

Exploring



Moving

Pretending

Connecting

Play Today

BC Handbook



Ministry of
Education

FORWARD

The experiences of children’s play have a profound impact on all areas of their growth and development. Memories of play can be vivid and detailed. These memories often have a treasured place in our hearts and minds.

Educators and parents have a special opportunity to ask themselves, “What kind of memories of play do I want the children in my program/school/family to have?”

Play Today is meant to serve as a guide for offering high quality, play-based learning experiences in the early years, primary grades, and even into the middle years of childhood. It is a foundational document that supports educators, parents and families in B.C. and provides examples of how a diverse range of play experiences can be supported and integrated into programs for young children. It illustrates how a continuum of play-based learning experiences may be used in early learning environments. We have developed and adapted examples of play experiences that illustrate this continuum.

This handbook recommends a play-based approach in the early years, with examples of how play experiences may be used to guide and shape children’s learning. It provides information and support for the integration of learning through play into various program settings and it is a supporting document for the Early Learning Framework.

We encourage everyone to be confident in making time for children to play, throughout their lives.

Let’s play, today!

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A BRITISH COLUMBIA APPROACH

Introduction

Educators, advocates for children’s rights, and academic researchers agree that play is vital for young children. Play should have a central role in the lives of young children—from infancy into middle childhood and beyond. The B.C. government recognizes the importance of play-based learning.

The Play Today Handbook highlights the role of play, explains the meaning of play-based learning and offers strategies on how to offer play-based learning opportunities in early childhood settings, playgrounds and schools. Play belongs in every classroom. It is grounded in current research and the lived experiences of children and their educators in B.C. and elsewhere.

The Play Today Handbook is grounded in learning principles found in the First Peoples Principles of Learning, the Core Competencies that inform B.C.’s Curriculum for Kindergarten to Grade 12 and the vision for early learning in the B.C. Early Learning Framework.



A Note About Terminology

The following terms appear throughout this document. The meanings of these terms are as follows:

Early Childhood Education

Programs (for example, child care, preschool, StrongStart BC) for children from birth to five years who attend on a regular basis, guided by qualified educators and an intentional pedagogy to promote early learning.

Out-of-School

Programs (for example, licensed school-aged child care and recreation programs) for children who are also attending Kindergarten or Grades 1, 2 and 3.

Educator

Program staff (for example, Early Childhood Educators (ECEs), teachers, or recreation leaders) who facilitate learning in early childhood education/early years settings, Kindergarten to Grade 3 classes or out-of-school programs.

Aboriginal

A term defined in the Constitution Act of 1982 that refers to all indigenous people in Canada, including “Indians” (status and non-status), First Nations, Métis, and Inuit peoples. More than 1.5 million people in Canada identified themselves as Aboriginal on the 2016 Census and are the fastest growing population in Canada. While still appropriate, the term “Aboriginal” is being replaced by the term “Indigenous.” (Glossary of Curriculum Terms, B.C. Ministry of Education, 2016)

B.C. Early Learning Framework

The Early Learning Framework guides the practice of educators who work with young children across B.C. Using thoughtful, reflective questions, educators are encouraged to explore various areas of learning alongside children in a way that honours the individual needs of each child. Creating a unified vision for early learning and a common set of principles, the Framework supports adults to create rich experiences and environments.

The vision for early learning is based on images of children as capable and full of potential. Early learning is envisioned as a dynamic process, actively supported by families and other adults who care for and teach children in their homes and communities. Children are recognized as co-constructors of knowledge as they engage with people, places, objects



and ideas. Learning and education is envisioned as a continuum as children transition between early years programs, schools and other services.

B.C. Curriculum

The Core Competencies, along with literacy and numeracy foundations and essential content and concepts, are at the centre of the curriculum and assessment redesign. Core Competencies are sets of intellectual, personal, social and emotional proficiencies that all students need to develop to engage in deep and life-long learning.

Each competency consists of an overview and a set of profiles. The overview includes the competency's background and facets. The set of profiles are descriptions of students as they progress to sophisticated stages of competency. The profiles are written from the student's point of view, reflecting student ownership and responsibility as life-long learners.

Communication: Set of abilities that students use to impart and exchange information, experiences and ideas, to explore the world around them, and to effectively interact and collaborate with others both face-to-face and digitally.

Creative Thinking: Playing with and generating new ideas and concepts that have value to the individual or others, and the development of these ideas and concepts from thought to reality.

Critical Thinking: Set of abilities that students use to examine and make judgments about their own thinking and that of others, and about information that they receive through observation, experience, and various forms of communication.

Positive Personal and Cultural Identity: Awareness, understanding, and appreciation of all facets that contribute to a healthy sense of oneself. It includes awareness and understanding of one's family background, heritage(s), language(s), beliefs, and perspectives in a pluralistic society.

Personal Awareness and Responsibility: Skills, strategies, and dispositions that help students to stay healthy and active, set goals, monitor progress, regulate emotions, respect their own rights and the rights of others, manage stress, and persevere in difficult situations. Students who demonstrate personal awareness and responsibility demonstrate self-respect and express a sense of personal well-being.

Social Responsibility: Ability and disposition to consider the interdependence of people with each other and the natural environment; to contribute positively to one's family, community, society, and the environment; to resolve problems peacefully; to empathize with others and appreciate their perspectives; and to create and maintain healthy relationships.

First Peoples Principles of Learning

The “First Peoples Principles of Learning” express the shared wisdom of Elders and educators within British Columbia’s First Peoples communities. These principles have been affirmed within First Peoples societies to guide the teaching and learning of provincial curricula. Because these principles of learning represent an attempt to identify common elements in the varied teaching and learning approaches that prevail within particular First Peoples societies, it must be recognized that they do not capture the full reality of the approach used in any single First Peoples society.

- Learning ultimately supports the well-being of the self, the family, the community, the land, the spirits and the ancestors.
- Learning is holistic, reflective, reflexive, experiential and relational (focused on connectedness, on reciprocal relationships and a sense of place).
- Learning involves generational roles and responsibilities.
- Learning involves recognizing the consequences of one’s actions.
- Learning recognizes the role of Indigenous knowledge.
- Learning is embedded in memory, history and story.
- Learning involves patience and time.
- Learning requires exploration of one’s identity.
- Learning involves recognizing that some knowledge is sacred and only shared with permission in certain situations.

(First Nations Education Steering Committee, 2012)

Weaving Together Indigenous and non-Indigenous Perspectives on Play and Learning

The Early Learning Framework vision, the Core Competencies of the B.C. Curriculum and the First Peoples Principles of Learning can help to guide and inspire the pedagogical choices of early childhood educators, primary teachers, early years professionals, service providers, families, communities and governments. The First Peoples Principles of Learning, developed in partnership with the First Nation Education Steering Committee and the B.C. Ministry of Education, are an important element in the Early Learning Framework and the B.C. Curriculum. Together they offer educators ways of thinking about education and learning.

B.C. recognizes the historical legacy of injustice to Indigenous peoples in Canada. B.C. commits to addressing the recommendations of Truth and Reconciliation Commission of Canada to infuse Indigenous perspectives into the core of Canadian educational settings and curricula.

Indigenous and non-Indigenous educators can work with Elders and Indigenous communities to

offer learning environments that are informed by Indigenous worldviews and perspectives. It is essential that all children and families understand the history endured by Indigenous peoples since colonization in addition to the rich learning opportunities that are informed by Indigenous perspectives, cultures and languages.

To address Indigenous content and perspectives in learning environments in a respectful way, educators are strongly encouraged to seek the advice and support of members of local Indigenous communities. As these communities are diverse in terms of language, culture, and available resources, each community will have its own unique protocol to gain support for integration of local knowledge and expertise. Educators should obtain permission to use cultural materials or practises by consulting first with Indigenous individuals, families and other community members.



To obtain authorization prior to the use of any educational plans or materials, educators should first contact Indigenous education co-ordinators, teachers, support workers, or counsellors in their communities. These individuals may be able to facilitate the identification of local resources and contacts such as Elders, chiefs, First Nations tribal or band councils, Aboriginal cultural centres, Aboriginal Friendship Centres, and Métis or Inuit organizations. In order to present authentic First Peoples content and worldviews, it is important to draw from Indigenous learning and teaching resources. Authentic First Peoples texts and resources are those that:

- present authentic First Peoples voices
- depict themes and issues important to First Peoples cultures,
- incorporate First Peoples story-telling techniques.

Inclusive Learning

“Inclusion entails recognition of our universal oneness and interdependence. Inclusion is recognizing that we are one even though we are not the same.” (Asante, 2002, p. 1)

A core responsibility of families, educators, communities and governments is ensuring a welcoming and inclusive environment for all people regardless of ability. Children and families that are fully included in programs feel a sense of belonging and membership along with positive social relationships that support children in reaching their full developmental and learning potential. High quality learning programs provide:

Access. Providing access to a variety of learning activities, environments and settings means physically adapting an environment, incorporating technology, or modifying activities. Instruction

that plans for multiple and varied formats of both engagement and expression ensures that many children with diverse needs succeed.

Participation. Even when the environment is accessible, children may need additional support to engage in learning. A number of approaches may be used to ensure successful participation: teaching through routines, teaching through play, or varied amounts of direct instruction.

Supports. Systems-level infrastructure for supporting families, educators, specialists and administrators must be in place to strengthen daily practice. Professional development, opportunities for collaboration, resources and policies are all critical to the success of inclusive practices.

THE PLAY-LEARN CONNECTION

Looking Back at Play

What is your earliest memory of play? What occurred?

Who else was involved?

Were you fully and deeply engaged in play? How old were you?

Most adults remember play experiences from their middle childhood years—sometime between six and 12-years-old. Often the remembered play became the source of a passion that continued into adulthood. Research shows that when young adults are asked to recall their most vivid memories of play, they are likely to elaborate on memories of play that occurred when they were between eight and 12 years of age (Bergen & Williams, 2008). Often, they report socio-dramatic play that involved elaborate pretend scripts that occurred over time. Other types of recalled play included organized sports and other physically active games, exploration of outdoor environments, figuring out how things work and creating something original.



A grade one teacher:

“I remember lining up my dolls on chairs and playing ‘school’—I was the teacher and I would read storybooks out loud. I must have been at least six or seven-years-old because I could actually read the text. I had an easel with a chalkboard on one side and I would print number problems for my students to solve. Sometimes I played ‘school’ alone, creating small dramas and working through problems—a student who would not pay attention or who was poking another student. Other times, I would play school with two or three other friends. I always wanted to be the teacher, but if I was a student I would take the role of the ‘bad’ student. This was quite a different role from my actual life as a student where I tried hard to be a ‘good’ student and wanted the teacher’s approval.”

A firefighter:

"I remember playing hockey outdoors with the lights on the rink. It was pick-up hockey—not organized by real coaches and teams. But it was serious play—we would start at 7 pm and not leave until the adult league insisted we clear the rink for their 9 pm game. I was not particularly good, but I loved it. One game in particular, stands out. I scored a winning goal. Then we would head over to the shed by the rink for a watery hot chocolate before heading home. I must have been at least eight years old because I was allowed to walk home three blocks with my friend who lived across the street."

