using non-standard units), time of day, days of the week, and the seasons [Mathematics]*
- compare data using appropriate language, including quantitative terms [Mathematics]*
- classify, describe, and arrange objects using comparative language to compare length, size, area, weight, and volume [Mathematics]*
- describe the similarities and differences between simple objects [Science]*

**GRADES 2 TO 3**

*It is expected that students will:*

- estimate, measure, record, compare, and order objects and containers using non-standard and standard units [Mathematics]*
- estimate and measure the passage of time in terms of seconds, minutes, hours, days, weeks, months, and years and relate the various measures to each other [Mathematics]*
- recognize, build, compare, and order sets that contain 0 to 1,000 elements [Mathematics]*
- compare, contrast, sort, and classify two-dimensional shapes and three-dimensional objects using two or more attributes [Mathematics]*
- estimate and then count an increased number of objects in a set, and compare the estimate with the actual number [Mathematics]

## reflect on her or his work and assess accomplishments

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- demonstrate an interest in evaluating their own work [English Language Arts]
- demonstrate a willingness to respond to questions about their own communications [English Language Arts]*
- demonstrate a willingness to review and assess their accomplishments [English Language Arts]*
- demonstrate a willingness to talk about their own participation in group activities [English Language Arts]
- suggest reasons for the use of elements and principles in their work [Visual Arts]*

### GRADES 2 TO 3

*It is expected that students will:*

- seek opinions and consider the responses of others [English Language Arts]*
- revise and edit their own work [English Language Arts]
- evaluate their own work using teacher- and class-generated criteria [English Language Arts]
- demonstrate a willingness to experiment with language to clarify their understanding, express their thoughts, and gain feedback [English Language Arts]*
- suggest possible improvements to investigations [Science]
- suggest reasons for the use of elements and principles in their work [Visual Arts]*

## predict and experiment to extend understanding

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- predict unknown words by using picture clues, their knowledge of language patterns, and letter-sound relationships [English Language Arts]*
- predict the chance of an event happening using the terms *never, sometimes,* and *always* [Mathematics]*
- demonstrate a willingness to experiment with written, visual, kinesthetic, dramatic, oral, and electronic forms of communication [English Language Arts]*

### GRADES 2 TO 3

*It is expected that students will:*

- use picture clues to predict content and make connections between illustrations and written text [English Language Arts]*
- predict, retell, and sequence events and ideas from selections they have read, heard, or viewed [English Language Arts]*
- demonstrate a willingness to experiment with language to clarify their understanding, express their thoughts, and gain feedback [English Language Arts]*
- conduct a probability experiment, choose an appropriate recording method, and make conclusions and predictions from the results [Mathematics]*
- discuss data, communicate conclusions, and make predictions and inferences to solve similar problems [Mathematics]*
- describe the likeliness of an outcome using terms such as *likely, unlikely, fair chance, probable,* and *expected* [Mathematics]*
- estimate and then count an increased number of objects in a set, and compare the estimate with the actual number [Mathematics]*
- explain the rule for a pattern and make predictions based on patterns using models and objects [Mathematics]*
- obtain new information by performing arithmetic operations on the data [Mathematics]*
- generate new questions from displayed data [Mathematics]*
- formulate questions to guide observation and investigations [Science]*
- conduct simple tests and describe observations [Science]

# develop an awareness of the nature and purposes of language & literacy

## be aware of himself or herself as a user of language

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- demonstrate an awareness of themselves as communicators — users of language and various media [English Language Arts]

### GRADES 2 TO 3

*It is expected that students will:*

- describe themselves as communicators [English Language Arts]*

## understand the different purposes and uses of language

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- demonstrate their understanding of the different purposes and uses of language [English Language Arts]
- demonstrate an awareness of differences in the ways in which people use language in various contexts, including home, the playground, and the school [English Language Arts]*

### GRADES 2 TO 3

*It is expected that students will:*

- demonstrate an understanding that language changes in different contexts [English Language Arts]*
- demonstrate an awareness of ways people communicate, including the use of technology [English Language Arts]

## understand the nature of oral and written language

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- demonstrate an understanding that print conveys meaning [English Language Arts]*
- demonstrate an understanding of the conventions of print, including how letter sounds make words, left to right movement in reading, and spacing [English Language Arts]*
- demonstrate an awareness of upper- and lower-case letters and of punctuation in written work [English Language Arts]*
- demonstrate an awareness that information can be obtained from a variety of sources [English Language Arts]*
- demonstrate an awareness of themselves as communicators — users of language and various media [English Language Arts]*
- demonstrate their understanding of the different purposes and uses of language [English Language Arts]*
- demonstrate an awareness of differences in the ways in which people use language in various contexts, including home, the playground, and the school [English Language Arts]*

### GRADES 2 TO 3

*It is expected that students will:*

- describe themselves as communicators [English Language Arts]
- demonstrate an awareness of ways people communicate, including use of technology [English Language Arts]*
- demonstrate an understanding that language changes in different contexts [English Language Arts]*
- demonstrate a respect for variations in language, accent, and dialect [English Language Arts]*

# develop listening and speaking abilities

## participate willingly in activities requiring listening and speaking

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- demonstrate a willingness to express their feelings and ideas [Drama]*
- demonstrate a willingness to participate actively in oral activities [English Language Arts]
- ask questions as an aid to understanding when reading, listening, or viewing [English Language Arts]*
- demonstrate a willingness to participate in a variety of sharing activities that include the use of pictures, charts, storytelling, songs, lists, menus, and storybooks [English Language Arts]*
- demonstrate pride and satisfaction in using language to express their thoughts, ideas, and feelings [English Language Arts]*

### GRADES 2 TO 3

*It is expected that students will:*

- demonstrate a willingness to communicate a range of feelings and ideas [English Language Arts]*
- demonstrate a willingness to participate in a variety of shared activities that include reading and listening to stories and poems, dramatic play, and presenting their own work [English Language Arts]*
- ask and respond to questions before, during, and after reading, viewing, or listening [English Language Arts]*
- demonstrate pride and satisfaction in using language to express thoughts, ideas, and feelings using familiar forms [English Language Arts]*

## orally convey feelings, ideas, and information

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- retell known stories in correct sequence [Drama]*
- use vocal elements (high-low, loud-soft), when developing roles [Drama]
- demonstrate a willingness to respond to questions about their own communications [English Language Arts]*
- demonstrate abilities to use basic grammar when speaking [English Language Arts]
- speak in turn [English Language Arts]*
- demonstrate a willingness to present relevant ideas in discussions [English Language Arts]*
- revise oral and written communications to clarify their ideas [English Language Arts]*
- use vocal elements appropriately when developing a variety of roles [Drama]*

