Government of Saskatchewan
Ministry of Education

Making Learning Visible in Kindergarten Classrooms

Embedding and Meeting Curriculum through Inquiry, Play-Based Learning

Distinguishing Features of an Early Childhood Education Program

Environments:

- Encourage and support purposeful play
- Engage the senses and children's interests
- Foster curiosity and intellectual engagement
- Encourage a variety of ways of representing and reflect on learning
- Support the worldviews of children

Conversations:

- Are authentic and meaningful
- Support language development and learning
- Invite and encourage children to think deeply about ideas
- Provide information enabling educators to scaffold children's learning
- Explore connections , share stories about culture to develop an understanding and appreciation of diversity

Relationships:

- Support the development of strong, positive and trusting relationships
- Foster a personal connectedness to nature and one another

Play:

- Reflects, reinforces and results in children's development
- Stimulates inquiry
- Contributes to the achievement of curricular outcomes
- Promotes self expression and identity

Principles for Early Learning

The Saskatchewan Kindergarten curriculum upholds and promotes the following research-based principles and related practices for early learning:

- Children are capable, competent learners who bring a wide variety and diversity of interests, knowledge, skills and experiences into the Kindergarten classroom. Effective educators recognize, value, support, and extend these qualities in each learner.

- Play is essential for optimal childhood development. Effective educators recognize the significance of play and provide meaningful play experiences. These experiences encourage, promote and develop creativity, inquiry and problem solving skills in holistic skill development.

- Learning and development are holistic, and interconnected. Effective educators provide stimulating, engaging and integrated opportunities to support the growth and development of the whole child—intellectually, socio-emotionally, physically and spiritually—throughout the required areas of study.

- Relationships are foundational to learning. Effective educators develop relationships with and among children, families and communities to foster the development of connections with ideas and the environment.

- Environments are stimulating and dynamic. Effective educators ensure that indoor and outdoor environments are safe, inclusive spaces that facilitate play, exploration, and inquiry in the promotion of independence, responsibility, holistic development and interaction.

"Play is the leading source of development in the early years." (Vygotsky, 1933)

"Play is the work of children." (Piaget, 1962)

"Rich, elaborated and prolonged play makes better human beings." (Bruner, 1983)

"Play provides children with opportunities to construct knowledge as they create and test theories, practice their skills and make sense of the world." (Saskatchewan Ministry of Education, 2010)

Capable, Competent Children

The ages of children entering Kindergarten can span a full year. There are widely accepted developmental stages for four-, five- and six-year-old children; because children are unique and proceed through these milestones at their own pace. A four-year-old child may exhibit characteristics from both four- and five-year-old groups as might a five- or six-year-old child. In addition, individual children in any Kindergarten class will have had a variety of different linguistic, familial, social and cultural experiences. Through building relationships with individual children and their families, educators come to understand what is developmentally appropriate and culturally important for individual as well as for groups of children. It is essential that educators recognize and respond to those differences in positive, supportive ways. Additional information on the holistic development of children and developmentally appropriate practices can be found on the resources page of this document.

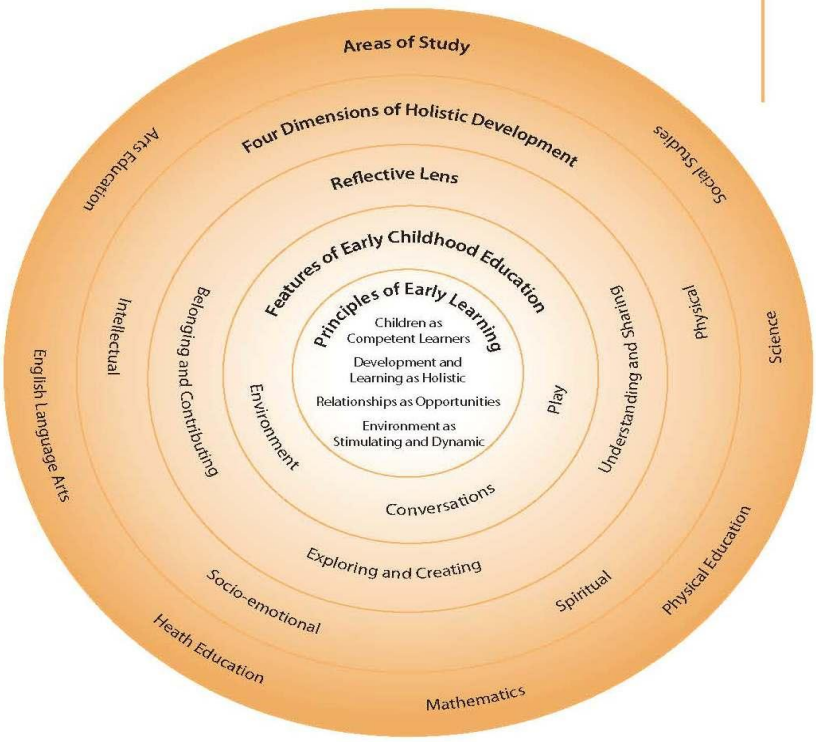
Play and Outcomes

Philosophers, writers and researchers from Plato through to Vygotsky, Piaget and Bruner have identified the critical role of play in all areas of childhood development. Learning through play occurs naturally and although research highlights the importance of play as a mode for learning, play is not prominent in many early learning programs (Hewes, 2006). This occurs because, although many early childhood teachers value play, they struggle with connecting play and the outcomes in the Kindergarten curriculum (Hamlin & Wisneski, 2013).