A nurse:

"I remember my first best friend, Aisha. We were in the same Grade 2 class and went to the same afterschool program at the nearby recreation centre. We also played together most weekends, often cajoling our parents to let us have a sleepover. We were obsessed with making miniature structures and miniature people to go inside the structures. Our buildings became quite elaborate—with hand-painted designs on the inside walls, drapes hand-sewn with actual gathering at the top, looped over a tiny dowel that was the curtain rod. Our people were often made from pipe cleaners and dressed in clothes made from fabric scraps. We were aware of scale and would try to make our structures, furnishings and people make sense in relation to each other. I don't remember actual pretend play as much as the planning and designing and the constructing and making."

A playground worker:

"I remember playing with worms one summer when I was at the cottage with my dad. I was 8-years-old that summer. I was fascinated by the earthworms in the soil in front of the cottage that came out one afternoon following a morning of rain. I watched them wiggle across the cement squares as the sun came up and dried up the rain. I followed them into the dirt in the garden surrounding the patio and watched as they slithered underground. Then I dug them up and watched what they did. My brother and I even tried to have worm races, prodding them along the patio squares. That night I pestered my dad with my questions—'Why do they slither away into the dirt?'; 'What do earthworms eat?'; 'How do they make babies?' My dad was a patient man, answering my questions and then suggesting that we go to the neighbouring town in the morning and check out the library for more information. A National Geographic video on worms was found and I spent many hours that summer investigating the lives and habits of earthworms."

An early childhood educator:

"I remember my love of the game Monopoly. The rules were the rules, but there was much I could do within the rules. There was luck, but there was also a big dose of how you used what came your way. I remember that I would decide a strategy early in the game based on the initial properties I acquired. Sometimes I would target large numbers of low-value properties. Other times, I would acquire a few high value properties and load them up with houses to increase my take when another player landed."

Elements of these memories likely resonate with many people. These types of play and learning experiences all contribute to learning and development and will be explored further within this handbook.

“Children learn through play” often seems like a platitude, but decades of research support its wisdom. Play is a powerful and complex platform for learning about ourselves and how the world works. This research is summarized in the following sections.

Early Childhood and Primary School Experiences

Early childhood primary school experiences carry forward into adolescence and adulthood. Long before school begins, a complex array of environmental and biological factors shapes early brain development and contributes to the pattern and timing of development (McCain, Mustard & McCuaig, 2011). The construction of the brain’s neural pathways proceeds in a predictable sequence from the prenatal period into adolescence. Increasingly complex skills and their underlying neural circuits build on the skills and circuits formed earlier. Brain development in early and middle childhood reveals itself in a young child’s emerging social competence, emotional well-being, cognitive skills, as well as language and physical abilities, which carry forward into formal schooling and adulthood.

A child’s brain maturity may limit what is possible, but it is the child’s interest and curiosity that motivates the effort required for the next step. That effort forces or stimulates the brain to develop new connections needed for the task at hand.

Early relationships and experiences shape how genes are expressed and how the brain is structured. The in-utero environment, families, and home environments are the primary drivers. An extensive, longitudinal study that tracked over 3,000 children aged three years to 16 years replicated earlier research that pointed to the power of early learning environments. The strongest influences outside the

family and home are children’s regular participation in early childhood education programs and in primary school (Sylva, Melhuish, Sammons, Siraj-Blatchford & Taggart, 2009).

Early childhood education and primary school experiences carry forward into adolescence and adulthood. What happens in school matters, independent of earlier early childhood education and family influences. Learning environments in the primary grades reinforce earlier patterns or alter them—for better or for worse.



Calm, Focused and Alert

A calm, focused, and alert state is a prerequisite to learning. Self-regulation is the ability to adapt one's emotions, behaviour as well as attention to meet the demands of a given situation and being aware of one's own thoughts and feelings and those of others (McCain, Mustard & McCuaig, 2011). Self-regulation is an interconnected array of complex capacities that include recognizing and managing emotions, self-guidance of thought and behaviour, planning, self-reliance and responsible behavior (Berk, 2018). Related skills and abilities include mindfulness, an attentive awareness, a nonjudgmental attitude and being present in the moment (Oberle & Schonert-Reichl, 2017). Optimal self-regulation underpins a calm, focused and alert state essential for learning (Shanker, 2012).

Studies from economics, education, population health, developmental science and neuroscience studies point to the suite of skills connected to self-regulation as essential for learning (McCain, Mustard & McCuaig, 2011). Effective learning, academic achievement and successful life skills share common pathways that emerge early in life. Early and middle childhood lay down the foundations of self-regulation that carry forward into adolescence and adulthood.

Self-regulation abilities are underpinned by the interconnections of neural circuits formed in the brain's limbic system and prefrontal cortex that weave together our social, emotional and attention capacities. The neural circuits of the limbic system manage how we respond to challenges and stress and are under active construction before birth and in early life. The neural circuits of the prefrontal cortex support a suite of skills often called executive functions. These include working memory, ignoring distractions to stay on task, cognitive flexibility to shift focus, resolve competing demands, inhibit initial responses and understand the perspective of others. The formation of the prefrontal cortex circuitry is very active during the preschool period and continues through middle childhood, adolescence and early adulthood.

Education policies and research frequently identify self-regulation or components of self-regulation—social and emotional, and personal learning and thinking skills—as central to academic achievement. A wide range of program evaluations and research over the past decade reveal a robust link between social and emotional competence and academic success as well as health and well-being (Oberle & Schonert-Reichl, 2017).

Optimal self-regulation increases motivation—the ability to set and accomplish one's own goals (Duckworth, Ackerman, McGregor, Salter & Vorhaus, 2009). Knowing how to prioritize choices, how to make decisions and when to put in effort are central to learning. Self-regulation is not about compliance with rules or social behaviour expectations. Rather, self-regulation is about developing one's own internal motivation for adapting to demands and challenges (Pascal, 2009). In fact, for many children, requiring compliance undermines their abilities to self-regulate (Shanker, 2012).

Several studies have found that a calmly focused and alert state predicts children's later literacy outcomes. For example, Fuchs and colleagues (2003) reported that children in Grade 3 with good self-regulation spend more time trying to figure out problems before offering solutions and are more flexible in their approach to solving a problem. McClelland and Cameron (2012) found self-regulation not only predicted literacy outcomes in preschool and elementary school, but also predicted the

improvements in literacy children made during that time. Children who showed improvement on a simple task designed to measure self-regulation skills also showed improvement in emergent literacy, vocabulary and early mathematics skills.

The ability to attend is central to critical thinking. Amongst Canadian children at age nine, higher attention ability was linked to achievement in mathematics, not repeating a grade and not requiring additional learning supports such as tutoring. Children's level of attention emerged as a fundamental skill that was linked to all aspects of academic achievement (Thomas, 2009).

Language, Thinking and Well-being

"The qualities developed through play are the same [qualities] required to succeed at school. Children who [have] strong oral communication skills, are confident, able to make friends, are persistent and creative in completing tasks and solving problems and are excited to learn, have pathways set for academic success" (McCain, Mustard & Shanker, 2007, p. 49).

Children's play promotes optimal language development, thinking skills, and physical, social and emotional well-being in early and middle childhood. Historically, early childhood education and primary school environments benefit the overlapping domains of cognition, social-emotional and physical areas of development. Several studies reveal that early childhood programs that elevate academic instruction and eliminate play opportunities can dampen motivation to learn and diminish regulation of attention and behaviour, especially among children from low socio-economic status communities and families. (Berk, 2018; Cleve & Cole-Hamilton, 2012). Play-based learning opportunities in primary grades challenge children and contribute to strong communication, critical thinking, ability to make friends, take responsibility, collaborate, persist, investigate, solve problems, innovate, acquire reading, writing, numeracy and digital literacy skills and cross-cultural understanding.

- Play, cognitive and social problem-solving skills are linked (Roskos, Christie, Widman & Holding, 2010) as well as to emerging literacy, especially with regard to the idea of "story" or sense of narrative (Baumer, Ferholt, & Lecusay, 2005).
- Play offers opportunities for extended conversations that can be used intentionally to introduce complex vocabulary and ideas. Children in preschool and primary school settings have higher comprehension levels when their educators use complex language (Huttenlocher, Vasilyeva, Cymerman & Levine, 2002).
- Language and play are intricately entwined. Children with language delays demonstrate increased communication when educators use language interventions within free play activities (Hemmeter & Grisham-Brown, 1997).
- Early mathematics ability is a strong predictor of later achievement and success. Yet, science, technology, engineering and mathematics (STEM) skills are rarely introduced adequately in early childhood and primary school classrooms. Play can offer unique opportunities to engage children in STEM learning experiences (Hassinger-Das, Zoch, Hirsh-Pasek & Golinkoff, 2018).



Researchers Lester and Russell (2008) reviewed published literature about play across disciplines and consolidated key messages. They conclude that play affects the architecture of human development—how brains are built and how our genes are expressed. They suggest that play contributes to emotional regulation and resilience. Play should be provided for its own sake and that “play provision should be judged on whether it enables children to play rather than on more instrumental outcomes” (p. 31).

Studies linking play to specific academic or social-emotional competencies in early childhood and the primary grades often focus on short-term outcomes. They are likely to underestimate the importance of play in contributing to a broader range of competencies that are not assessed (Bodrova & Leong, 2007). As primary grade reading instruction moved to a greater emphasis on the word-reading skills needed to perform well on early literacy assessments, attention to comprehension, vocabulary and concept knowledge was not increased. Yet, comprehension, vocabulary and concept knowledge are prerequisites for understanding subject-specific texts in later grades (Murnane, Sawhill & Snow, 2012).

Young children’s play is typically described in four categories: functional play, constructive play, dramatic play and games with rules (Smilansky, 1968).

Functional Play

Functional play is an exploratory type of play that begins when children are infants. Children experiment with materials and learn how things go together. They are learning about the physical characteristics of objects. Children explore and examine the functions and properties of objects. By exploring objects and materials, children are discovering how they work. Functional play emerges in infancy and continues throughout childhood when there are new objects to explore. When the environment offers materials and objects that are interesting and challenging, children's curiosity increases, and they are motivated to explore.

Constructive Play

Constructive play involves building structures or other creations with various materials such as blocks, Lego or recycled large or small cardboard boxes. The complexity of constructive play is related to availability of materials that stimulate creativity and the tools to execute ideas. In constructive play, children can transform open-ended materials such as planks, pipes, water, sand, netting, tarpaulins, barrels, large plastic water containers and plastic milk crates.

Pretend or Dramatic Play

Children demonstrate numerous skills, dispositions, and abilities during socio-dramatic play. Socio-dramatic play contributes to children's literacy and numeracy acquisition and to their problem-solving and social skills. In socio-dramatic play, children set tasks and goals, use a narrative structure and increasingly complex language. The use of narrative and more advanced oral language are linked to later reading and fluency. Socio-dramatic play deeply involves children as they try out a variety of roles and scenarios that facilitate joint planning, perspective-taking and mental representation. Socio-dramatic play expands children's theory of mind—their understanding that others have beliefs, desires and intentions that are different from their own (Pascal, 2009; Siraj, Kingston & Melhuish, 2015). Children's dramatic play is influenced by popular culture as children incorporate cultural practices and ideas into their play (Hewes, Whitty, Aamot, Schay, Sbbald & Ursulia, 2016).

Games with Rules

In play that involves a game with specified rules, children must understand and agree to the rules for the play to be successful. Younger children require simpler rules. Older children often enjoy the challenge of more complex rules. Games with rules help children concentrate, understand limits and manage their behavior to conform to the rules. Two major types of games with rules are table games and physical or movement games.