### GRADES 2 TO 3

*It is expected that students will:*

- demonstrate a respect for variations in language, accent, and dialect [English Language Arts]*
- contribute relevant ideas to discussions [English Language Arts]*
- demonstrate abilities to use grammatically correct language when speaking and when writing simple sentences [English Language Arts]*
- use language to acknowledge special events and honour individual and group accomplishments [English Language Arts]*
- demonstrate a willingness to experiment with language to clarify their understanding, express their thoughts, and gain feedback [English Language Arts]*
- communicate and apply positional language and cardinal directions (relating to compasses and maps) in verbal, written, or numerical form [Mathematics]*
- describe personal thoughts, images, and feelings experienced in classroom repertoire [Music]*
- use appropriate vocabulary to express feelings [Personal Planning]

## listen to make meaning from ideas and information

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- demonstrate abilities to follow simple oral instructions [English Language Arts]
- listen actively, providing verbal and non-verbal responses appropriate to their stages of development and to their cultures [English Language Arts]*
- show a willingness to listen to directions and simple explanations [Physical Education]*

### GRADES 2 TO 3

*It is expected that students will:*

- listen actively, responding verbally and non-verbally [English Language Arts]*
- demonstrate the ability to listen to directions, follow rules and routines, and stay on task while participating in physical activity [Physical Education]*

# develop reading and viewing abilities

## show interest and enjoyment in reading and viewing

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- demonstrate a willingness to participate in a variety of sharing activities that include the use of pictures, charts, storytelling, songs, lists, menus, and storybooks [English Language Arts]*

### GRADES 2 TO 3

*It is expected that students will:*

- demonstrate a willingness to participate in a variety of shared activities that include reading and listening to stories and poems, dramatic play, and presenting their own work [English Language Arts]*
- select topics from a variety of literature and mass media works that are of personal interest [English Language Arts]*
- demonstrate enjoyment of literature and mass media works by independently choosing from a range of materials [English Language Arts]*
- demonstrate a willingness to share information about their favourite authors and materials [English Language Arts]*

## use various strategies and approaches to reading

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- ask questions as an aid to understanding when reading, listening, or viewing [English Language Arts]*
- predict unknown words by using picture clues, their knowledge of language patterns, and letter-sound relationships [English Language Arts]*
- demonstrate an understanding of the conventions of print, including how letter sounds make words, left to right movement in reading, and spacing [English Language Arts]
- demonstrate an understanding that print conveys meaning [English Language Arts]
- identify familiar words and images in charts, lists, signs, informational texts, and storybooks [English Language Arts]
- read silently for short periods of time [English Language Arts]

### GRADES 2 TO 3

*It is expected that students will:*

- ask and respond to questions before, during, and after reading, viewing, or listening [English Language Arts]*
- use picture clues to predict content and make connections between illustrations and written text [English Language Arts]*
- reread and read ahead for clarification [English Language Arts]
- use an expanding range of strategies — including pictorial, graphic, structural, and phonics clues — to derive meaning [English Language Arts]

## read with comprehension and accuracy

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- retell known stories in correct sequence [Drama]*
- identify similarities and differences in simple information from two sources [English Language Arts]*
- describe the sequence of the main events in a story orally, in writing, or by using pictures [English Language Arts]
- identify the main information provided in illustrations [English Language Arts]*
- recount what books, stories, or articles are generally about [English Language Arts]
- read number words up to 10 [Mathematics]*
- identify international hazard symbols on common household products [Science]*
- use picture maps to identify home and school within the community [Social Studies]

### GRADES 2 TO 3

*It is expected that students will:*

- read with support, becoming increasingly fluent and independent [English Language Arts]
- describe aspects of stories or mass media narratives, including characters, where and when the events took place, and what happened [English Language Arts]
- predict, retell, and sequence events and ideas from selections they have read, heard, or viewed [English Language Arts]*
- follow simple written instructions [English Language Arts]
- identify specific details in communications in response to tasks or questions [English Language Arts]*
- describe the main topics or ideas in communications they read and view [English Language Arts]
- read and write both forms of money notation (89¢ and

$0.89) [Mathematics]*
- read and write time to the nearest minute using 12-hour notation (use both a digital and an analog clock) [Mathematics]*
- read and write the date, including the days of the week, and use the abbreviations and names of the months of the year in order [Mathematics]*
- make connections among manipulatives, diagrams, spoken terms, and written symbols [Mathematics]*

### respond to and analyse what is read

KINDERGARTEN TO GRADE 1

*It is expected that students will:*
- explain their preferences for specific types of literary and informational works [English Language Arts]*
- identify connections between their thoughts and feelings and their reading, viewing, or listening experiences [English Language Arts]*
- identify explicit connections between works that they have read, viewed, or heard [English Language Arts]
- identify connections between ideas and information and their own experiences [English Language Arts]
- identify "good" and "evil" character types in stories, films, and videos [English Language Arts]
- distinguish between make-believe and reality in print and non-print materials [English Language Arts]
- draw simple interpretations from personal experiences, oral sources, and visual representations [Social Studies]*

GRADES 2 TO 3

*It is expected that students will:*
- offer direct responses to their reading, listening, or viewing experiences supported by reasons, examples, and details [English Language Arts]
- identify and describe details and feelings conveyed by illustrations [English Language Arts]
- generate new questions from displayed data [Mathematics]*
- identify patterns and groupings to draw conclusions from information [Science]*
- draw simple interpretations from personal experiences, oral sources, and from visual and written representations [Social Studies]*

## develop writing and representing abilities

### show interest and enjoyment in writing and representing

KINDERGARTEN TO GRADE 1

*It is expected that students will:*
- demonstrate a willingness to express their feelings and ideas [Drama]*
- demonstrate pride and satisfaction in using language to express their thoughts, ideas, and feelings [English Language Arts]*
- demonstrate a willingness to experiment with written, visual, kinesthetic, dramatic, oral, and electronic forms of communication [English Language Arts]*

GRADES 2 TO 3

*It is expected that students will:*
- demonstrate pride and satisfaction in using language to express thoughts, ideas, and feelings using familiar forms [English Language Arts]*
- demonstrate a willingness to experiment with communication forms to respond to, inform, and entertain others [English Language Arts]
- demonstrate a willingness to experiment with language to clarify their understanding, express their thoughts, and gain feedback [English Language Arts]*
- demonstrate a willingness to communicate a range of feelings and ideas [English Language Arts]*

### write and represent to convey feelings, ideas, and information

KINDERGARTEN TO GRADE 1

*It is expected that students will:*
- create movements that represent patterns, characters, and other aspects of their world [Dance]*
- apply various strategies to generate ideas [English Language Arts]
- create simple charts, webs, or illustrations as a way of organizing information [English Language Arts]*
- revise oral and written communications to clarify their ideas [English Language Arts]*