Play should be ubiquitous in Kindergarten--noisy and quiet, active and passive, individual and groups; play should take place indoors, outdoors, and in natural environments. Play in Kindergarten can take many forms including locomotor, object, language, and sociodramatic play (Tremblay, Boivin, & Peters, 2010). All of these types of play support the development of the whole child and the attainment of curricular outcomes. Further, for children who immigrate or children who have English as an additional language, play provides opportunities to create relationships and is a safe place to practice and learn a new language (Gosso & Carvalho, 2013).

Play should be purposeful and planned. In the Ministry of Education document, *Children First: A Resource for Kindergarten (*2009), a planning framework diagram is included below. It is a "visual summary that is intended to guide educators in decision making and planning" (Ministry of Education, 2009). Surrounding the reflective lens are the four dimensions of holistic development and the Required Areas of Study which provide the outcomes that children should know, understand, and be able to achieve by the end of the Kindergarten year. This resource offers educators to be reflective in planning for play and inquiry experiences in the Kindergarten program.

Figure 1. Planning Framework



The Role of the Educator

Of central importance for the Kindergarten educator is their role of recognizing, establishing and extending relationships. Loris Malaguzzi, the principal founder of the Reggio Emilia preschools programs, highlighted the importance of the relationship between children and their teacher and, in addition, pointed out the need to recognize and honour the network of familial and community relationships the child brings into the classroom. Kindergarten educators acknowledge and view relationships as foundational to learning and work to support those connections between and among children, families, communities, classrooms and the school (Smidt, 2013). The role of the educator is to build and enable those relationships through a safe and supportive environment.

"Positive relationships lay the foundation for children's exploration and learning and enhance the likelihood of children's engagement and achievement in school." (Stetson, 2013)

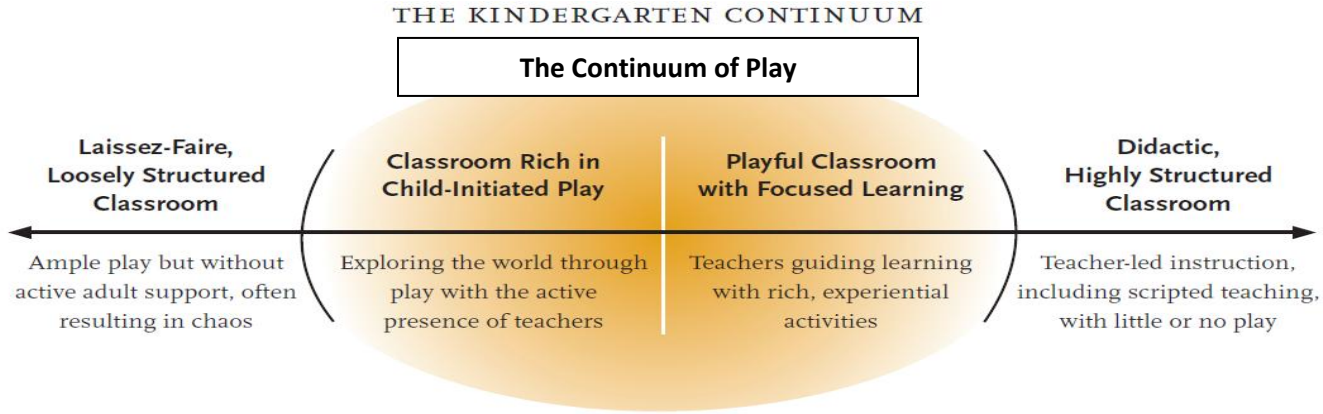
"The adult sets the stage, creating and maintaining an environment conducive to rich spontaneous play, and interacting in ways that enhance children's learning in play, without interrupting the flow and direction of play" (Hewes, 2006).

"If we are to achieve a richer culture, rich in contrasting values, we must recognize the whole gamut of human potentialities, and so weave a less arbitrary social fabric, one in which each diverse human gift will find a fitting place." (Mead, April 2009)

At the heart of appropriate and effective approaches to early learning; inquiry, project learning, emergent or negotiated curriculum are the intentional interactions that the educator has with a child or a group of children. The Kindergarten educator needs to be fully present in the moment, observing what the children are doing, listening, or asking, and validating what the children are saying, in order to support and extend their learning (Stetson, 2013). Listening to and observing children are the most critical and necessary component of intentional interactions and the planning process of project and inquiry based learning.