Physically Active Play

Regular physically active play has a host of benefits for young children. Children’s active play with each other develops endurance, control of body movements and perceptual-motor integration. The benefits extend beyond physical well-being. Longer-term benefits relate to all aspects of learning, behaviour and health. Cognitive abilities, blood pressure, lipid levels and mental health improve with regular active play. Children learn and practice safety, take care of and respect their bodies, and develop an appreciation and enjoyment of movement and physical activity.

To be successful, physically active play takes creativity, flexibility, self-control, and discipline. Central to all these aspects is executive functions—mentally playing with ideas, giving a considered rather than an impulsive response and staying focused. Diverse physically active play such as aerobics, martial arts, and yoga improve children’s executive function (Diamond & Lee, 2011). These activities involve repeated practice and progressively increase children’s ability to focus. Children who need support attending, shifting attention, inhibiting responses and planning ahead benefit greatly from active play.



During the first eight years of life, learning for young children is grounded in the body (Archer & Siraj, 2015; 2017). Movement play refers to a series of movement patterns that link the body and the brain and involves fine and gross motor skills. Fine motor skills use the small muscle groups in the hands, fingers and toes. Gross motor skills use large muscle groups that are in the arms, legs and trunk. Climbing stairs, hopping, skipping, jumping, running, throwing and catching are central to being physically active. Fundamental movement skills include balancing, locomotion (moving from one place to another) and co-ordination (hand-eye or foot-eye co-ordination).

Physically active play can be structured, unstructured, indoors or outdoors. During physically active play that is child-directed, children often insert their own rules or boundaries that must be followed as part of the play. Play provides opportunities for children to practice regulating their own emotions,

behavior, attention and to co-regulate with their peers (Bodrova & Leong, 2007). Sometimes physically active play can be structured to focus on specific movement skills, such as balancing on one foot.

Recent reports indicate that the amount of time that children are physically active across Canada continues to decrease while obesity and screen time increase (Tremblay, 2018). Researchers point to a combination of poor play environments, school schedules, screen time and an increase in structured activities (Elkind, 2007; Tremblay 2018).

Primary school students benefit when the daily schedule includes designated time for physically active play. In a study of over 10,000 children, researchers found that eight and nine-year-old children who had morning and afternoon recess periods of at least 15 minutes were more focused during class time and displayed fewer disruptive behaviours (Barros, Silver & Stein, 2009). Recess is a time for unstructured play, chosen by children and is a complement to, not a substitute for, physical education, with multiple social and cognitive benefits (Council on School Health, 2013). The Canadian 24-Hour Movement Guidelines for Children and Youth: An Integration of Physical Activity, Sedentary Behaviour and Sleep (2017) emphasize the integration of all movement behaviours that occur over a whole day and focus on the whole (all physical activity, sedentary behaviour and sleep).

Outdoor Play

Children benefit from outdoor play, particularly in natural environments that provide examples of nature's power in relation to environments built by humans—such as plants and weeds that push through asphalt or ant hills pushing through concrete. Outdoor environments connect children to a sense of place and relationships with plants, animals, water, land and weather (Anderson, Comay & Chiarotto, 2017). Children can learn early about being stewards of the environment, particularly with older children as partners—creating learning opportunities for both groups. Regular time to play outside and experience the environment connects children to the natural world, the physical and social communities they live in, and to cultural learning on ancestral lands of the local Indigenous peoples. Repeated experiences in the same location offer children the opportunity to become aware of what changes and what stays the same over time. In outdoor environments, children learn about natural processes and cycles.



The Early Childhood Education and Care review team for the Starting Strong II study (OECD, 2006) noted that opportunities and environments for outdoor play in Canadian licensed child-care centres were generally poor. Programs overemphasized safety at the expense of developmental opportunities, independence and autonomy. Typically, there was a lack of adequate and available outdoor space. Children spent little time outdoors with few opportunities to move freely between the indoors and outdoors.

Parental and societal concerns for children’s safety dominate current perspectives on outdoor play (Brussoni et al., 2015). A diverse, cross-sectorial group of partners, stakeholders and researchers collaborated to develop the Position Statement on Active Outdoor Play for children.

“Access to active play in nature and outdoors—with its risks—is essential for healthy child development. We recommend increasing children’s opportunities for self-directed play outdoors in all settings—at home, at school, in child care, the community and nature.” (ParticipACTION, 2015, p. 8).

Big Body Play

Big Body Play involves children energetically using their whole bodies (Carlson, 2018). Classic examples include chase, rough and tumble play, tug-o-war, and climbing trees. In Big Body Play children practice:

- Awareness of their body in space
- Self-regulation of emotions
- Cooperation and communication with peers
- Independence in managing bumps and bruises
- Assessing and taking risks



Big Body Play can take place indoors or outdoors, alongside friends or alone. A recent expert review of outdoor play where children took risks found benefits to children’s health, social and behaviour

outcomes, and increases in their physical activity. Also, the review revealed reduced injuries and aggression when children engaged in outdoor play that involved risk-taking. At the same time, fewer opportunities for risky outdoor play exist, pointing to a need for parents and educators to rethink how outdoor play is structured for young children (Brussoni, et al., 2015).

Pellis and Pellis (2012) found that rough-and-tumble play that includes chasing and wrestling offers children opportunities to adapt their behavior and contributes to empathy, self-control skills and is an expression of caring and friendship. Animal play fighting studies suggest that active play produces subtle and nuanced responses to novel and unpredictable environments, which builds resilience and the ability to deal with disturbance (Pellis & Pellis, 2009). Play fighting research in both humans and animals indicates a relationship between social competence and frequent engagement in rough and tumble play.

In a game of chase, for instance, children are physically active and maintain the game by negotiating and agreeing to abide by the rules. They engage in turn-taking, read social cues, and demonstrate restraint. Yet, what they value is the thrill of the chase and running as fast as possible. The rules provide a framework by which the players know that “this is play.”

Children need to engage in exhilarating play with a manageable amount of risk that is not too scary. When educators give them the mental and physical space, children can figure out for themselves what is a safe level of risk (Brussoni, 2017). Educators often find that when children perceive risks as real, even impulsive children show considerable care and responsibility. Pretend play and Big Body Play provide a safe place where emotions can be experienced without the consequences they might bring in the “real” world.

Transitions from Early Years to Primary

Transition experiences from early years to primary school matter with respect to how children develop. Research evidence from the United Kingdom (Sylva et al., 2009) and the United States (Allen & Kelly, 2015) reveals that the benefits of early childhood education are most likely to carry forward in school life when the respective pedagogical practices are aligned with each other. Rather than seeing school as a significant change in learning environments, educators can promote a more seamless pedagogy in early childhood settings, kindergarten, primary grades and out of school programs.

Often, primary teachers agree that play is important, and they recognize play as valuable for primary classrooms beyond Kindergarten, yet they may find it challenging to plan for play and find ways to fit it into the curriculum (Martlew, Ellis, Stephen & Ellis, 2010; Moyles 2010; & Pascal, 2009). It is not given time in the schedule or space in the classroom often enough. Academic pressure, lack of materials and concerns about parent expectations can be barriers.

Early childhood educators may value play and plan play-based learning environments yet may be unclear about the underlying pedagogy. They may turn to more structured approaches, particularly related to early literacy and numeracy skills in response to school-readiness expectations.

Play-based learning pedagogy can be challenging to implement given its broad definitions and varied understanding (Pyle, 2018). Educators may be uncertain about how to provide such opportunities in

school and how to assess the learning that occurs through play. In some instances, pressure to achieve learning outcomes may partly contribute to these challenges.

The historical divide between K – 12 education and early childhood education programs extends to access, funding, governance and educators' qualifications (Dockett, Griebler & Perry, 2017). It is challenging to bring both groups of professionals together to understand a common pedagogy of play-based learning that could better support children's transitions from early childhood settings including Kindergarten into primary school classrooms.

Many educators and researchers take opposing perspectives on play, either believing that all play leads to learning, or that play and learning are entirely separate processes (Weisberg & Zosh 2018). Supporting children's play is more active than the simple statement that "Children learn through play." Educators need a concrete pedagogical definition of "play" and an understanding of what kinds of learning take place within play.

Sometimes there is tension between adults' aspirations for young children to academically succeed in life by imparting specific content knowledge and skills, and a children's desire to play. This tension may be misguided. It is possible to approach play-based learning in a more coherent manner that accommodates both perspectives (Weisberg & Zosh, 2018).

Children bring their exposure to popular culture into their play. Educators may wish to exclude popular commercial culture from their learning environments, however they do so at the risk of denying what intrigues and motivates children. Play-based learning in early childhood settings, school classrooms, out of school programs and playgrounds can benefit from children's play culture—recognizing its power to motivate and challenge children.

A CONTINUUM OF PLAY-BASED LEARNING FROM PRESCHOOL TO GRADE 3 (THREE TO EIGHT YEARS)

Children’s play may be a catalyst to introduce specific learning activities, as a bridge whereby educators and children learn together, or as opportunities for children to learn from their own play or with others. Across Canada, provinces and territories have designed early learning framework documents that promote play-based learning intended for young children.

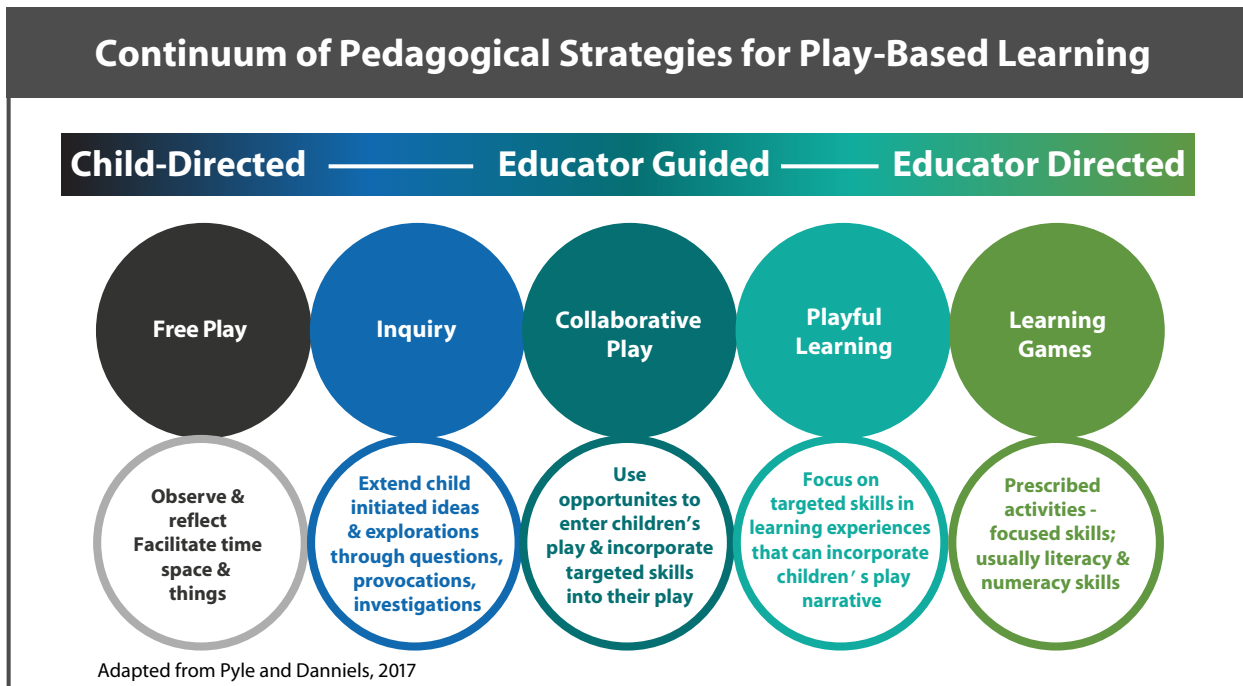
In early childhood education programs, play combined with judicious amounts of intentional instruction creates important learning moments. In Kindergarten and the primary grades, the extension of play-based learning offers teachers a wide repertoire of strategies to engage children and expand opportunities for learning that complements the provincial curriculum. Through play, children build bridges between ideas and connect feelings, facts and gain new understandings about how the world works through continual, reciprocal interactions with others.