GRADES 2 TO 3

*It is expected that students will:*
- move expressively to a variety of sounds and music [Dance]*
- create movement sequences based on patterns, characters, and stories [Dance]*
- use a variety of movements to express an idea, mood, or role [Drama]*
- tell stories that have a beginning, middle, and end [Drama]*

- construct a pictograph using one-to-one correspondence [Mathematics]*
- use symbols to represent simple rhythmic patterns [Music]*
- represent personal thoughts, images, and feelings experienced in classroom repertoire [Music]*
- demonstrate a willingness to communicate their feelings [Personal Planning]*
- present information using oral, visual, or written representation [Social Studies]*
- use feelings, observation, memory, and imagination as sources for images [Visual Arts]*
- make 2-D and 3-D images:
  -using a variety of design strategies, including elaboration and magnification
  -exploring a variety of media
  -to communicate experiences and moods
  -to tell a story
  -that engage more than one of the senses [Visual Arts]*

- demonstrate an understanding that language changes in different contexts [English Language Arts]*
- create a variety of personal communications, including charts, journals, lists, illustrations, and stories [English Language Arts]
- apply various strategies to generate and shape ideas [English Language Arts]
- read and write the date, including the days of the week, and use the abbreviations and names of the months of the year in order [Mathematics]*
- read and write time to the nearest minute using 12-hour notation (use both a digital and an analog clock) [Mathematics]
- read and write both forms of money notation (89¢ and $0.89) [Mathematics]*
- demonstrate place-value concepts concretely and pictorially to give meaning to numbers 0 to 1,000 [Mathematics]*
- communicate and apply positional language and cardinal directions (relating to compasses and maps) in verbal, written, or numerical form [Mathematics]*
- use symbols to represent metre and rhythmic patterns [Music]*
- use a variety of ways to communicate their goals and plans with others [Personal Planning K–12]
- create and interpret simple maps using cardinal directions, symbols, and simple keys [Social Studies]
- collect and record information from a variety of sources and experiences [Social Studies]*
- use feelings, observation, memory, and imagination as sources for images [Visual Arts]*
- make 2-D and 3-D images:
  -using a variety of design strategies, including multiplication
  -exploring a variety of media
  -to communicate experiences, moods, and stories
  -to illustrate and decorate
  -that engage more than one of the senses [Visual Arts]*
- create images:
  -based on objects, places, events, or issues in their classroom, school, and community
  -in response to images from a variety of cultural contexts [Visual Arts]*
- organize information into sequenced presentations that include a beginning, middle, and end [Social Studies]*

## apply standard conventions when writing

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- use recognizable letters when writing familiar words [English Language Arts]
- use conventional spelling for some of the words they use in their writing [English Language Arts]
- demonstrate an awareness of upper- and lower-case letters and of punctuation in written work [English Language Arts]

### GRADES 2 TO 3

*It is expected that students will:*

- use some conventions of capitalization and punctuation [English Language Arts]
- print or write legibly [English Language Arts]
- demonstrate abilities to use grammatically correct language when speaking and when writing simple sentences [English Language Arts]*
- demonstrate abilities to identify misspellings in frequently used words [English Language Arts]

# develop information processing abilities

## identify information needs; and locate and gather information

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- suggest questions for investigations [Science]*
- demonstrate an awareness that information can be obtained from a variety of sources [English Language Arts]
- collect first-hand information by counting objects, conducting surveys, measuring, and performing simple experiments [Mathematics]*
- collect information from a variety of sources and experiences [Social Studies]
- draw simple interpretations from personal experiences, oral sources, and visual representations [Social Studies]*

### GRADES 2 TO 3

*It is expected that students will:*

- use various strategies for generating questions [English Language Arts]*
- collect specific information from a variety of sources, including print, oral discussions, electronic media, and computer technology [English Language Arts]
- demonstrate an interest in using information from documentaries, news broadcasts, newspapers, and electronic sources [English Language Arts]
- identify specific details in communications in response to tasks or questions [English Language Arts]*
- ask and respond to questions before, during, and after reading, viewing, or listening [English Language Arts]*
- locate and retrieve information using information technology tools [Information Technology]
- use a variety of methods to collect and record data, including measuring devices, printed resources, and tallies [Mathematics]*
- conduct a probability experiment, choose an appropriate recording method, and make conclusions and predictions from the results [Mathematics]*
- formulate questions and categories for data collection and actively collect first-hand information [Mathematics]*
- obtain new information by performing arithmetic operations on the data [Mathematics]*
- use simple magnifiers or microscopes to observe things [Science]
- use a variety of measuring instruments to gather accurate information [Science]*
- collect and record information from a variety of sources and experiences [Social Studies]*

## organize and analyse information

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- sort information, including ideas, details, and events obtained from a variety of sources [English Language Arts]*
- identify similarities and differences in simple information from two sources [English Language Arts]*
- create simple charts, webs, or illustrations as a way of organizing information [English Language Arts]*
- use information technology tools to organize information [Information Technology]
- pose oral questions in relation to the data gathered [Mathematics]*
- compare data using appropriate language, including quantitative terms [Mathematics]*

### GRADES 2 TO 3

*It is expected that students will:*

- organize details and information to make simple charts, webs, or illustrations [English Language Arts]*
- sort, organize, and represent specific information [English Language Arts]*
- identify and use different methods of organizing information [Information Technology]
- conduct a probability experiment, choose an appropriate recording method, and make conclusions and predictions from the results [Mathematics]*
- sort and organize data by one or more attributes and by using graphic organizers such as lists and charts [Mathematics]*
- translate patterns from one mode to another using manipulatives, diagrams, charts, calculators, spoken and written terms, and symbols [Mathematics]*
- discuss data, communicate conclusions, and make predictions and inferences to solve similar problems [Mathematics]*

- display data in more than one way, including graphs, pictographs, bar graphs, and rank ordering [Mathematics]*
- graph whole number points on a horizontal or a vertical number line [Mathematics]*
- identify patterns and groupings to draw conclusions from information [Science]*
- draw simple interpretations from personal experiences, oral sources, and from visual and written representations [Social Studies]*
- organize information into sequenced presentations that include a beginning, middle, and end [Social Studies]*

### present information

#### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- present ideas using electronic documents [Information Technology]
- use information technology tools in a variety of ways to create new meaning [Information Technology]
- create and modify electronic documents [Information Technology]
- demonstrate an ability to use a graphics program [Information Technology]
- present information using oral, visual, or written representation [Social Studies]*