At the same time, the teacher organizes the classroom and materials to integrate play and learning by designing an environment that sparks curiosity, investigation and discovery. Both the indoor and outdoor environments are considered in planning for learning. Included in the indoor environments will be a variety of materials such as collections, found/recycled objects, items from nature, books, puzzles, photographs, musical instruments, recordings, dramatic play props, building supplies, art and writing materials. Within the classroom environment there will be a number of experiential centres which focus on a context or concept. These centres create dedicated spaces where children play, explore, and interact with the materials provided and with one another. Examples of classroom centres or areas include construction /blocks, family/housekeeping, literacy, science/inquiry, visual arts/creative representation, numeracy, hidey hole/quiet area, music/dramatic play, fine/gross motor and discovery/sensory. When reflecting on responding to children's interests and "taking the curriculum" outdoors, consider materials to support dramatic play, music, visual art experience, building with loose parts and natural objects, inquiry based learning opportunities and enhancing physical development.

Having created the environment, the teacher observes, interacts, extends and documents children's learning through play. The play that happens in a developmentally appropriate, effective kindergarten classroom is neither a free-for all nor highly structured and controlled; rather, it encompasses self-initiated, free-choice play and play that is guided and supported by the teacher's intentionality and care in planning of the learning and the environment. Knowledge of the Kindergarten outcomes allows teachers to identify activities, materials and resources to support children's learning. In circumstances when a child or group of children exhibits frustration, anxiety, fear or discouragement, educators become "co-players" as they guide, model and extend the play in order to support the development of requisite knowledge and skills (Synodi, 2010). The following graphic illustrates the continuum of play.



(adapted from Miller & Almon, 2009, p. 12)

Early childhood educators understand the importance of play and ensure that time and space is provided for play to develop. They value, facilitate, and support the varied outcomes of play – social, emotional, cognitive, creative and physical (Hewes, 2006).

Assessment Evidence: Making Learning Visible

The observation and documentation of children's learning is central to the role of the educator. Purposeful play provides educators with opportunities to observe, gather, and document assessment evidence. Documentation is used by the educator to record, reflect on, revise, and plan for future learning experiences. Documentation is regularly displayed and shared with the children and their families as a demonstration of the learning that has occurred. Documentation can include: children's representations of their learning, student portfolios, webs, photographs, classroom-created books, recordings or transcripts of interviews with children, checklists, rating scales, anecdotal records, and teacher observations. Electronic formats allow teachers to share documentation through email, blogs and websites.

On the following pages, a detailed example of inquiry-based play and learning is provided in order for educators to gain further understanding of how to respond to children's interest and meeting curricular outcomes.

Key Considerations in Planning for Learning

What topics, questions, or interests are the children excited about?

At recess, a number of children are huddled around a spider web.

E.: Notices several bugs caught in the web and calls Ms. C over.

E: Those bugs are caught in the web.

Ms. C: How do you know they are caught in the web?

E: They aren't moving. The web is sticky. They are stuck. See (E touches the web with his finger and shows how the web sticks to his hand)!

Ms. C: Hmmm….What do you think made the web?

E: I know a spider made the web. I have a web on my fence at home. I watched the spider make it.

Ms. C: I wonder why spiders make webs?

Other children gather around, start to make observations, and ask questions about the web, who made it, and if they can touch it. One child begins to sing "The Itsy, Bitsy Spider". Another chimes in saying her grandma taught her a song about a spider and a fly in her tummy. Other children mention their dislike or fear of spiders. And another recalls the word for spider in Cree is a kohkominaw, something he learned when he was visiting his Kookum.

Council of Ministry of Education Canada Statement on Play-Based Learning

"Play is the highest form of research." (Albert Einstein)

"Play lies at the core of innovation and creativity. It provides opportunities for learning in a context in which children are at their most receptive. Play and academic work are not distinct categories for young children, and learning and doing are also inextricably linked for them." (Ontario Full Day Early Learning Kindergarten Program, 2010)

"Play expands intelligence, stimulates the imagination, encourages, creative problem solving, and helps develop confidence, self-esteem, and a positive attitude toward learning." (Dr. Fraser Mustard)

"In play, children represent and transform the world around them, providing other children and adults with a window into their thoughts and perceptions, and often helping adults to see the world in new ways." (BC Early Learning Framework. 2008)

The bell rings and conversations about the spider and the web continue as the children walk into the school. Throughout the remainder of the morning, there is additional conversation about spiders, webs, and bugs. As the children share what they know about spiders and insects, Ms. C records their ideas on chart paper for future reference. Ms. C decides that perhaps this interest in spiders could serve as the basis for further exploration of spiders and/or perhaps other insects so she begins planning for inquiry into this topic and developing an initial invitation for learning. Ms. C knows that not all children will want to inquire on this topic and has already set in place other inquiries that respond to the interests of those children. She will also be observing and listening to the children who are not involved to determine what their interests might be, how she can extend their interests and how she might respond.