Play-based learning is accepted as central to early childhood education and out-of-school programs and is gaining recognition as a learning strategy beyond Kindergarten. Primary teachers who bring play into their classrooms will find students more engaged, more independent and able to learn more successfully. School age children seek mastery and success. They want and need to acquire relevant knowledge and to learn specific skills. They enjoy testing their capabilities in realistic situations. The value of play to promote learning is finding recognition among primary school educators. Across Canada and internationally, engaging children in play helps to achieve primary grade learning goals and to enhance children’s well-being.

The confusion around “what is play” and “what is play-based learning” can be addressed by considering play-based learning as a continuum that extends from child-directed play to educator-guided play and to educator-directed play (Pyle & Danniels, 2017; Pyle, DeLuca & Danniels, 2017). The continuum provides a concrete definition of play-based learning that defines the role of educators in implementing this pedagogical approach with preschool and school-age children (Pyle & Danniels, 2017). The continuum of play-based learning allows educators to recognize and value a variety of play experiences. It is more specific in defining five categories, including three that are in the educator-guided space. Free play is recognized as valuable to gather information about children’s abilities and proclivities for learning. Direct instruction is effective for specific discrete skills. Guided learning while children play is most effective for a suite of learning goals including metacognition and self-regulation (Alfieri, Brooks, Aldrich & Tenenbaum, 2011).

Alongside the continuum of play, is a parallel continuum that defines the role of educators from non-obtrusive observation to direct instruction. Play provides a multitude of daily opportunities for intentional teaching when educators can make concrete connections between the children’s play and a specific skill or concept. Sometimes, educators will introduce something new and directly instruct children in how to use a tool or introduce a specific academic concept or skill that can then be connected to their play. In other situations, educators will support the inclusion of children with diverse learning needs by interpreting nonverbal cues or making space in a play scheme for another

child. Educators can negotiate the balance of child-directed and educator-guided play depending on the group of children and families.



Play-based learning can be described along a continuum from free play, to inquiry, collaborative play, playful learning and learning games. Each one is described in the following sections of Play Today, including vignettes that illustrate children’s play and teaching strategies to support children’s play-based learning. The sections identify the core components and active ingredients that drive the success of play-based learning for children from three to eight years (approximately Grade 3). The continuum of play-based learning incorporates the types of play described earlier (functional play, constructive play, dramatic play and games with rules) alongside strategies to maximize learning opportunities.

Play that is directed by children allows them to take the lead and to engage and collaborate with each other. They take the lead and engage with the world around them. Play that is extended by conversations and educator resources can extend children’s learning. Play directed by educators with a focus on “just-in-time” instruction give children the cultural tools they need to deepen and widen their play and learning. Children and educators become a community of learners.

The continuum of play-based learning is an alternative to simply alternating direct academic instruction with free-play periods. Instead, educators can intentionally design play-based learning experiences from across the continuum with varying degrees of child direction and educator guidance. The type of program and who the children and educators are will influence how the continuum is used.

The success of play-based learning is enhanced when educators adapt their approach along the continuum according to the context as well as the ethnic and cultural background of children and their families. Educators who acknowledge and recognize children’s cultural heritages can incorporate that understanding into the play environment and experiences. Recognition of the children’s home

languages, use of representative cultural images, artifacts, celebrations and food all contribute to nurturing a sense of belonging for every child and family.

Free Play

Hide-and-Seek

In a grade 2/3 class, every day begins with an hour of outdoor active play. Only in a heavy downpour or the occasional blizzard do children come inside when the bell rings at 9 am. The teacher, Ms. Alduhl, explains to parents that “really there is no such thing as bad weather, only bad clothing” and asks that children arrive at school prepared to be outdoors. Ms. Alduhl has negotiated with her principal to keep the children inside for morning recess that is scheduled for 10:30 am. The grade 2/3 class has the playground to themselves in the morning and joins other grades for afternoon recess.

Ms. Alduhl plans the active playtime block so that children make choices and she usually includes equipment for favourite games and sports as well as less familiar equipment. She pays attention to how children move and what physical skills they are acquiring.

Today it is 9:15 am. It is January, and the skies are cloudy but only a bit of drizzle is coming down. Several children are playing a game of hide and seek in the playground. Cardboard boxes and large crawling tubes scatter the yard offering various places to hide. The rules for the hide-and-seek game evolved among the children over the past few weeks. It is the current favourite among the children. Often the children ask a teacher to join. Finding the teacher is a central part of the game. Once found, the teacher must run and then be caught by chasing children. The teachers only join at the children’s requests, and they follow the rules that the children have established. The result is that everyone does a lot of running.

Free play is child-initiated, self-directed, pleasurable, internally motivated and voluntary. Free play offers numerous benefits to young children (Hewes, 2014). Spontaneous free play that is controlled and directed by children contributes to mental as well as physical health in early childhood. Rough and tumble play contributes to healthy social relationships. Sustained involvement in pretend play enhances emotional and social self-regulation. The disruptive aspects of free play enhance children’s flexibility and adaptability in response to change and unpredictability.

“... spontaneous free play, controlled and directed by children and understood from the child’s perspective, contributes to children’s subjective experience of well-being, building a foundation for life-long social and emotional health.” (Hewes, 2014. p. 280)

“The very things that distinguish [free] play from other behaviours—its voluntary, pleasurable and ‘as if’ creation of uncertainty—enable children to approach their environments in highly flexible and adaptive ways” (Lester & Russell, 2008 p. 1).

Free play is an opportunity for children to apply emerging skills and knowledge while developing a range of competencies. “When left to their own play themes and interests, they often choose things to do that are more complex, challenging and satisfying than anything an adult might suggest to them or lead them into” (Broadhead & Burt, 2012, p. 5). Play organized by children means that the players are actively involved. It often takes the form of pretend play or physically active play.



Space Adventure

Khalid and Brian are five-year old students in a Kindergarten class. They have a common interest in outer space. They share picture books from home about astronauts and often have extended conversations debating what life is like in a rocket ship or on a space station orbiting the earth.

One day, Khalid and Brian find a large box filled with rocks of different sizes and shapes on one side of the classroom. Nearby were pads of paper and pencils placed on a small table. Large cardboard boxes and cylinders were stacked in the corner.

“Wow” says Khalid as he runs over to the box with the rocks. “Here are some moon rocks.” During the morning play period, Khalid and Brian check out the new materials. Their excited voices attract a few more children.

About forty minutes later, the activity evolves into socio-dramatic play, involving astronauts, a space ship and landing station on the moon (making use of the cardboard boxes and cylinders), and maps of the stars and planets. Khalid, Brian and the other children take on different roles. A command centre back on earth has a captain making notes and shouting commands to the astronauts. Khalid becomes the spaceship captain and Brian the second in command. When they speak at the command centre, they always end with “Roger that.”

Later in the week, a more elaborate space ship evolves. Various parts are held together with duct-tape, paint, tinfoil and pipe cleaners. Inside, there is now an elaborate control deck with many knobs made from corks and a sliver screen control screen that connect to the command centre on earth.

The ongoing dramatic play becomes more complex as players came in and out, but the central

story line of adventure in outer space continues with several landings on the earth's moon and other moons. A recurring theme of technical challenges addressed by brave actions dominates.

Pretend or make-believe play is about creating a world in which children are in control and can triumph over uncertainty. The creativity required that is developed by play, the use of imagination and finding one's own solutions to problems, both real and imagined, all help children to develop ways of reacting to a wide range of situations. They develop a repertoire of flexible responses to situations they create and encounter within the safety of the make-believe world they have created.

Pretend play is socio-dramatic play when children merge their play with each other. It is defined by three components—an agreed upon scenario, roles and rules. Together, children co-construct and negotiate a pretend situation. They take on and act out defined roles, and they follow a set of rules that are shaped by the specific roles. When children take on a specific role for an extended period of time, they have opportunities to pay attention to their choices and not act on immediate impulses.

Preschool children rely on personal experiences for dramatic play and may co-operate with other children and share space with other children. By four or five years of age, children start to develop more complex, interconnected play scenarios and differentiate complementary roles. Socio-dramatic play continues into primary school years, often using more themes of fantasy and interconnected, planned scripts. Young school age children may shift from pretend play to dramatic productions with a prepared script drawn from a published story or from one authored by the children.

Socio-dramatic play requires the pretenders to relay their stories and negotiate with each other using language, gestures and symbolic objects to tell and retell stories. Socio-dramatic play builds a sense of narrative that sets the foundation for moving from children learning to read to children reading to learn. Children's ability to communicate to a variety of audiences benefits from role-play in socio-dramatic play as well as more structured dramatic arts. They learn to apply their speaking and listening skills for different purposes. Children practice these verbal and narrative skills needed for reading comprehension.

Sociodramatic play offers opportunities to practice regulating emotional responses because unexpected events are introduced during the play. The ability to regulate emotional responses to disturbance, and to reduce stress levels, enhances the ability to cope with uncertainty. It allows for the development of a suite of physical, cognitive and social skills (motor, cognitive and social) that can be used in every situation.

Social responsibility is strengthened through interactions and negotiations with others in socio-dramatic play. Children take on the perspective of others and problem solve when they role-play at the dramatic play centre, experimenting with a variety of social roles (store clerk, bus driver, grandparent). This variety in roles creates natural spaces for children with diverse needs, specific skills, or limited interests.

Pretend play can also be hurtful or negative. When children tease, bully or harass other children while playing a role, this is a harmful use of imagination. Educators have a responsibility to intervene and redirect the play just as they would do in any other situation in the classroom or playground. When pretend play entrenches societal inequities, cultural biases or violence, educators have a responsibility to step in and redirect in the same way they would if one child struck another child.

In the early 20th century, Russian psychologist Vygotsky (1978) concluded that children learned to follow rules and manage their emotional responses (aspects of positive self-regulation) during play with each other. "In [pretend] play, the child always behaves beyond his average age, above his daily behavior; in play it is as though he were a head taller than himself. As in the focus of a magnifying glass, play contains all developmental tendencies in a condensed form and is itself a major source of development" (Vygotsky, 1978, p. 102).

During the past few decades opportunities for preschool and school-aged children to engage in free play has decreased. Structured activities (sports, music, dance lessons) have increased along with an increasing intolerance for anything that might be viewed as aggression (Hewes, 2014; Collins, 2018). There is growing concern amongst academics, professionals, policy makers and community leaders that the decline in free play opportunities may be a contributing factor to increasing rates of childhood obesity and to the alarming increase in the incidence of anxiety, stress and depression in young children (Hewes, 2014).

Free play for young school-aged children used to be common in the "third space" of childhood—a space apart from home and school where children gathered for endless hours of play with each other (Collins, 2018). Sometimes, children played in parks or vacant lots, often in back alleys or nearby bush. Basements and garages were also common spaces. The loss of the third space of childhood speaks to a need to bring more opportunities for free play into school classrooms and playgrounds (Collins, 2018).