#### GRADES 2 TO 3

*It is expected that students will:*

- sort, organize, and represent specific information [English Language Arts]*
- create and modify electronic documents that express ideas or concepts [Information Technology]
- identify suitable information technology tools to express ideas or concepts [Information Technology]
- use word-processing and graphics software to present ideas [Information Technology]
- present ideas using a variety of information technology tools [Information Technology]
- describe the components of electronic presentations [Information Technology]
- construct models to represent ideas or concepts [Science]
- communicate scientific observations to peers, teachers, and family [Science]

## develop number sense

### use numbers to describe quantities

#### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- explore, represent, and describe numbers up to 50 in a variety of ways [Mathematics]
- demonstrate and explain orally an understanding of "half" as part of a whole [Mathematics]
- estimate and count objects in a set (0 to 50) and compare estimates to the actual number [Mathematics]
- create equivalent sets of coins up to 10¢ in value [Mathematics]
- use money as a form of exchange [Mathematics]
- recognize and name the value of pennies, nickels, and dimes [Mathematics]
- demonstrate an understanding of money as a means of exchange [Social Studies]

#### GRADES 2 TO 3

*It is expected that students will:*

- read and write both forms of money notation (89¢ and $0.89) [Mathematics]*
- demonstrate an understanding of the use and value of money as a means of exchange [Social Studies]
- select the most appropriate standard unit for measuring length (cm, m, km), mass (g, kg), volume (L), and time (minutes, hours, days) [Mathematics]*
- demonstrate and explain in a variety of ways an understanding of halves, thirds, fourths, fifths, and tenths as part of a region or a set [Mathematics]

## read and represent numbers in a variety of ways

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- use a calculator or computer to explore and represent numbers up to 100 [Mathematics]
- count orally by 1s, 2s, 5s, and 10s to 100 [Mathematics]
- read number words up to 10 [Mathematics]*

### GRADES 2 TO 3

*It is expected that students will:*

- identify and use coins and bills (to $100) to estimate, count, record collections, create equivalent sets, and make change up to $10 [Mathematics]*
- make connections among manipulatives, diagrams, spoken terms, and written symbols [Mathematics]*
- demonstrate place-value concepts concretely and pictorially to give meaning to numbers 0 to 1,000 [Mathematics]*
- explore, represent, and describe numbers to 1,000 in a variety of ways, including the use of calculators and computers [Mathematics]
- read and write number words to 100 and numerals to 1,000 [Mathematics]
- use ordinal numbers to 100 [Mathematics]
- round numbers to nearest 10 and 100 [Mathematics]
- recognize, build, compare, and order sets that contain 0 to 1,000 elements [Mathematics]*

## understand and develop proficiency with calculations

### GRADES 2 TO 3

*It is expected that students will:*

- demonstrate whether a number is even or odd [Mathematics]
- recognize and explain whether a number is divisible by 2, 5, or 10 [Mathematics]
- obtain new information by performing arithmetic operations on the data [Mathematics]*
- verify their solutions to problems by using inverse operations, estimation, and calculators [Mathematics]*
- calculate and justify the methods they used to find sums, differences, products, and quotients using estimation strategies, mental mathematics techniques, manipulatives, algorithms, and calculators [Mathematics]*
- choose, use, and defend the appropriate calculation strategy or technology to solve problem [Mathematics]*
- recall addition and subtraction facts up to 18 and multiplication facts up to 25 [Mathematics]
- explore and demonstrate the processes of multiplication and division up to 50, using manipulatives, diagrams, and symbols [Mathematics]
- demonstrate and describe the process of addition and subtraction of whole numbers up to 1,000 with and without regrouping, using manipulatives, diagrams, and symbols [Mathematics]
- skip count forward and backward by 2s, 5s, 10s, 25s, and 100s to 1,000, using starting points that are multiples; and skip count forward, using random starting points [Mathematics]
- estimate and then count an increased number of objects in a set, and compare the estimate with the actual number [Mathematics]*
- identify and use coins and bills (to $100) to estimate, count, record collections, create equivalent sets, and make change up to $10 [Mathematics]*

### describe and use arithmetic operations to solve problems

**GRADES 2 TO 3**

*It is expected that students will:*

- demonstrate and orally describe the process of addition and subtraction of whole numbers to 18 using role-play, manipulatives, and diagrams (Memorization is not intended.) [Mathematics]
- discuss data, communicate conclusions, and make predictions and inferences to solve similar problems [Mathematics]*
- choose, use, and defend the appropriate calculation strategy or technology to solve problem [Mathematics]*
- verify their solutions to problems by using inverse operations, estimation, and calculators [Mathematics]*
- calculate and justify the methods they used to find sums, differences, products, and quotients using estimation strategies, mental mathematics techniques, manipulatives, algorithms, and calculators [Mathematics]*
- estimate and then count an increased number of objects in a set, and compare the estimate with the actual number [Mathematics]*
- estimate, measure, record, compare, and order objects and containers using non-standard and standard units [Mathematics]*

## develop spatial sense

### use direct or indirect measurement to describe and compare in "real-world" situations

**KINDERGARTEN TO GRADE 1**

*It is expected that students will:*

- use comparative terms to describe time and temperature [Mathematics]*
- match the size and shape of figures by superimposing one on top of another [Mathematics]
- use directional terms such as *over, under, beside, near, far, left,* and *right* to describe the relative position of objects and shapes [Mathematics]*
- compare and sequence events according to the duration of time (using non-standard units), time of day, days of the week, and the seasons [Mathematics]*
- estimate the number of uniform objects and irregular shapes that will cover a given area and verify their estimates by covering and counting [Mathematics]
- select an appropriate non-standard unit to estimate, measure, record, compare, and order objects and containers [Mathematics]
- compare the relative sizes of non-standard units by measuring the same object using different units of measurement, and recognize that different objects may have the same mass [Mathematics]
- classify, describe, and arrange objects using comparative language to compare length, size, area, weight, and volume [Mathematics]*
- describe the similarities and differences between simple objects [Science]*

**GRADES 2 TO 3**

*It is expected that students will:*

- communicate and apply positional language and cardinal directions (relating to compasses and maps) in verbal, written, or numerical form [Mathematics]*
- relate temperature to real-life situations [Mathematics]
- estimate, read, and record temperature to the nearest degree Celsius [Mathematics]
- read and write time to the nearest minute using 12-hour notation (use both a digital and an analog clock) [Mathematics]*
- read and write the date, including the days of the week, and use the abbreviations and names of the months of the year in order [Mathematics]
- estimate and measure the passage of time in terms of seconds, minutes, hours, days, weeks, months, and years and relate the various measures to each other [Mathematics]*
- relate the size of units to the number of units needed when measuring [Mathematics]
- describe relationships among various standard units of measure [Mathematics]*
- select the most appropriate standard unit for measuring length (cm, m, km), mass (g, kg), volume (L), and time (minutes, hours, days) [Mathematics]*
- construct a shape, length, or object using a specific non-standard unit or standard unit [Mathematics]