Which outcomes could this inquiry address?

Ms. C knows there is a direct link to the science outcome *LTK.1--Examine observable characteristics of plants, animals, and people in their local environment.* She also recognizes that the interest the children have displayed in this area link to other curricula. She uses the *Kindergarten Documentation and Planning* templates (found in the *Children First: A Kindergarten Resource* document pp. 28 to 31) to "gather information about the teaching and learning process, plan and support the achievement of the outcomes from the seven Required Areas of Study", plan the classroom environment, guide questions for conversation, identify the inquiry focus and plan for the assessment evidence of the related criteria. Ms. C also recognizes other curricular opportunities that will likely emerge and be supported through this inquiry:

- sort, count, categorize, measure and graph insects and spiders (Mathematics: NK.1, NK.2, NK.3, NK.4, SSK.1)
- sounds of insects; stories and songs about insects and spiders (English Language Arts: CRK.1, CRK.2, CRK.3, CCK.1) (Arts Education: CPK.1, CPK.2, CPK.3, CPK.4, CRK.1, CHK.1)

As part of Ms. C's planning, she creates a web using categories and key words on spiders (teacher web). This web assists with teacher planning and concepts or vocabulary that can be used to provide direction for inquiry and project based opportunities for children.

Creating the Learning Environment

Ms. C begins to think about the specific materials and resources to support throughout the children's exploration of insects and spiders while meeting the identified curricular outcomes. She identifies some resources and asks the teacher-librarian to help her gather additional materials. She also identifies a process to communicate with home and families to gather resources. Knowing the importance of dramatic play, Ms. C creates a discovery area and invitation where children can pretend play as entomologists. She carefully plans for the children to explore and inquire which will assist her in facilitating the direction of the inquiry and meeting the outcomes of the curriculum.

Materials – live and artificial insects and spiders—insects brought in by children; terrarium, lab coat, flashlight, microscope, magnifying glasses, scale; insect catchers/boxes; photographs, diagrams; a variety of writing tools and materials; paint, collage materials and clay; clipboards.

Literature – a variety of high quality fiction and non-fiction books about spiders and insects.

Multi-Media – websites, DVDs, CDs, and photographs related to spiders and insects; an iPad and a camera.

Outdoor Environments – school yard, park area, and children's homes.

Community Resources/People & Organizations – Entomological Society of Canada, Knowledge Keepers/Elders, scientists (biologists) from the university, pest control fumigators, pet store owners.

The next day, Ms. C reviews the conversation that the children had previously shared and begins recording the questions the children have. Ms. C shares a few non-fiction books with the children pointing out and naming the variety of habitats—tree trunks, grass, leaves, soil, etc. Following this, the class goes on an insect walk in and around the school yard. Ms. C encourages the children to find, observe, and record, through drawing, the information about the insects they find as well as naming the habitats where they find them. One of the children wants to catch a bug. Ms. C demonstrates how insects can be safely and humanely caught. The child photographs the bug and then releases it. Ms. C takes pictures and video of individual children and groups of children while on the insect walk. These photos are printed and added to the discovery centre. Ms. C posts pictures of the web and the walk on her classroom blog, a place that families and children visit regularly for classroom and learning updates. Along with the pictures and explanation of the learning activities, Ms. C adds a request for resources, materials, or expertise that might be shared. Ms. C shares that the focus for learning throughout this inquiry will be on the characteristics and importance of the different spiders and insects that live with us and the variety of different habitats or homes they live in.

In the classroom, Ms. C uses the photos to revisit the insect walk. The children begin to label the photos with what they know about insects from the books they have read. The children create a number of drawings about insects. Ms. C creates an art center that features a variety of art materials for children to further extend their representations of spiders and insects. Books are offered to help guide children about the shape, size and colour of the insects they are creating. Over the next several days, children and family members also contribute additional resources and materials.

Ms. C reads several of the insect books to the children, asking questions to support their responses to the readings. Children are asked to describe, predict, and provide explanations. Ms. C records their words on large sheets of paper to display in the discovery centre.

Throughout the inquiry, children select the centres they will visit related to the topic of study in addition to choosing other play and learning opportunities within the classroom. While the children are playing, Ms. C looks for opportunities to connect with children, ask questions, extend their play, and document their learning.

At the discovery centre, children are supported by Ms. C as she asks questions that provoke about what they notice as they examine the insects and spiders and assists the students in recording data. Materials provided at the art centre invite children to create representations of insects and spiders as well as other topics of interest as a means of expressing their understanding. As the children examine books and view short videos they are encouraged to respond to the stories and represent their learning using the materials provided throughout the classroom.