Schools are a valuable, trusted public community resource. They have available indoor and outdoor space that can offer opportunities for play in the third space of childhood during the school day and out of school hours. School spaces offer valuable opportunities for preschool and family programming. Outdoor space can be available seven days a week and provide a community setting that allows children freedom to explore while parents and other caregivers can connect with each other.

Role of the Educator

The role of educators in free play is often misunderstood and is perhaps related to a well-intentioned belief that they should not be involved if the play is to be truly child-directed. However, educators have two critical roles as observers and as facilitators of the environment.

Children's free play requires an environment that offers both the necessary physical space and time. Educators can organize the schedule so that there are open blocks of time for children to pursue their own play without interruption. Sometimes this means beginning the day with outdoor time that is unstructured. It may mean eliminating as many group transition times as possible.

Free play offers educators a unique window into children's thoughts, passions and concerns. Educators can be careful observers of children's play to intentionally seek a deeper understanding of the children's play and their ideas. Careful observation can also reduce the instances where the educator's participation interrupts the rhythm and flow of the children's play (Hewes, 2014).

Free play can offer educators insights into children's thinking that may lead to educator-guided play experiences. This can be done by either entering the play to keep the play going or to stimulate children's thinking by expanding the children's ideas in other learning experiences.

Free play is enhanced when educators actively seek to understand, acknowledge and respect children's purposes in play. This can mean acknowledging the play identities that children create for themselves through daily routines and transitions (Hewes et al., 2016). Educators can also pay particular attention to children whose play they find confusing. They can seek to understand what a child is thinking and trying to portray. Observing free play is an opportunity to learn more about the interests and ideas of children who do not verbally express themselves. Educators can learn about what is important to a child such as their sensory engagement in smelling or feeling parts of toys, or a sense of order evidenced by carefully lining up or arranging toys.

Research studies of children's play reveal challenges for teachers. When children direct their own play without adult interference, instances and storylines of exclusion and unequal access may arise (Campbell, 2005). Educators who attend closely to the play interactions of children can be alert to the situations that require discussion. Incidents of children's exclusion of other children must be addressed—ignoring such incidents suggests that such behaviours are permissible and acceptable.

Inquiry Play

The Big Building

A group of preschool children watch the construction of a condo building next door. Children stand at the fence and watch the parade of cement mixers, diggers, front-end loaders and cranes. Three-year-old Connor plays exclusively with vehicles and sits down on a tricycle and moves back and forth, making his usual rumbling sound. Other children ride over on tricycles and wagons and join Connor. Then several children decide to bring over large building blocks, cardboard tubes, large empty boxes and hard hats from the storage shed. The children eagerly begin to construct a building they call "the big building".

Several days later, the children's construction area includes structures made out of blocks, tubes and boxes, picture and word signs. They give directions for construction vehicles and warnings of danger and give out pails and shovels for hauling sand around in the sand box. From time to time, Yasmeen, an Early Childhood Educator, joins the play. She asks lots of questions about how they manage to keep the building from falling over and what the construction workers are doing.

One day, Yasmeen decides to extend the outside playtime. She brings out some large sheets of paper and tapes them on a nearby table. Then Yasmeen invites children to draw a picture of the construction site. Four children come to the table, pick up the markers Yasmeen has placed on the table and start to draw. Yasmeen encourages them to look over to the construction site and think about details of the equipment and the large hole in the ground.

The children ask more and more questions about the construction vehicles and about the many tools the workers use. Four-year-old Emily wants to know how the water and electricity will be part of the building. Yasmeen brings in several picture books about construction from the local library. She tells the children that she does not know the answers, but she can help them find answers in the book. Hassan suggests they use the Internet in the library to look up more information. Several children are drawing pictures about building construction and asking how to spell words like "condominium" and "excavator". Yasmeen and the children now take pictures

every morning and document what progress they observe in a book they are making called “The Big Building”.

The following week, Yasmeen again sets up the nearby table with paper and markers and invites the children to draw pictures. She notices that children are drawing pictures with much more detail in their illustrations of the equipment and construction site. Yasmeen invites Connor over to the table by offering to draw a front-end loader.

As the play outside continues to develop a narrative about construction workers and powerful machines, Yasmeen suggests that they write a script together for a play. The children contribute handwritten notes and drawings that are transferred to the computer. They work together to prepare a play about building a very tall building with lots of playrooms, including one with a large bouncy castle.

Adapted from *Early Years Study 3* McCain, Mustard & McCuaig, 2011 pp. 49-50

Sinking Boats

In a Grade 1 class, six-year-old Ellie is at the outdoor water table. Beside the water table sits a small table with several plastic boats and half dozen balls of Plasticine about an inch in diameter. Ellie drops the Plasticine balls into the water, watching them sink to the bottom and then pulling them out and starting over again. Sasha joins her. He places the boats in the water and pushes them around. Ellie places a Plasticine ball on the smallest boat and it sinks. Sasha then places a ball on the largest boat and it does not sink.

Ellie says, “Hey, how come that boat keeps floating?”

Sasha says, “Because it is the biggest boat and big boats don’t sink, just little ones.”

Ellie puts three balls on the biggest boat and it does sink.

The teacher who has been quietly observing the interaction joins Sasha and Ellie. She says. “That’s interesting. Why do you think one ball sinks a small boat, but it takes three balls to sink a big boat?”

Inquiry means “asking” to seek knowledge, information, or new understandings. An inquiry orientation depends on a sense of curiosity and an openness to feeling perplexed, surprised and intrigued by things not yet known. Inquiry play begins with child-initiated investigations, often through exploratory play where children are figuring out how something or some process works. Exploratory play leads children to see connections between objects, ideas, meanings and imaginations. Ideas and questions progress to in-depth investigation of a real-world topic that engages children’s attention and effort. Educators prompt children’s thinking and join the investigation. Children move from what they know to what is more complex. Children are more likely to remember and really understand what they learn if they find it compelling and take the lead in figuring it out or discovering some part of it for themselves.

Inquiry play is child-led and educator-guided. Educators focus on what children notice. New information builds communication and observation skills as children become experts in an area. As they investigate and build bridges between ideas, children go through a problem-solving and

planning process that encourages them to persist and find alternative solutions. An inquiry play investigation may be carried out with an entire class or with small groups of students. When educators pay attention to what is important to children as they play, they can interject ideas, materials, equipment and questions that can amplify learning opportunities. In inquiry play, educators provide an environment that allows children to determine their own learning direction and outcomes and to pursue them at length and in depth.

Numeracy and mathematical understanding benefits from exploratory play that evolves into inquiry and involves measurement, space, perspective and other mathematical ideas. Opportunities present themselves for children to record observations in graphs that represent their findings. Benefits to the development of literacy accrue as children document their ideas, experimentation and findings either individually or as a group (Vossoughi & Bevan, 2014).



Role of the Educator

In inquiry play, educators extend children’s ideas, theories and explorations through questions, provocations and representations. A critical difference for effective inquiry play-based learning lies in the educator’s ability to be a provocateur rather than always a facilitator. A facilitator makes things easier. A provocateur challenges and pushes the edges.

Educators seek out entry points to prompt problem-solving, critical thinking, innovation, communication skills and abilities. They encourage children to try something new, persist and find alternative solutions. Educators use factual books and online information to support children’s understanding of concepts that are emerging from inquiry play.

Educators encourage children to share what they are learning with one another through visual and/or oral presentations and reflect on what they could do differently or change the next time.

Educators ask open-ended questions and encourage children to ask questions that are relevant to their play. If a child has limited verbal language or is an English language learner, educators can adapt questions and pay attention to children's non-verbal responses.

Collaborative Play

The Crane

Michaela, an educator in a StrongStart BC program, notices that three-year-old Ivan and Lindsey are deeply engaged with the unit blocks and Lego in the construction play area. Ivan lines up several unit blocks on the floor. He places a tall stack of Lego blocks on one end of the blocks, and it falls over. After observing for several minutes, Michaela decides to find out what Ivan and Lindsey understand about why the blocks fall down, and what they are trying to do.

Michaela asks, "What are you trying to do, Ivan?" Ivan responds, "We are making a really big crane." Lindsey adds, "It is going to pick up the concrete for the tower?" Ivan turns to Michaela and asks, "Can you help us get the crane to stay standing up?" Michaela responds, "Of course. Which way do you want the crane to face?"

Ivan says, "It has to face the concrete" as he points to a pile of small rocks beside the wooden blocks. Michaela places the tower on a block in front of the rocks. It falls over.

Michaela asks, "Why do you think it keeps falling over?" Ivan says, "Because it doesn't stick to the block." Michaela responds, "So, how could we get it to stick?" Lindsey shouts out, "We need to glue it!"

Michaela says, "That is a very good idea. But then it would always be stuck on the block. How would the block fit back in the shelf?"

Ivan suggests, "Let's use tape. When we are finished, we can take the tape off." Michaela answers, "You thought of a good way to solve that problem. Let's find the tape."

Collaborative play is child-directed play with educator support. It leverages the joy and exuberance that children experience in free play while at the same time offering opportunities for learning specific content and skills (Weisberg & Zosh, 2018). In collaborative play, children make decisions about their play but are provided guidance to reach the learning goal the educator has in mind. Educators may intervene during children's play by becoming involved in the children's play. They intentionally seek to leverage potential learning opportunities but not disrupt or transform the children's plan (Pyle, Deluca & Danniels, 2017).

The Restaurant

Azza, Zack and Loti are setting up tables in the housekeeping centre of their Kindergarten classroom. "Let's pretend this is a restaurant," Loti says to the other two children. "We can serve pizza." The three children pull out a variety of props from the nearby cupboard and set about to organize a nearby shelf for making pizza. They also set chairs around two small tables and move the doll's bed to the side.

The educator, Rachel, observes. As the play continues, she recalls that Loti and Azza played an alphabet game yesterday and they were interested in printing their name and a few words from the game on lined sheets of paper.

Rachel enters the restaurant and asks for a menu. Azza says, “Hmm, we don’t have a menu.” Rachel responds, “Would you like to make menus for your restaurant?” The children are eager to make menus and Rachel suggests that they get some paper and markers from the writing centre. There is lined flipchart paper so they decide to use a sheet of that and tape it on the wall of the restaurant for a large menu. Rachel asks them what will be on the menu and the children decide that there will be three kinds of pizza and chocolate milk. Rachel prints the items in large letters on the paper and asks them to help her sound out the letters. She notes that Loti is only aware of the first letter of each word while the others can identify several of the letters.

Later in the afternoon, the restaurant has expanded to four tables and several other children have joined in as customers or pizza makers. Zack and Azza decide to make individual menus on sheets of lined paper. Rachel notices this and joins them, pointing out the posted menu. Together, they make four small menus for customers, copying down the words from the large one.

Tomoka enters the restaurant and Rachel invites her to sit at a table beside her. Tomoka understands verbal communication but has difficulty expressing herself and has recently started to have sessions with a speech and language pathologist. Tomoka points to the menu and Rachel responds, “You want to know what is on the menu. Let’s read it together.”

Collaborative play often involves the deliberate integration of literacy props and materials into children’s play. This increases children’s literacy-related play if educators scaffold (i.e., bridge) children’s interactions with props during play through modeling, role-playing, or conversation. Literacy-based play increases children’s emergent literacy knowledge.