## describe and construct 3-D objects and 2-D shapes and analyse the relationships among them

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- explore and describe real-world and three-dimensional objects using descriptive attributes such as *big, little, like a box,* and *like a can* [Mathematics]
- compare, sort, classify, and pattern two-dimensional shapes [Mathematics]
- construct and rearrange a design using a set of two-dimensional shapes [Mathematics]
- identify and describe specific two-dimensional shapes such as circles, squares, triangles, or rectangles [Mathematics]
- construct three-dimensional objects using materials such as Plasticine, blocks, and boxes [Mathematics]
- explore, identify, and classify three-dimensional objects in the environment according to their properties [Mathematics]
- make 2-D and 3-D images:
  -using a variety of design strategies, including elaboration and magnification
  -exploring a variety of media
  -to communicate experiences and moods
  -to tell a story
  -that engage more than one of the senses [Visual Arts]*

### GRADES 2 TO 3

*It is expected that students will:*

- explore the concepts of points, lines, perpendicular lines, parallel lines, and intersecting lines on three-dimensional objects [Mathematics]
- recognize congruent three-dimensional objects and two-dimensional shapes in the environment [Mathematics]
- describe and name pyramids and prisms by the shape of the base [Mathematics]
- identify, count, and describe the faces, vertices, edges, sides, and angles for polygons and solids [Mathematics]
- recognize that the size and shape of an object does not necessarily determine its mass [Mathematics]
- compare, contrast, sort, and classify two-dimensional shapes and three-dimensional objects using two or more attributes [Mathematics]*
- describe and name three-dimensional objects (cubes, spheres, cones, cylinders, pyramids, and prisms) and use appropriate two-dimensional names to describe their faces [Mathematics]
- make 2-D and 3-D images:
  -using a variety of design strategies, including multiplication
  -exploring a variety of media
  -to communicate experiences, moods, and stories
  -to illustrate and decorate
  -that engage more than one of the senses [Visual Arts]*

## perform, analyse, and create transformations

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- explore and describe reflection in mirrors [Mathematics]
- identify and fit pieces of puzzles or shapes that go together (part-to-whole relationship) [Mathematics]

### GRADES 2 TO 3

*It is expected that students will:*

- trace a path on a line following oral or written instructions [Mathematics]
- construct and rearrange a design using a set of two-dimensional shapes [Mathematics]
- construct skeletons of a three-dimensional object from a model and relate skeletons (nets) to models [Mathematics]
- demonstrate through dismantling that a rectangular solid has more than one net [Mathematics]
- make identical, congruent two-dimensional shapes [Mathematics]
- make congruent shapes and symmetrical two-dimensional shapes using folds and reflections [Mathematics]

# develop statistical sense

## collect, display, and analyse data to make predictions

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- collect first-hand information by counting objects, conducting surveys, measuring, and performing simple experiments [Mathematics]*
- predict the chance of an event happening using the terms *never, sometimes,* and *always* [Mathematics]*
- pose oral questions in relation to the data gathered [Mathematics]*
- compare data using appropriate language, including quantitative terms [Mathematics]*
- construct a pictograph using one-to-one correspondence [Mathematics]*
- collect first-hand information by counting objects, conducting surveys, measuring, and performing simple experiments [Mathematics]*
- suggest possible interpretations for a set of observations [Science]
- suggest questions for investigations [Science]*

### GRADES 2 TO 3

*It is expected that students will:*

- obtain new information by performing arithmetic operations on the data [Mathematics]*
- generate new questions from displayed data [Mathematics]*
- discuss data, communicate conclusions, and make predictions and inferences to solve similar problems [Mathematics]*
- display data in more than one way, including graphs, pictographs, bar graphs, and rank ordering [Mathematics]*
- sort and organize data by one or more attributes and by using graphic organizers such as lists and charts [Mathematics]*
- use a variety of methods to collect and record data, including measuring devices, printed resources, and tallies [Mathematics]*
- formulate questions and categories for data collection and actively collect first-hand information [Mathematics]*
- graph whole number points on a horizontal or a vertical number line [Mathematics]*
- formulate questions to guide observation and investigations [Science]*
- use a variety of measuring instruments to gather accurate information [Science]*

## use probability to represent and solve problems involving uncertainty

### GRADES 2 TO 3

*It is expected that students will:*

- conduct a probability experiment, choose an appropriate recording method, and make conclusions and predictions from the results [Mathematics]*
- describe the likeliness of an outcome using terms such as *likely, unlikely, fair chance, probable*, and *expected* [Mathematics]*

## develop a sense of relationships and patterns

### use patterns to describe the world around them and to solve problems

KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- recognize patterns in the environment [Mathematics]
- identify, reproduce, extend, create, and compare patterns using actions, manipulatives, diagrams, and spoken terms [Mathematics]*
- recognize, build, compare, and order sets of objects (0 to 50) using both comparative and numerical terms [Mathematics]*
- identify form in terms of repetition and unity of rhythmic patterns [Music]*
- distinguish variations from regular patterns [Science]
- identify the elements of colour, shape, line, and texture, and the principle of pattern in images and in their environment [Visual Arts]*

GRADES 2 TO 3

*It is expected that students will:*

- identify attributes and rules in pre-sorted sets [Mathematics]
- identify, create, and describe number and non-number patterns [Mathematics]
- describe relationships among various standard units of measure [Mathematics]*
- explain the rule for a pattern and make predictions based on patterns using models and objects [Mathematics]*
- translate patterns from one mode to another using manipulatives, diagrams, charts, calculators, spoken and written terms, and symbols [Mathematics]*
- reproduce patterns using accented beats [Music]*
- perform rhythmic patterns from classroom repertoire [Music]*
- maintain a repeated rhythmic pattern in a simple texture [Music]*
- describe form in terms of repetition and unity of rhythmic phrases [Music]*
- use symbols to represent metre and rhythmic patterns [Music]*
- maintain a melody or repeated melodic pattern in a simple texture [Music]*
- describe form in terms of repetition and unity of melodic phrases [Music]*
- identify patterns and groupings to draw conclusions from information [Science]*
- identify the elements of colour, shape, line, and texture and the principles of pattern and repetition in images and in natural and human-built environments [Visual Arts]*

## develop an understanding of the world around them

### understand the natural world

KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- use appropriate vocabulary to identify the physical characteristics that distinguish males from females [Personal Planning]
- demonstrate an awareness of the ability of living things to reproduce [Personal Planning]
- describe the diversity of plants within the home and school environment [Science]
- determine the requirements of healthy plants and healthy animals [Science]
- compare the life cycle of an animal hatched from an egg with one born from the mother [Science]
- identify the stages in the life cycle of a plant and of a pet or other animal [Science]
- identify similarities and differences among animal species [Science]
- describe the appearance and behaviour of a variety of animals [Science]
- describe the characteristics of a variety of plants [Science]