Children are also supported in their learning by a presentation from an entomologist (the grandfather of one of the children in the classroom) who brings additional samples of insects and shares information about “good bugs and bad bugs”. A traditional knowledge keeper, such as an Elder is also invited to share with the children on the perspectives of spiders based on First Nations and Métis ways of knowing. Ms. C and the children plan additional opportunities to return outdoors in order to search for and observe insects in their natural habitats. While investigating outdoors, the children communicate and share ideas with one another. They describe, explain, and record what they are learning. Throughout the inquiry, Ms. C observes and documents the children’s learning using the criteria she identified earlier based on the kindergarten outcomes (Table A, Ms.C’s Assessment Criteria). In addition, based on her observations and documentation, Ms. C supports and extends the learning of a variety of children, noting the details on the individual anecdotal records she keeps for each child.

How will the children share their learning? How will the educator make learning visible?

At the end of each day, Ms. C reviews her documentation and reflects on additional supports and extensions which she might provide for individual children or groups of children. Throughout the inquiry, children are invited to share their learning with one another and with their parents and care-givers. A display documenting the inquiry process and how it evolves is displayed in the hallway to share with the families and school community. In addition, regular updates are posted to the classroom blog. When Ms. C determines that interest in the topic is waning, she decides that she will end the inquiry into insects and spiders. In small groups, Ms. C asks children to bring their representations to share with one another in their groups. The children share one thing they learned from the inquiry. Ms. C records the children's comments and posts her summary comments on the blog after all the children have had the opportunity to share their learning. Families are invited to visit the documentation display during one of the school wide Celebration of Learning events that will be taking place later on in the month. Finally, Ms. C reflects on what she has learned about the children and her teaching during this inquiry in addition to identifying what she would change with respect to resources, materials, and or processes she used in order to meet curriculum outcomes and scaffold learning.

Sample Planning Tools

Sample 1. Sample Documentation Form (Table 6, p. 28, *Children First: A Resource for Kindergarten,* 2009)

<table>
<tr><th>Documentation of the Learning Experience</th><th></th></tr>
<tr><td colspan="2">Child's Name or Names of Children in the Group: E (AM Class)
Date: September 16, 2013
Observer: Ms. C.</td></tr>
<tr><td>Observation
This is what I (Educator) see or hear related to…

Intellectual Dimension:
• Questioning skills: Inquiring and inferring
• Some previous experience and background knowledge of spiders and their habitats
• Connecting prior learning experiences to songs and literature
Socio-Emotional Dimension:
• Fear or dislike of spiders
• Respectful of other's feelings towards spiders
• Turn-taking in a shared language experience
Physical Dimension:
• Demonstrates actions of spiders using song
Spiritual Dimension:
• Relates to cultural connections from Elders
• Inquisitive-a desire for understanding the role of spiders
• Respectful of creatures in nature</td><td>Interpretation

This tells me (Educator)…

• I will need to create a 100 word web in order to identify the possibilities of the direction the inquiry may take and to embed curriculum and outcomes through the content of interest
• Set up an invitation on spiders including non-fiction literature
• Observe further inquiries and record to assist in planning investigations and embedding curriculum
• Bring in a live spider for a classroom pet
• Research and find information on spiders for children to access on own
• Find literature of There Was An Old Lady and Itsy Bitsy to include in classroom library</td></tr>
<tr><td>Outcomes for areas of study

What the child knows, understands, and is able to do…
• Spiders build webs and catch bugs in their webs
• Spider webs are sticky and can break if it is touched
• Retell a story or song
• Connect a shared language activity to an everyday experience in nature
• Understands that the name for a spider is different in other languages
• Fear or dislike of spiders
• Describes some factual information about spiders and gives supporting knowledge from personal experiences</td><td>Questions

What the child still wonders about…

-Where do spiders live?
-How does a spider make a web?
-What are the kinds of spiders?
-Why are spiders important ?
-Why are people scared of spiders?</td></tr>
</table>