Collaborative play allows children to share play experiences with educators and with each other. Through co-creation, children are learning from their peers and from educators.



Role of the Educator

In collaborative play educators bring a specific learning focus into children’s play while respecting the children’s lead in the play itself. Educators often design learning experiences that incorporate targeted learning outcomes into children’s play or offer ideas to extend learning.

Educators can join in an individual child’s or a group of children’s play and respond to their interests and new ideas. Educators may introduce new ideas and/or materials into the children’s play that

support children's interests and problem solving or are in response to suggestions that children have made.

Educators can join children's play and "co-author" the ongoing narrative without hijacking the play (Hewes et al, 2016). Children are active agents who continue to guide the direction of the play. Educators join in the children's play if invited and follow the children's lead. Educators can also model invitations to other children to play and incorporate them into the ongoing narrative.

Educators recognize and respect children's emerging and repeated play themes and include children in planning learning experiences and in setting up the physical environment.

Playful Learning

Pumpkin Cake

A group of five children in an after-school program located in a primary school gather around a table in the school kitchen. William, the educator who facilitates the program, tapes a large sheet of paper with a recipe for pumpkin cake on the wall behind the table. It is autumn, and the children were recently at a local market that had a large selection of pumpkins.

Together the children and William read through the recipe. Six-year-old Sophie slowly sounds out the word "sugar" and says, "I know where the sugar is. I will get it."

William asks, "How much sugar will we need?"

Seven-year-old Thomas replies, "2 ½ cups—that's what the recipe says," pointing to the recipe on the wall.

"Right," says William. "Thomas, we have a ½ cup measuring cup here. Can we use that to measure out 2 1/2 cups of sugar?"

Thomas replies, "We need to add three of those to the bowl!"

William pulls out a 1 cup measuring cup and asks Thomas again. Sophie says, "I think 2 of the small cups will fill the big cup."

Slowly, William guides the children through the measurement of all the ingredients, emphasizing that $\frac{1}{2} + \frac{1}{2}$ equal 1. After the pumpkin cake is in the oven, the children review the recipe chart. William asks them to make their own recipe card or pumpkin cake. He encourages them to make drawings of each of the ingredients to show how much is needed for the recipe.

Playful learning activities are planned play experiences relevant to children's interests and abilities that are organized around specific learning objectives. Educator guidance in play is often highlighted as a critical component to acquire academic skills related to numeracy and literacy (Pyle, Deluca & Danniels, 2017). Educators intentionally set up the environment and learning experience and provide prompts that ensure that children's exploration is focused. The autonomy remains with the children and keeps the activity fun and interesting for them. Playful learning experiences harness children's natural tendency to learn and explore, and allows their own interests to guide their actions, leading to increased learning (Weisberg & Zosh, 2018).

Worms

The preschool group is outside. It has been raining, but for now the sun is poking through the clouds and the children are exhilarated to be outside. Several begin to run around the open field adjacent to the child-care building. The educator, Tim, scans the play area, and then kneels down beside three-year-old Malcolm and four-year-old Oscar who are sitting on the grass beside a patch of dirt that will become a vegetable garden later in the spring. He plans on engaging them on a search for worms.

Tim says, “Do you know who lives in the dirt?” “Dragons?” says Oscar. Malcolm shakes his head. Tim says, “Well, let’s find out” as he hands them each a small spade.

Malcolm and Oscar begin digging, and very soon they find worms that they carefully pick up and place in a small bucket. The two children excitedly report on how the worms are moving around and ask Tim lots of questions: “What do worms eat? Do worms bite? Where are the baby worms?” Tim answers questions and extends the conversation with more questions. Earlier, Tim had reviewed a few resources about earthworms and had planned to introduce specific scientific concepts about living beings into the children’s encounter with the worms.

Tim has prepared a Plexiglass container for the worms. Oscar and Malcolm fill the container with dirt and carefully place the worms inside and watch as the worms disappear into the dirt. Tim asks, “What do you think they will need to stay alive?” They decide to add some water to the container and wonder about adding grass. After the water is added, Tim asks them to watch what the worms do.

Children are active participants in playful learning experiences that motivate and excite them about their own learning and their own communities. Children and educators have conversations about how children participate in the learning process. They discuss the intended learning goals and children are encouraged to monitor their own learning. As children monitor their own learning and reflect on their progress towards specific skills, they also learn to see themselves as competent and confident learners. As children evaluate what they have accomplished, set new goals and adapt their learning, they cultivate meta-cognition abilities. Self-evaluation is a key aspect of the development of Core Competencies.



Several evidence-based curricula are available that offer educators specific plans and strategies for playful learning experiences.

- Tools of the Mind (Bodrova & Leong, 2007) includes a systemic play intervention approach designed to promote young children's intentional and self-regulated learning. Its authors contend that the play that exists in many of today's early childhood and primary classrooms does not fit the definition of mature play, due to a decrease in adult mediation of make-believe play. In Tools of the Mind, teachers scaffold children's self-regulation by modeling different pretend play roles and by helping children think of what might come next. This intervention has positive effects on the development of self-regulation and its relationship to child achievement in early literacy and mathematics.
- The curriculum of Promoting Alternative Thinking Strategies (PATHS) teaches self-regulation, emotional awareness, conflict resolution skills, social problem-solving skills and responsible decision-making. It is aimed at elementary school children (see Bierman et al., 2010). Problems are viewed as a normal part of life, and that it is not always possible to avoid problems. In fact, some problems, such as deciding what kind of ice cream flavour to choose or where to go on vacation, are good problems to have. Teachers have scripted lessons that set up a problem scenario and guide children through solving the problem together. Children learn eleven basic steps to solving a problem and use the assigned problem scenarios to practice:
 1. STOP and CALM DOWN
 2. Identify the PROBLEM (Collect lots of information)
 3. Identify FEELINGS (your own and other people's)
 4. Decide on a GOAL
 5. Think of lots of SOLUTIONS
 6. Think about the CONSEQUENCES (what might happen)
 7. Choose the BEST solution (evaluate all of the alternatives)
 8. Make a good PLAN (think about the possible obstacles)
 9. TRY your plan
 10. EVALUATE—how did you do?
 11. If you need to, TRY AGAIN

Role of the Educator

In playful learning experiences, educators focus on targeted skills as part of learning experiences that can incorporate children's play narratives and interests. Educators seek to integrate specific learning skills into planned play experiences.

Educators organize time and space for planned learning experiences that actively engage every child

as they are introduced to specific skills. Educators may use lessons that focus on different types of learning styles or whole-body experiences in order to engage each child. Often children are in small groups that facilitate shared conversations with each other and with the educator.

Educators observe children after playful learning experiences and note if any of the vocabulary, content, ideas or concepts are incorporated into their free play.

Learning Games

Learning to Skip

The recreation centre's after-school program is popular among children in Grades 1 and 2. Today, three boys and a girl play basketball. Two girls skip and two boys play "ballsies" (a made-up game that involves throwing a rubber bouncing ball at the school wall and catching it without any bounces on the ground as many times as possible).

Isabel, the recreation leader, scans the environment often automatically counting to make sure that the 20 children who were present at 3:15 pm remain in the playground. She also takes note of who is doing what and how each child is moving his or her body.

Like many other children who struggle with motor skills, seven-year-old Zoe hates outdoor activities during school hours or afterschool. Inside the classroom, she is quietly confident about her abilities, but outdoors she is abundantly aware that she lacks the physical skills of many of her peers. She has to wait to be asked to play jump rope and faces embarrassment if she misses a skip, or if nobody ends up asking her to join. But this year is different. In September, Isabel observed Zoe struggle to join in skipping games and did some coaching to build her skipping skills. She also assigned a Grade 6 helper who was a master skipper to practice with Zoe. Four months and many mornings of practice later, Zoe starts mastering the skills and by her smiling face, is enjoying her newfound skipping skills.

Learning games are prescribed learning experiences with specific rules. They are play with an external structure. Learning games set the stage for introducing and consolidating literacy, numeracy and inquiry skills, general knowledge as well as specific physical skills. Children learn to how to take turns, share and resolve differences with each other when they take part in games with rules.

Number Line Game

Four-year-old Idris enters his preschool with his auntie. He immediately runs to the table with a new game set up. He yells out, "Auntie, auntie—look, this one is using the acorns I brought yesterday."

On the table is a number line game set up for three players. Each player has several acorns. The children take turns tossing a large dice and then placing that number of acorns on one of the number lines that are numbered squares from one to ten. When children can do this, Emmanuel, the educator, will add more acorns and extend the game with longer number lines.

Idris sits down and tosses the dice. It comes up with two circles. Idris places two acorns on the number one and number two squares on his number line. Then he tosses the dice again, and

it has three circles. He places three acorns along the next three squares on the number line. Emmanuel observes and asks, "So what number are you up to now?" Idris smiles and starts at the first square counting up to five where the acorn is placed. Emmanuel takes note of Idris' number understanding as he watches, smiling and nodding.

Learning games increase intrinsic motivation to learn, as well as academic content if that content is incorporated into the game. Number linear board games and card games contribute to foundational math concepts and numerical skills. Games can be organized to encourage mathematical understanding and early reading practice in a systematic manner. Games using a number line (such as Snakes and Ladders) are particularly effective in supporting children's sense of numbers and introducing mathematical concepts. Playing a linear number board game with each other and with an educator can increase children's knowledge in numerical magnitude comparison, number line estimation, counting and numeral identification. The playful and engaging elements of learning games along with the key number sense concepts help children increase their mathematical knowledge.

That's How You Play

At a child-care centre, three children sit around a table playing a game that is based on colour concepts. Five-year-old Joseph picks up the deck of cards and starts flipping through the cards to find the colour pink which would advance him several places on the game board to a place near the finish line.

Five-year-old Isha speaks up, "You can't do that. You have to take the next card in the pile, or it's not fair."

Joseph replies, "But last time, I had a white card and had to move backwards, and that wasn't fair."

"But that's how you play the game. If I had a white card, I would have to move backwards. That's how you play the game," Isha calmly explains.

Primary grade children care about the fairness of the rules. Learning to play games that are structured allows children to experience fairness that applies equally to all of the players. Learning to take turns begins in early childhood, often with games like Peekaboo. Older children learn that the rules are followed even when the outcome is not what they want.

As children become more skilled, learning games can become more complex. Children become interested in formal games with peers by age four or five. This interest continues into middle childhood. Older children's logical and socialized ways of thinking make it possible for them to play more complex games together. Learning games are often the most prominent form of play during middle childhood.

The main organizing element in game play consists of explicit rules that guide children's group behaviour. Some games involve two or more sides, competition and agreed-upon criteria for determining a winner. Other games require cooperation among children to be successful. Children use games flexibly to meet social and intellectual needs.

Games provide children with shared activities and goals that build their capacity to collaborate with

others and support social responsibility. Games can require children to consider the perspective of and empathize with others. Perspective taking is central to children's ability to be socially responsible. Children with perspective-taking skills are more likely to show community mindedness in their responses to class and school events. Co-operative games help children get along with others, contribute to the classroom or playground community and solve conflicts and problems. Working together with other people to achieve a common goal requires collaboration.

Children practice reasoning strategies and skills from strategy games like checkers or chess. Children must consider playing both offensively and defensively. These types of games develop critical thinking skills, which can help solve complicated problems or choose from several different possible actions. The ready access to an unprecedented amount of information requires abilities to analyze and evaluate that information and the problem-solving skills to effectively use that information.