GRADES 2 TO 3

*It is expected that students will:*

- describe how living things reproduce [Personal Planning]
- demonstrate a knowledge of how plants take in water, nutrients, and light [Science]
- compare and contrast different types of animal life cycles [Science]
- compare and contrast plant and animal life cycles [Science]
- demonstrate a knowledge of what animals need to survive [Science]
- suggest reasons for the endangerment or extinction of an animal species [Science]
- compare and contrast different types of plant life cycles [Science]
- suggest reasons for the endangerment or extinction of a plant species [Science]
- explain how animals interact with one another [Science]
- describe structures that enable different plants to survive in different environments [Science]

- compare and contrast animal fossils with living organisms [Science]
- compare and contrast plant fossils with living organisms [Science]
- describe structures that enable animals to survive in different environments [Science]
- describe the basic structure and function of the organs involved in hearing and speech [Science]
- relate the nature of sound to hearing [Science]

## understand the physical world

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- identify a variety of changes that cannot be reversed [Science]
- demonstrate changes in properties of matter when water is added [Science]
- demonstrate changes in properties of matter when heated or cooled [Science]
- differentiate between solids, liquids, and gases [Science]
- identify common types of forces [Science]
- use a variety of objects to describe motion and changes in motion [Science]
- describe how objects can change over time [Science]
- describe the properties of a variety of common objects [Science]
- infer the relationship between the position of an object, its shadow, and the sun [Science]
- identify characteristics of each season [Science]
- describe the properties of air [Science]
- identify the living and non-living materials found in soil [Science]
- classify rocks and soil according to their physical characteristics [Science]
- describe the characteristics of rocks, soil, and water [Science]
- describe the effects of water and wind on rocks and soil [Science]
- describe the effects of weather on living things [Science]

### GRADES 2 TO 3

*It is expected that students will:*

- describe the unique features of the Earth that sustain life [Science]*
- demonstrate how the movements of the Earth cause day, night, and the seasons [Science]
- classify rocks as sedimentary, igneous, and metamorphic [Science]
- identify the Earth as part of a system of planets [Science]
- demonstrate an understanding of the factors involved in the composition and formation of rocks (e.g., minerals, temperatures, forces) [Science]
- construct a model to show that the Earth is composed of many layers [Science]
- demonstrate a knowledge of the composition and formation of soil [Science]
- distinguish between the features of the day and night skies [Science]
- give examples of how the Earth's surface changes constantly [Science]
- evaluate ways energy can be conserved in the school and home [Science]
- describe the three states of matter [Science]
- classify materials as magnetic or non-magnetic [Science]
- identify the sources of energy in a variety of devices found in the school and home [Science]
- compare how sound travels through different materials [Science]
- demonstrate the properties of magnetic attraction and repulsion [Science]
- describe different types of sounds in terms of pitch, quality, and intensity [Science]
- describe various kinds of magnets and their force fields [Science]
- classify materials according to the extent to which they conduct heat [Science]
- create a magnet [Science]
- demonstrate the ability to make sound using vibrations [Science]
- describe ways energy is used in the school and home [Science]
- distinguish between changes in matter that cannot be readily reversed and those that can [Science]
- identify properties of matter that may stay the same even when other properties change [Science]
- infer how we hear sounds [Science]
- relate changes in the states of matter to thermal energy transfer [Science]
- identify and locate the provinces and territories of Canada [Social Studies]
- identify and locate B.C. in Canada, North America, the Pacific region, and the world [Social Studies]

## understand the social and political world

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- demonstrate an awareness of Canada [Social Studies]
- demonstrate an awareness of natural and human-built environments [Social Studies]

### GRADES 2 TO 3

*It is expected that students will:*

- describe the ways people in the community use science [Science]
- describe how physical environment influences human activities [Social Studies]
- describe the impact of mass media on their choices as consumers [Social Studies]
- describe how technology affects individuals and communities [Social Studies]
- describe the development of various B.C. communities in relation to their location and availability of resources [Social Studies]
- describe the historical development of various B.C. communities [Social Studies]
- explain the significance of Canada's symbols [Social Studies]

## understand information technology and be willing to use information technology tools

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- enter information on a computer and print it [Information Technology]
- demonstrate a willingness to use information technology tools [Information Technology]
- use appropriate terminology to describe the parts of a computer system [Information Technology]
- follow a sequence of steps to perform a task using information technology tools [Information Technology]
- identify and describe the effects of technology tools that communicate information in the home and school [Information Technology]

### GRADES 2 TO 3

*It is expected that students will:*

- enter, save, and retrieve information using a computer or other information technology tool [Information Technology]
- demonstrate an understanding of data-storage practices [Information Technology]
- describe how a disk is installed and stored [Information Technology]
- use appropriate terminology when using information technology tools [Information Technology]
- demonstrate an understanding that tasks on a computer can be done in a variety of ways [Information Technology]
- identify information technology tools used in the home, school, and community [Information Technology]

# Physical Development and Well-Being

*A VARIETY OF EXPERIENCES ENABLE THE CHILD TO:*

## learn and practice safety

### identify the characteristics that make a situation safe or unsafe

**KINDERGARTEN TO GRADE 1**

*It is expected that students will:*

- identify safe and unsafe substances [Personal Planning]
- identify the characteristics that make the family environment safe and nurturing [Personal Planning]
- distinguish between appropriate and inappropriate touching behaviours [Personal Planning]
- identify the hazards and use safe behaviours in the home, school, and community [Personal Planning]
- identify international hazard symbols on common household products [Science]*

**GRADES 2 TO 3**

*It is expected that students will:*

- describe the potential dangers associated with various unsafe substances [Personal Planning]

### identify and use basic principles of safety in the home, at school, and in the community

**KINDERGARTEN TO GRADE 1**

*It is expected that students will:*

- demonstrate ways of refusing unknown substances [Personal Planning]
- identify an unsafe situation and apply safety rules to prevent child abuse [Personal Planning]
- identify people and organizations that support students [Personal Planning]
- follow rules of behaviour to prevent injury to themselves and others [Personal Planning]
- demonstrate an ability to access resources when in dangerous and unsafe situations [Personal Planning]
- demonstrate an ability to access help when in abusive or potentially abusive situations [Personal Planning]
- demonstrate an ability to access emergency services [Personal Planning]
- identify the hazards and use safe behaviours in the home, school, and community [Personal Planning]
- safely carry out instructions and procedures involving a small number of steps [Science]