Sample 2. Ms. C's Assessment Criteria

Big Ideas: There are a lot of spiders and insects that live with us. Insects and spiders look different and live in different habitats (homes). Insects and spiders are important to people. **Curriculum Outcomes** **Science** **LTK.1** – Examine observable characteristics of plants, **animals**, and people in their local environment. a. Pose questions about observable characteristics b. Record with assistance observable characteristics c. Seek out information about the observable characteristics from a variety of sources d. Select and safely use appropriate tools e. Show respect for other living things and the environment when observing and interacting **Arts Education** **CPK.4** – Create art works that express own observations and ideas about the world. **English Language Arts** **CRK.1** – Comprehend and respond to a variety of visual, oral, print, and multimedia texts. **CRK.2** – View and interpret the basic message of visuals and objects in a variety of texts. **CRK.3** – Listen, comprehend, and respond to gain meaning. **CRK.4** – Comprehend, retell and respond to basic ideas in stories, poems, songs and informational texts read to them.	**Assessment** Document conversations with students as they make observations and identify characteristics of insects and spiders. Observe and record: • Questions posed by children • Children's ability to observe and note characteristics • Children's use of tools • Children's treatment of live insects and spiders Criteria for observations: • Selects and uses a variety of materials • Observes and identifies details of the physical appearance of animals • Demonstrates co-ordination and development of skills and use of tools/materials • Discusses choices made Use Checklist for Comprehend & Respond with following criteria: • Demonstrates interest and curiosity about books • Makes connections, shares experiences • Identifies key ideas and supporting details • Relates experiences and responses through symbols, drama, movement, music and drawings Use Checklist for Compose & Create with following criteria: • Contributes and shares information ideas & experiences • Uses before, during, and after strategies to communicate meaning • Creates stories using story elements • Relates stories through pictures, dictation, physical movement and play

CCK.1 – Compose and create various visual, multimedia, oral and written texts that explore and present thoughts, ideas, and experiences. **CCK.2** – Use and construct symbols, pictures, and dramatizations to communicate feelings and ideas in a variety of ways. **CCK.3** – Use oral language to converse, engage in play, express ideas and share personal experiences. **<u>Mathematics</u>** **PK.1** - Demonstrate an understanding of repeating patterns (two or three elements) by: identifying, reproducing, extending, creating patterns using manipulatives, sounds, and actions **SSK.1** – Use direct comparison to compare two objects based on a single attribute such as: **length, mass,** volume, capacity **<u>Physical Education</u>** **PEK.2** – Explore and practice ways to move the body through space including at: an exploration level when hopping, skipping, leaping, sliding, galloping.	Document conversations with children using the following criteria: • Describes a repeating pattern (in an insect or spider) • Copies a repeating pattern • Creates a repeating pattern in an insect representation • Compares the length of two insects (or an insect and another object) and explains how they compare using the words shorter, longer, or almost the same • Compares the mass of two insects (or an insect and another object) and explains how they compare using the words lighter, heavier, or almost the same Observe and record using the following criteria: • Explores and share ways to move the body through space (crawl like a spider, hop like a grasshopper, etc) • Explore moving in response to locomotor vocabulary – crawl, hop, leap • Imitate the locomotor movements of others during the game “Follow the Queen Bee”

Sample 3. Sample Planning Form Template (Table 8, pg. 30, *Children First: A Resource for Kindergarten*)

<table>
<tr><th colspan="3">Planning Form for Kindergarten</th></tr>
<tr><td colspan="2">Topic: Spiders
Building Background Knowledge of Educator for Inquiry :
Include a teacher created web on spiders to assist with planning (refer to Lilian Katz and Sylvia Chard's book on Project Based Approaches- Engaging Children's Minds: The Project Approach (Ablex, 1989, 2000)</td><td>Big Idea/Question:
There are a lot of spiders and insects that live with us.
Spiders look different and live in different habitats.
Spiders are important in our world.</td></tr>
<tr><td colspan="2">Desired Results
(Outcomes from areas of study: Arts Education, English Language Arts, Health Education, Mathematics, Physical Education, Science, Social Studies)
Science: LTK.1
Arts. Education: CPK.2, CPK.4
English Language Arts: CRK.1, CRK.2, CRK.3, CRK.4, CCK.1, CCK.2, CCK.3
Mathematics: PK.1, SSK.1
Social Studies: DRK.1
Physical Education: PEK.2</td><td>Assessment Evidence
(Performance tasks, rubric, self-assessment , and other evidence)
Document (photographs) and record conversations and questions of children as they explore spiders and their habitats. Display the evolving process.
Post inquiry project on the school blog
Create, compose and document artwork/song/dramatizations of spiders
Record and fill in a timeline or chart to document the process of what and how the children are learning
Create a representation of a spider and discuss facts they have learned via a digital recording (technology)</td></tr>
<tr><td colspan="3">Learning Plan</td></tr>
<tr><td>Environment: Ideas and needs
Science/Discovery Area:
Create a terrarium with insects
Build a frame for spiders to make webs
Inquiry tools: photographs, magnifying glass, flashlight, small tongue depressors, tweezers, clipboards, camera
Man-made spider webs to explore
Art materials and supplies for children to explore in creating webs
Access and excursions outdoors on a regular basis
Fiction and Non-fiction literature</td><td>Conversations: Questions the educator may use to scaffold and guide learning
What do you already know about spiders?
What do you wonder about when you think of spiders?
How are you going to find out the answers to your inquiries?
Why is your spider inquiry important?
What are some materials, supplies and resources that you require to continue your project?
Where will you start your project, indoors or outdoors?
How will you show what you know?
Who will you share your learning with?
What else do you wonder about? What other things would you like to learn about that are related to spiders? (create a web diagram to scaffold learning and areas of interest)
(Sample questions to guide observations and assist with planning can be found on pp. 23 to 27 of Children First: A Kindergarten Resource, 2009)</td><td>Play: Inquiry focus
Collect data on the children
Observing, interpreting, documenting and sharing: observable characteristics of plants, animals and people in the environment
Relationships within nature and the effects on people
Food chains
Inquiry of other insects
Predators of spiders/insects
Spinning of webs and the connection of how materials are made for other purposes</td></tr>
<tr><td colspan="3">Reflective Lens
Belonging and Contributing
Exploring and Creating
Understanding and Sharing</td></tr>
</table>