Learning games can be designed to promote social-emotional learning. Several curricula approaches have intentionally incorporated play-based learning strategies to build children's self-regulation skills, particularly those related to working memory, attention and flexible thinking.

Research studies point to some promising findings such as:

- **Classic Learning Game:** McClelland and Cameron (2012) found a series of classic games that require children to follow directions and take turns had a positive impact on self-regulation and later literacy and numeracy. The classic games include Red Light/Green Light, Simon Says, I Spy With My Little Eye and Hide-and-Seek. The games can become more challenging by adding rules that require children to pay close attention and follow new instructions to do the opposite of what they are used to. For example, stop on the green light and go on the red light. These games require children to pay attention and remember the rules (working memory). They also build children's capacity to get along with each other. The Hide-and-Seek game is also a game with rules that encourage the practice of self-regulation since children must wait quietly until they are found. Role-playing games in which children pretend to be someone else for an extended block of time provide opportunities for children to think about their choices.
- **Movement Games** incorporate fundamental movement skills: balancing, locomotion and coordination. Balancing games could include yoga poses such as the tree pose, animal walks where children pretend to be different types of animals such as hopping rabbits or slithering snakes. All of these movements practice locomotion skills. Beanbag golf requires throwing and coordination skills. *Appetite to Play* (Child Health BC, 2017) provides information on physical activity games.
- **MindUP** (Scholastic Teaching Resources, 2011) is a comprehensive, evidence-based curriculum organized around 15 structured games or lessons that benefit social-emotional learning and promote academic success. MindUP is based on routine practices including repetition of the core practices—deep belly breathing and attentive listening—that focus attention and reduce stress. Children learn about the brain and how it works which gives them insights into their own minds and behaviours as well as those of the people around them. MindUP promotes focused attention to oneself and others, tolerance of differences and the capacity of each member of the community to grow as a human being and a learner.

What about electronic games? Parents, educators and researchers are divided about the potential benefits and harm of electronic games on children's learning and well-being. One of the major concerns is the total amount of screen time in children's daily lives. A central concern is spending time being less physically active and not interacting with friends. Electronic games can be designed to offer opportunities to practice emerging literacy and numeracy skills, improve attention, remember directions, ignore distractions and reduce impulsive responses.

Role of the Educator

When planning learning games, educators focus on specific skills appropriate for a child or group of children, typically numeracy and literacy, movement or social-emotional learning skills. The educator structures the games, but children may be involved in adaptations of the rules as part of the learning game play.

Educators identify specific learning outcomes that are appropriate for an individual or group of children. They aim to challenge children to stretch their thinking, language, social-emotional, and motor skills but not beyond what a child knows or can do with assistance.

The design of the games allows educators to readily monitor children's learning of specific skills and plan follow-up accordingly.

Educators can break instructions to games into small steps or provide visual reminders that help children focus on one step or one piece of information at a time.

Inclusive Learning Practice

Raise Your Foot High

Seven-year-old Asher was diagnosed with Attention-Deficit Hyperactivity Disorder when he was four-years-old. He attends his neighbourhood elementary school. Asher continues to struggle to focus his attention, particularly during learning activities focused on reading or arithmetic. His educator, Katherine, has learned to help him become aware of physical sensations through simple movement and music games.

Today, Asher talks to other children who work quietly in pairs at the reading table. Katherine asks Asher to join her in a corner of the room that has a rug, CD player and large mirror on the wall. There are no other displays on the wall, furniture, or equipment. Katherine turns the CD player and takes Asher through a series of simple dance steps.

"Raise your foot high," says Katherine as she goes through the movements herself, "and bounce it up and down." Asher follows Katherine's lead.

At first, Asher seems awkward and his movements are stiff and jerky. Katherine's voice is calm and quiet and she speaks slowly. She also moves slowly and exaggerates her movements. Asher becomes more relaxed and his movements less tense. After a couple of songs and movement steps, Katherine says, "How does your body feel, Asher?"

As Asher increases his physical awareness, Asher feels calmer and is better able to focus his attention and join other children at the reading table.

Early learning environments are enrolling more students with diverse learning needs. A strong foundation in inclusive learning practices is critical. As inclusive classrooms benefit children with and without disabilities (Buysse, Goldman, & Skinner, 2002), educators want to support diverse communities of learners. But, they may struggle with how to communicate about learning differences, engage children with special needs or scaffold foundational skills. Play is a powerful tool for educators who support diverse learners as it capitalizes on child interest and peer engagement.

Focusing on the interests of the child and engagement with friends can be a challenge if children demonstrate delays in social emotional skills or have a limited range of interests. Children with diverse needs may play in different ways than their friends. Part of the role of the educator is to interpret and expand on play to support developing skill sets. With modeling, peers begin to interpret and expand, supporting a more naturalistic observational learning experience between friends (Terpestra & Tamura, 2008).

Parents of young children consistently report that making friends is a top priority for their child in early learning settings and schools. One of the key benefits of inclusion is the development of community-based friendships and support for children and their families. A focus on friendship building through play underpins these goals. Educators can lay the groundwork by pairing children with similar passions, combining materials to allow children to demonstrate their strengths to peers and modeling and interpreting kind behaviour. With practice, embedding inclusive strategies in daily play becomes easier.

Research indicates that collaboration that occurs early and often between families and educators results in positive early learning experiences for young children with diverse learning needs and their peers (Division for Early Childhood, 2014). Educators can be ready for all children by consulting with families for guidance in interactions and providing support for children with diverse needs. Leaning on professional support networks is an effective way for educators to gain knowledge and improve practice (Artman-Meeker & Hemmeter, 2013).

Role of the Educator

Educators may play a larger role in supporting children with diverse learning needs, especially as children develop skills and relationships within a new setting. Educators can design the right conditions for all children to demonstrate and develop their abilities and interests. For some children, adaptations in the physical or social environment will be necessary. For others, educators can help with a child's entry into free play to support a child who might otherwise be left out.

Educators find out children's passions and learn what helps them continue to be interested, excited and motivated to learn.

Educators support diverse groups of children to play together by encouraging persistence, modeling new skills, interpreting behaviour, capitalizing on children's strengths, and being playful.

Educators use their observations and assessments to plan for each child's play experiences, including children who have identified language delays or learning differences.

Educators ensure that access to play activities or free choice activities is not denied due to behaviour or academic performance.

Educators talk to children and reflect with them on their learning. Children are encouraged to ask questions and share ideas about what they can do, what they are interested in and what they want to learn.



Observing, Monitoring and Documenting Children's Play

In this handbook, the role of the educators is highlighted across the continuum of play-based learning in all settings for children from age three years to eight (preschool through Grade 3). Play is a valuable learning time for children and educators and can be leveraged to maximize what children know and can do.

Observation, monitoring and documentation of children's play are powerful tools for educators who are working with young children in various settings. Specific strategies will vary according to the educators, the setting and the group of children. A preschool group in a child-care centre presents a very different context than an after-school outdoor recreation program for children aged six to eight years. A StrongStart BC program, which has different groups of children attending every day is different than a Grade 2 class of seven-year-olds who attend regularly over the school year. The professional background and experience of educators also varies.

Observations

Educators observe children's play closely with the goal of getting to know each child. Observations of children involve educators who pay attention, look closely, listen carefully, note what the children are doing and record an accurate and detailed description. Educators record what each child is doing,

what is said, and the vocabulary used. How motivated are the children? Do they show any joy and delight in their play? Is the play continuous and intense? How are the children playing with each other? Are any children playing alone, with a partner, or in a group? What adults are involved?

Monitoring

Monitoring incorporates observation practices by aligning information from observations with learning expectations or outcomes. Educators can monitor children's play to generate information and feedback for children, other educators and their families. Monitoring includes attendance—who participates in a program—as well as who participates in what types of play. Learning games offer opportunities to monitor if children are acquiring specific skills that are featured in the game.

Pedagogical Narration

Pedagogical narration is a process that begins with observation of children's play, then gathers data such as photographs, notes, children's art work or videos and then reflects on this information (Stacey, 2015). Simply posting photographs or videos on the wall or electronically with a short description is documentation. To take documentation one step further into pedagogical narration, an educator examines the data. Through reflection and interpretation, the educator can intentionally make decisions about what learning might be taking place, how to respond to a child or group of children, or what play opportunities might be offered.

CONCLUSION

Play exists in many forms. It can be boisterous, messy, silly, wandering or quiet and gentle. The research demonstrates that play in all its forms serves a crucial role in every aspect of young children's development. As a parent or educator, your role in supporting children's play shifts along the continuum of facilitator to provocateur.

This handbook was designed to make the case for play in our homes, child care centres, schools and all places where children and adults gather together. We urge you to keep returning to Play Today to find a place that challenges you, as a parent or educator, to push your boundaries in experience with, and knowledge of play.

REFERENCES

- 24-Hour Movement Guidelines for Children and Youth. (2017). Retrieved from <http://www.csep.ca/view.asp?x=696>.
- Alferi, L., Brooks, P.J., Aldrich, N.J., Tenenbaum, H.R. (2011). Does discovery-based instruction enhance learning? *Journal of Educational Psychology*, 103(1), 1-18.
- Allen, L., & Kelly, B. (Eds.) (2015), *Transforming the Workforce for Children Birth Through Age 8*. Washington, DC: National Research Council.
- Anderson, D., Comay, J., & Chiarotto, L. (2017). *Natural Curiosity*. Toronto, ON: Eric Jackman Institute of Child Study, OISE, University of Toronto.
- Archer, C., & Siraj, I. (2015). *Encouraging Physical Development through Movement Play*. London: Sage.
- Archer, C., & Siraj, I. (2017). *Movement Environment Rating Scale (MOVERS) for 2 – 6-year-olds Provision*. London, UK: IOE Press, Trentham Books.
- Artman-Meeker, K. M., & Hemmeter, M. L. (2013). Effects of training and feedback on teachers' use of classroom preventive practices. *Topics in Early Childhood Special Education*, 33, 112-123.
- Asante, S. (2002). *What is inclusion?* Toronto: Inclusion Press.
- Barros, R., Silver, E., & Stein, R. (2009, February). School recess and group classroom behaviour. *Pediatrics*, 123(2), 431-436.
- Baumer, S., Ferholt, B., & Lecusay, R. (2005). Promoting narrative competence through adult-child joint pretense. *Cognitive Development*, 20, 576-590.
- B.C. Ministry of Education. (2016). *Glossary of Curriculum Terms*. Retrieved from B.C. Ministry of Education website: <https://curriculum.gov.bc.ca/sites/curriculum.gov.bc.ca/files/pdf/glossary.pdf>
- Bergen, D. & Williams, E. (2008). *Differing childhood play experiences of young adults compared to earlier young adult cohorts have implications for physical, social, and academic development*. Poster presentation at the Association for Psychological Sciences Conference, Chicago, IL
- Berk L.E. (2018, February). The role of make-believe play in development of self-regulation. In: Tremblay R.E., Boivin M, Peters R.DeV, (Eds.), Pyle A, (Topic Ed.). *Encyclopedia on Early Childhood Development*. <http://www.child-encyclopedia.com/play-based-learning/according-experts/role-make-believe-play-development-self-regulation>.
- Bierman, K.L., Coie, J.D., Dodge, K.A., Greenberg, M.T., Lochman, J.E., McMahon, R.J., & Pinderhughes, E. (2010, April). The effects of a multiyear universal social-emotional learning program: The role of student and school characteristics. *Journal of Consulting and Clinical Psychology* 78(2),156-168.
- Bodrova, E., & Leong, D. (2007). *Tools of the Mind: The Vygotskian Approach to Early Childhood Education*. 2nd ed. Upper Saddle River, NJ: Pearson/Merrill Prentice Hall.