**GRADES 2 TO 3**

*It is expected that students will:*

- demonstrate ways of refusing or avoiding harmful or unknown substances [Personal Planning]
- identify key persons for support in preventing abuse [Personal Planning]
- use avoidance and assertiveness skills in potentially dangerous situations [Personal Planning]
- identify emergency procedures in the home, school, and community [Personal Planning]
- apply safety rules to themselves and others at home, at school, and in the community [Personal Planning]
- describe ways to protect their hearing and speech organs from damage [Science]
- describe appropriate solutions for hazardous situations in the home, school, and community [Personal Planning]
- describe the emergency response systems in the community [Personal Planning]
- use avoidance and assertiveness skills in abusive or potentially abusive situations [Personal Planning]
- demonstrate an awareness of the legal and societal support for abuse prevention [Personal Planning]

### handle equipment and materials safely

**KINDERGARTEN TO GRADE 1**

*It is expected that students will:*

- demonstrate the proper care and safe use of equipment [Information Technology]
- handle equipment and materials safely [Science]
- practice appropriate safety procedures when investigating solids, liquids, and gases [Science]
- demonstrate care of the materials, tools, and equipment they use [Visual Arts]
- demonstrate an awareness of safety and environmental considerations in the use of materials, tools, equipment, and processes [Visual Arts]*

**GRADES 2 TO 3**

*It is expected that students will:*

- use a variety of science equipment safely [Science]
- demonstrate appropriate set-up, use, clean-up, and storage procedures for the materials, tools, and equipment they use [Visual Arts]

### use strategies for moving safely, depending on the situation

KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- move safely in both personal and general space [Dance]
- move safely and sensitively through all environments [Physical Education]
- move safely in a variety of alternative environments [Physical Education]
- move safely in personal and general space, demonstrating body awareness [Physical Education]
- demonstrate ways to run, jump, and throw safely [Physical Education]
- move safely through space when creating movement sequences with or without music [Physical Education]
- select ways to roll, travel, take off, and land safely [Physical Education]
- use safe behaviours when responding to simple movement tasks [Physical Education]

GRADES 2 TO 3

*It is expected that students will:*

- move safely in both personal and general space [Dance]
- demonstrate the proper care and safe use of equipment [Information Technology]
- move safely in a variety of alternative environments [Physical Education]
- demonstrate safe behaviours when participating in physical activity [Physical Education]

## take care of and respect her or his body

### be aware of good nutrition

KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- identify foods and activities that contribute to good health [Personal Planning]

GRADES 2 TO 3

*It is expected that students will:*

- explain why they need a variety of foods [Personal Planning]

### develop motor skills while maintaining physical fitness

KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- demonstrate an ability to balance in locomotor and non-locomotor movements [Dance]
- create shapes and balances, and transfer weight using a variety of body parts [Physical Education]
- perform locomotor and non-locomotor skills, individually and with objects [Physical Education]
- use movement concepts and skills to participate in alternative-environment activities [Physical Education]
- perform locomotor and non-locomotor skills individually, with a partner, and with objects [Physical Education]
- perform simple motor skills involved in individual and dual activities [Physical Education]

GRADES 2 TO 3

*It is expected that students will:*

- move in a variety of levels, pathways, and directions, using a variety of body shapes [Dance]
- demonstrate balance in movements [Dance]
- perform simple gymnastic movements using locomotor and non-locomotor skills, elements of body and space awareness, qualities, and relationships, alone and with others, with and without objects [Physical Education]
- perform simple movement sequences using elements of body and space awareness, qualities, and relationships, alone and with others, with and without objects [Physical Education]
- perform simple movement sequences using elements of body and space awareness [Physical Education]
- demonstrate basic dance steps and patterns using locomotor and non-locomotor skills, alone and with others [Physical Education]
- respond to a variety of stimuli to create movement sequences, alone and with others [Physical Education]
- demonstrate body and space awareness when performing simple game-skills activities [Physical Education]

## apply specific motor skills

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- demonstrate body awareness when performing dance activities [Physical Education]
- demonstrate ways to receive an object using a variety of body parts and implements [Physical Education]
- demonstrate ways to retain possession of an object [Physical Education]
- demonstrate ways to send and project an object using a variety of body parts and implements [Physical Education]
- move in time to a steady beat [Dance]
- move in a variety of levels, pathways, and directions, using a variety of body shapes [Dance]
- create movements to perform individual movement sequences in gymnastics [Physical Education]
- use movement to respond to a variety of stimuli [Physical Education]
- demonstrate basic dance steps, alone and with others [Physical Education]

### GRADES 2 TO 3

*It is expected that students will:*

- create and explain games that use specific skills [Physical Education]
- select and combine activity-specific motor skills involved in individual and dual activities [Physical Education]
- demonstrate ways to throw an object at a target with increasing accuracy [Physical Education]
- select and perform locomotor and non-locomotor skills involved in a variety of individual and dual activities [Physical Education]
- use a variety of gymnastic themes to create sequences using small equipment and large apparatus, individually and with others [Physical Education]
- demonstrate ways to project an object using a variety of body parts and movements [Physical Education]
- demonstrate ways to send and receive an object using a variety of body parts and implements [Physical Education]
- demonstrate ways to retain possession of an object [Physical Education]
- demonstrate activity-specific motor skills in a variety of alternative environments [Physical Education]

## understand and follow a healthy lifestyle

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- identify practices that contribute to a healthy lifestyle [Personal Planning]
- create and play simple games [Physical Education]
- participate regularly in short periods of vigorous activity with frequent rest intervals [Physical Education]*

### GRADES 2 TO 3

*It is expected that students will:*

- perform activities that support a healthy lifestyle [Personal Planning]
- participate regularly in vigorous physical activities [Physical Education]
- participate in physical activity performed in a natural setting [Physical Education]
- participate in warm-up and cool-down activities [Physical Education]
- give examples of strategies for preventing or avoiding substance use and abuse [Personal Planning]
- describe activities that support their health [Personal Planning]

## identify changes in personal growth and development

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- identify the parts of the human body [Physical Education]
- use appropriate vocabulary to identify the physical characteristics that distinguish males from females [Personal Planning]

### GRADES 2 TO 3

*It is expected that students will:*

- identify changes in personal growth and development [Physical Education]

## develop an appreciation and enjoyment of movement

### show interest and enjoyment in physical activity

**KINDERGARTEN TO GRADE 1**

*It is expected that students will:*

- demonstrate a willingness to perform dance [Dance]*
- demonstrate behaviours that indicate interest and enjoyment in physical activity [Physical Education]
- participate regularly in short periods of vigorous activity with frequent rest intervals [Physical Education]*
- show a willingness to listen to directions and simple explanations [Physical Education]*
- stay on task when participating in physical activity [Physical Education]