Key Questions for Reflective Practices to Guide Planning in Kindergarten

Children's Interests/Knowledge/Experiences:

- What topics, questions, or interests are the children excited about, examining or exploring?
- What do they already know about this area? How might I find out?
- What experiences might they already have? How might I find out?

Big Ideas/Inquiry Concept:

- In what ways is this interest area important, enduring or preparatory for what comes next or is interdisciplinary?

Curriculum Outcomes:

- Which outcomes and indicators could this area address?
- Which of the outcomes/indicators/for this inquiry are most important to document? For which children?

Observation/Documentation:

- For each outcome being assessed, how will I document the child's learning?
    - Rubrics, indirect/direct conversations, checklists, oral explanations, documenting learning with a digital camera, video or audio clips, documentation panels

Creating the Learning Environment:

- What specific materials can I use to stimulate and extend the play and the learning in the identified area?
- What props might be added to the environment to support play, the curriculum outcomes and/or topic?
- What else do I need to consider about the environment—centres, invitations, outdoor space, technology?
- What other resources such as games, stories, art experiences, field trips, guest speakers, will help the children reach the curricula outcomes and explore the topic in more depth?
- In what ways might the children represent their thinking and their learning?

Reflective Lens:

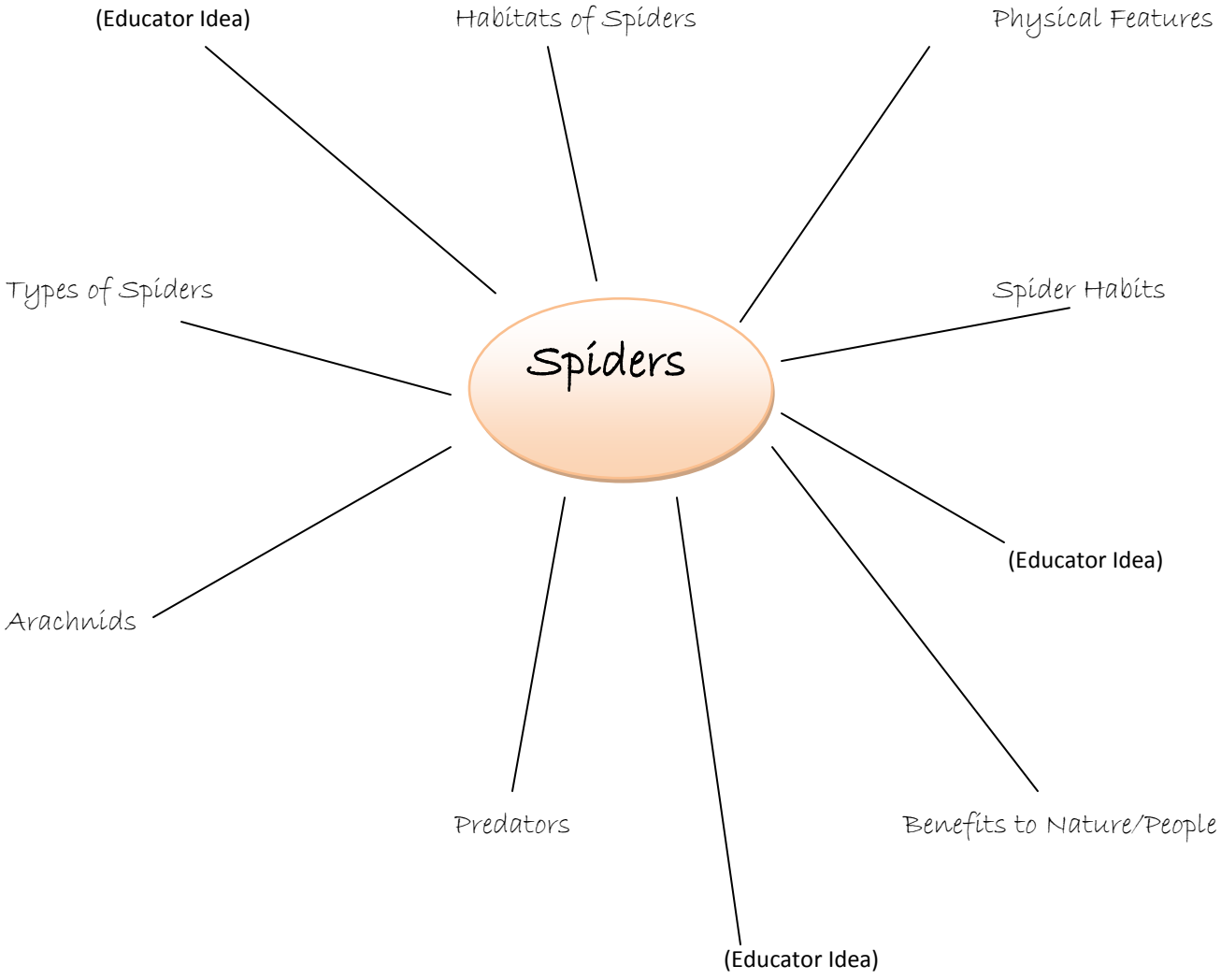
- What did I learn from and about the children, myself and my teaching practices?
- What additional supports do I need to enable all students to be successful?
- What conversations do I need to have with families? staff? community?