- Broadhead, P., & Burt, A. (2012). *Understanding Young Children's Learning through Play: Building Playful Pedagogies*. NY: Routledge
- Brussoni, M. (2017). Why kids need risk, fear and excitement in play. *The Conversation Canada*. Retrieved from <https://theconversation.com/why-kids-need-risk-fear-and-excitement-in-play-81450>
- Brussoni, M., Gibbons, R., Gray, C., Ishikawa, T., Sandseter, E.B.H., Bienenstock, A., Chabot, G., Fuselli, P., Herrington, S., Janssen, I., Pickett, W., Power, M., Stanger, N., Sampson, M., & Tremblay, M.S. (2015). What is the Relationship between Risky Outdoor Play and Health in Children? A Systematic Review. *Int. J. Environ. Res. Public Health*, 12, 6423-6454.
- Buysse, V., Goldman, B. D., & Skinner, M. L. (2002). Setting effects on children friendship formation among young children with and without disabilities. *Topics in Early Childhood Special Education*, 24, 169-183.
- Campbell, J. (2005). *Everyday learning about talking*. Canberra, ACT: Early Childhood Australia.
- Carlson, F. (2018.) Big Body Play: Why Something So Scary is So Good for Children. [PowerPoint slides]. Retrieved from https://www.earlychildhoodwebinars.com/wp-content/uploads/2018/02/Slides-3-per-page_Big-Body-Play-02_07_2018.pdf
- Child Health BC. (2017). *Appetite to Play*. Victoria, B.C.: Government of B.C.
- Cleve, J. & Cole-Hamilton, I. (2012). *A Literature review on the Effects of a Lack of Play on Children's Lives*. London, UK: Play England.
- Collins, K. (2018, June). Presentation at Summer Institute, George Brown College, Toronto.
- Council on School Health. (2013). The crucial role of recess in school. *Pediatrics* 2013; 131:183-188.
- Diamond, A. & Lee, K. (2011, August). Interventions shown to aid executive function development in children 4 to 12 years old. *Science* 19, 333(6045), 959-964.
- Division for Early Childhood. (2014). DEC Recommended Practices. Retrieved from DEC website: <http://www.dec-sped.org/dec-recommended-practices>.
- Dockett, S., Griebler, W., & Perry, B. (2017). (Eds.). *Families and transition to school. International perspectives on early childhood education and development*. Vol 21. (pp. 37-49). Switzerland: Springer International Publishing.
- Duckworth, K., Akerman, R., McGregor, A., Salter, E., & Vorhaus, J. (2009). *Self regulation: A review of literature. (Report 33)*. London: Centre for Research on the Wider Benefits of Learning, Institute of Education.
- Elkind D. (2007). *The Power of Play: Learning What Comes Naturally*. Cambridge, MA: Da Capo Press.

References

- First Nations Education Steering Committee. (2012). *First People's Principles of Learning*. Retrieved from: <http://www.fnesc.ca/wp/wp-content/uploads/2015/09/PUB-LFP-POSTER-Principles-of-Learning-First-Peoples-poster-11x17.pdf>
- Fuchs, L., Fuchs, D., Prentice, K., Burch, M., Hamlett, C., & Owen, R. (2003). Enhancing third-grade students' mathematical problem solving with self-regulated learning strategies. *Journal of Educational Psychology, 95*, 306-315.
- Hassinger-Das, B., Zosh, J.M., Hirsh-Pasek, K., & Golinkoff, R.M. (2018, February). Playing to Learn Mathematics. In: Tremblay R.E., Boivin M., Peters R.DeV., (Eds.). Pyle, A., (Topic Ed.), *Encyclopedia on Early Childhood Development*. <http://www.child-encyclopedia.com/play-based-learning/according-experts/playing-learn-mathematics>.
- Hemmeter, M. L. & Grisham-Brown, J. (1997). Developing children's language skills in inclusive early childhood classrooms. *Dimensions of Early Childhood, 25*(3), 6-13.
- Hewes J. (2014, December). Seeking Balance in Motion: The Role of Spontaneous Free Play in Promoting Social and Emotional Health in Early Childhood Care and Education. 1(3), 280-301. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/27417480>.
- Hewes, J., Whitty, P., Aamot, B., Schay, E., Sbbald, J., & Ursulia, K. (2016). Frozen. *Canadian Journal of Education / Revue canadienne de l'éducation 39*(3). Retrieved from <http://journals.sfu.ca/cje/index.php/cje-rce/article/view/2089>
- Huttenlocher, J., Vasilyeva, M., Cymerman, E., & Levine, S. (2002). Language input and child syntax. *Cognitive Psychology, 45*, 337-374.
- Lester, S., & Russell, W. (2008). *Play for Change*. London: National Children's Bureau.
- Martlew, J., Ellis, S., Stephen, C. & Ellis, J. (2010) Teacher and child talk in active learning and whole-class contexts: some implications for children from economically less advantaged home backgrounds. *Literacy, 44* (1). pp. 12-19.
- McCain, M., Mustard, F., & McCuaig, K. (2011). *Early Years Study 3*. Toronto, ON: Atkinson Centre, OISE
- McCain, M., Mustard, F., & Shanker, S. (2007). *Early Years Study 2*. Toronto, ON: Council for Early Childhood Development.
- McClelland, M. M., & Cameron, C. E. (2012). Self-Regulation in early childhood: Improving conceptual clarity and developing ecologically valid measures. *Child Development Perspectives, 6*(2), 136-142.
- Moyles, J. (2010). Play: The powerful means of learning in the early years, in Ed. S. Smidt, *Key Issues in Early Years Education*. NY: Routledge.
- Murnane, R., Sawhill, I., & Snow, C. (2012). Literacy challenges for the Twenty-First Century: Introducing the issue. *The Future of Children, 22*(2).

- Oberle, E., & Schonert-Reichl, K. (2017). Social and emotional learning: Recent research and practical strategies for promoting children's social and emotional competence in schools In J.L. Matson (Ed.), *Handbook of Social Behavior and Skills in Children, Autism and Child Psychopathology Series*, p. 175 – 194.
- OECD. (2006). *Starting Strong II: Early Childhood Education and Care*. Paris: OECD Publishing.
- OECD. (2017). *Starting Strong V Transitions from Early Childhood Education and Care to Primary Education*, Paris: OECD. Retrieved from: <http://www.oecd.org/publications/starting-strong-v-9789264276253-en.htm>.
- ParticipACTION. (2015). *The ParticipACTION Report Card on Physical Activity for Children and Youth: The Biggest Risk is Keeping Kids Indoors*. Retrieved from <https://www.participaction.com/en-ca/thought-leadership/report-card/archive?year=2015>.
- Pascal, C. (2009). *Our Best Future in Mind*. Toronto, ON: Government of Ontario.
- Pellis, S.M., Pellis, V.C. (2012, January). Play-Fighting During Early Childhood and its Role in Preventing Later Chronic Aggression. In: Tremblay R.E., Boivin, M., Peters, R.DeV, (Eds.). Tremblay, R.E., (Topic Ed.). *Encyclopedia on Early Childhood Development*. Retrieved from <http://www.child-encyclopedia.com/aggression/according-experts/play-fighting-during-early-childhood-and-its-role-preventing-later>.
- Pellis, S., & Pellis, V. (2009). *The Playful Brain: Venturing to the Limits of Neuroscience*. Oxford: Oneworld Publications.
- Pyle A. (2018, May). Negotiating a Holistic View of Play-Based Learning: A Commentary. In: Tremblay R.E., Boivin, M., Peters, R.DeV, (Eds.), Pyle, A., (Topic Ed.). *Encyclopedia on Early Childhood Development*. Retrieved from <http://www.child-encyclopedia.com/play-based-learning/according-experts/negotiating-holistic-view-play-based-learning-commentary>.
- Pyle, A., & Danniel, E. (2017). A Continuum of Play-Based Learning: The Role of the Teacher in Play-Based Pedagogy and the Fear of Hijacking Play, *Early Education and Development*, 28(3), 274-289.
- Pyle, A., DeLuca, C., & Danniel, E. (2017, May). A scoping review of research on play-based pedagogies in kindergarten education. *Review of Education*. Retrieved from <https://doi.org/10.1002/rev3.3097>.
- Roskos, K. A., Christie, J. F., Widman, S., & Holding, A. (2010). Three decades in: Priming for meta-analysis in play-literacy research. *Journal of Early Literacy Learning*, 10, 55-96.
- Sandseter, E. (2011). Children's risky play from an evolutionary perspective. *Evolutionary Psychology*, 9, 257-284.
- Scholastic Teaching Resources. (2011). *The MindUP Curriculum: Grades PreK-2*. The Hawn Foundation.
- Shanker, S. (2012). *Clearly Focused and Learning*. Toronto, ON: Pearson.
- Siraj, I., Kingston, D., & Melhuish, T. (2015). *Assessing Quality in Early Childhood Education and Care*. London, UK: IOE Press.

References

- Smilansky, S. (1968). *The Effects of Sociodramatic Play on Disadvantaged Preschool Children*. New York, NY: John Wiley & Sons.
- Stacey, S., (2015). *Pedagogical Documentation in Early Childhood: Sharing Children's Learning and Teachers' Thinking*. St. Paul, MN: Redleaf Press.
- Sylva, K., Melhuish, E., Sammons, P., Siraj-Blatchford, I., & Taggart, B. (2009). *Effective Pre-School and Primary Education 3 - 11 (EPPE 3 - 11) Final Report from the Primary Phase: Pre-School, School, and Family Influences on Children's Development During Key Stage 2 (Age 7 - 11)*. London, UK: Institute of Education, University of London.
- Terpestra, J., & Tamura, R. (2008). Effective social interaction strategies for inclusive settings. *Early Childhood Education Journal*, 35, 405-411.
- Thomas, E. (2009). Canadian nine-year-olds at school. *Children and Youth Research Paper Series*. Ottawa, ON: Statistics Canada.
- Tremblay, M. (2018). Keynote Address at the B.C. Recreation and Parks Association Annual Symposium, Vancouver, B.C.
- Truth and Reconciliation Commission of Canada. (2015). *What We Have Learned: Principles of Truth and Reconciliation*. Retrieved from: <http://www.trc.ca/websites/trcinstitution/File/2015/Findings/Principles%20of%20Truth%20and%20Reconciliation.pdf>
- Vossoughi, S., & Bevan, B. (2014). Making and tinkering: A review of the literature. *National Research Council Committee on Out of School Time STEM*, Retrieved from: https://www.researchgate.net/profile/Shirin_Vossoughi/publication/305725173_Making_and_Tinkering_A_Review_of_the_Literature/links/579d19e008ae80bf6ea48669.pdf
- Vygotsky, L. (1978). *Mind in Society: The Development of Higher Psychological Processes*. Cambridge, MA: Harvard University Press.
- Weisberg D.S., Zosh J.M. (2018, February). How guided play promotes early childhood learning. In: Tremblay R.E., Boivin, M., Peters R.DeV., (Eds.), Pyle, A., (Topic Ed.). *Encyclopedia on Early Childhood Development*. Retrieved from <http://www.child-encyclopedia.com/play-based-learning/according-experts/how-guided-play-promotes-early-childhood-learning>.