**GRADES 2 TO 3**

*It is expected that students will:*

- demonstrate behaviours that indicate interest and enjoyment in physical activity [Physical Education]

### describe the benefits of physical activity

**KINDERGARTEN TO GRADE 1**

*It is expected that students will:*

- identify the importance of physical activity [Physical Education]
- identify the changes that take place in the body during physical activity [Physical Education]

**GRADES 2 TO 3**

*It is expected that students will:*

- describe the benefits of physical activity [Physical Education]
- describe the changes that take place in the body during physical activity [Physical Education]

# Development of Social Responsibility

*A VARIETY OF EXPERIENCES ENABLE THE CHILD TO:*

## value and respect diversity and the contributions people make to their communities

### show respect for the contributions of self and others

**KINDERGARTEN TO GRADE 1**

*It is expected that students will:*

- demonstrate respect for the contributions of others [Dance]
- demonstrate respect for the contributions of others [Drama]
- acknowledge special events and honour individual and group accomplishments [English Language Arts]
- demonstrate appreciation for the work and ideas of others [English Language Arts]
- demonstrate respect for the contributions of others [Music]
- demonstrate respect for the work of self and others [Visual Arts]

**GRADES 2 TO 3**

*It is expected that students will:*

- demonstrate respect for the contributions of others [Dance]
- demonstrate respect for the contributions of others [Drama]
- demonstrate respect for the contributions of others [Music]
- demonstrate respect for the work of self and others [Visual Arts]
- use language to acknowledge special events and honour individual and group accomplishments [English Language Arts]*
- identify thoughtful, caring behaviours [Personal Planning]

### value and respect cultural identity and heritage

**KINDERGARTEN TO GRADE 1**

*It is expected that students will:*

- demonstrate an awareness of drama from a variety of cultures [Drama]
- demonstrate a willingness to experience music from a variety of historical and cultural contexts [Music]
- demonstrate an awareness of historical and cultural contexts of music [Music]
- demonstrate a willingness to participate in drama activities that explore the roles of community members [Drama]*

**GRADES 2 TO 3**

*It is expected that students will:*

- demonstrate an awareness of the role of drama in the community and other cultures [Drama]
- demonstrate a respect for variations in language, accent, and dialect [English Language Arts]*
- demonstrate an awareness of B.C.'s and Canada's diverse heritage [Social Studies]
- demonstrate a willingness to experience music from a variety of historical and cultural contexts [Music]

### tell how families can be similar and different

**KINDERGARTEN TO GRADE 1**

*It is expected that students will:*

- identify a variety of models for family organization [Personal Planning]
- describe how families can be similar and different [Social Studies]
- describe some purposes of families [Social Studies]*
- identify a variety of family groupings [Personal Planning]

## contribute to a collaborative environment

### know and act on rights and responsibilities

KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- identify different roles in a variety of physical activities [Physical Education]
- describe the difference between individual needs and wants [Social Studies]*
- describe their roles, rights, and responsibilities in school [Social Studies]
- explain the need for rules and the need to observe them [Social Studies]

GRADES 2 TO 3

*It is expected that students will:*

- explain their roles, rights, and responsibilities within the community [Social Studies]
- accept responsibility for assigned roles while participating in physical activity [Physical Education]
- demonstrate the ability to listen to directions, follow rules and routines, and stay on task while participating in physical activity [Physical Education]*
- describe various roles and responsibilities within families [Personal Planning]

### take responsibility for a shared social environment

KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- show a willingness to listen to directions and simple explanations [Physical Education]*

GRADES 2 TO 3

*It is expected that students will:*

- identify and implement strategies to address class problems or projects [Social Studies]*
- demonstrate the ability to listen to directions, follow rules and routines, and stay on task while participating in physical activity [Physical Education]*
- demonstrate a willingness to participate in the development of a healthy school and community [Personal Planning]

## develop an awareness of the roles and responsibilities of a member of a community

### identify the purpose and functions of family, school, and community

KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- describe some purposes of families [Social Studies]*
- describe the purpose and functions of schools [Social Studies]
- identify some characteristics of their community [Social Studies]
- identify components of a safe and healthy school [Personal Planning]
- demonstrate a willingness to participate in drama activities that explore the roles of community members [Drama]*

GRADES 2 TO 3

*It is expected that students will:*

- describe ways members of a community meet each other's needs [Social Studies]
- describe ways in which communities are interdependent [Social Studies]
- describe functions of local governments [Social Studies]
- demonstrate behaviours that contribute to a safe and healthy school [Personal Planning]
- describe various roles and responsibilities within families [Personal Planning]

## respect and care for the environment

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- practise responsible behaviour in caring for their immediate environment [Social Studies]
- demonstrate an awareness of safety and environmental considerations in the use of materials, tools, equipment, and processes [Visual Arts]*
- describe how they interact with different environments [Social Studies]
- demonstrate how plants and other organic material can be recycled back into the environment [Science]

### GRADES 2 TO 3

*It is expected that students will:*

- describe the unique features of the earth that sustain life [Science]*
- conserve resources in the school [Science]
- evaluate ways energy can be conserved in the school and home [Science]
- demonstrate an understanding of their responsibility to local and global environments [Social Studies]
- identify safe and environmentally sensitive use of materials, tools, equipment, and processes [Visual Arts]

## recognize the role of work

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- identify occupations in their community that involve the use of information technology [Information Technology]
- distinguish between work and play [Personal Planning]
- identify a variety of job and volunteer situations in the community, including paid and unpaid work [Personal Planning]
- identify the links between work and leisure [Personal Planning]
- identify different occupations in their community [Social Studies]
- identify a variety of job and volunteer situations within the school [Personal Planning]

### GRADES 2 TO 3

*It is expected that students will:*

- explain similarities and differences between work and play [Personal Planning]
- identify the links between work and leisure [Personal Planning]
- identify and apply effective work habits [Personal Planning]*
- identify a variety of job and volunteer situations in the community, including paid and unpaid work [Personal Planning]
- identify the contributions of various occupations to B.C. communities [Social Studies]
- identify a variety of job and volunteer situations within the community [Personal Planning]

## adapt to a changing world

### KINDERGARTEN TO GRADE 1

*It is expected that students will:*

- describe changes that take place in their home and school environments [Personal Planning]
- describe changes in their lives and their reactions to them [Social Studies]
- describe the role of technology in their lives [Social Studies]

### GRADES 2 TO 3

*It is expected that students will:*

- describe change in the home, at school, and in the community [Personal Planning]
- describe the potential impact of changes on family structure, functions, and roles [Personal Planning]
- identify changes in the school and community throughout the year [Social Studies]