Sample 4. Teacher Created Web

Educator Activity: Practice for Inquiry and Project Planning

(Create a teacher web using at least 100 words related to spiders.)

The following web has been provided as a place to start in the planning for learning by the educator.



Resources

Web-Based Resources

The Encyclopedia of Early Childhood Development: published on the Internet, is available free of charge. It covers topics related to the development of the child, from conception to the age of five, and presents the most up-to-date scientific knowledge http://www.child-encyclopedia.com/en-ca/home.html

The Galileo Education Network and Alberta Learning/Early Learning, Early Grades: provides a website with supports for both parents and professionals. Practical strategies, videos demonstrating appropriate practices and research can all be found at http://www.galileonetwork.ca/earlylearning/?q=home

National Association for the Education of Young Children (NAEYC): has an extensive website with specific information about developmentally appropriate practices http://www.naeyc.org/dap/3-core-considerations

The Project Approach by Sylvia Chard: provides educators with an overview of the theoretical background in project approaches, examples for educators to access and resources to source for further professional learning http://www.projectapproach.org

Saskatchewan Ministry of Education has a wide variety of supports on the website including ways to support play in classrooms; lists of materials for classroom environments; community resources; creating invitations for learning; and information for parents https://www.edonline.sk.ca/webapps/moe-curriculum-BBLEARN/index.jsp?kindergarten=true&view=materials&lang=en&subj=kindergarten&level=k

Saskatchewan Professional Development Unit provides examples of projects linking play and outcomes in Saskatchewan Kindergarten classrooms which can be found on the website at https://www.spdu.ca/resources/responding_children_interests.html

Saskatchewan Ministry of Education Digital Resources from PreKindergarten and Kindergarten Core Learning Resource, 2009, (p.30): provides 52 video narratives to help viewers increase their understanding of children's thinking and learning: Videatives https://www.videatives.com/

Professional Resources

Bullard, J. (2010). Creating Environments for Learning: Birth to Age Eight (Second Edition). Pearson Education, Inc.: United States.

Chalufour, I. & Worth, K. (2003). Discovering Nature with Young Children. RedLeaf Press: St. Paul, Minnesota.

Helm, J. & Katz, L. (2011). *Young Investigators: The Project Approach in the Early Years*. Teachers College Press: New York.

Katz, L. & Chard, S. (2000). Engaging Children's Minds: The Project Approach. Scholastic: Greenwood.

References

Atherton J. S. (2013). *Learning and Teaching; Piaget's developmental theory.* Retrieved from: http://www.learningandteaching.info/learning/piaget.htm

Bruner, J. (1983). Play, thought, and Language. *Peabody Journal of Education, 60*(3), 60-68.

Canadian Association for Young Children. (2006). *Play*. Retrieved from: http://cayc.ca/pdf/playstmnt/playstatementrevision2.pdf

Council of Ministers of Education, Canada. (2012). *CMEC Statement on Play-Based Learning.* Retrieved from: http://www.cmec.ca/Publications/Lists/Publications/Attachments/282/play-based-learning_statement_EN.pdf

Gosso, Y. & Carvalho, A. (2013). Play: The Cultural Context. Encyclopedia on Early Childhood Development. Retrieved from: http://www.child-encyclopedia.com/pages/PDR/synthesis-play.pdf

Hamlin, M. & Wisneski, D. (2013). Supporting the scientific thinking and inquiry of toddlers and preschoolers through play. In A. Shillady (Ed.), *Exploring Science* (pp. 41-47). Washington, DC: NAEYC.

Hewes, J. (2006). *Let the Children Play: Nature's Answer to Early Learning*. Retrieved from: http://www.ccl-cca.ca/pdfs/ECLKC/lessons/Originalversion_LessonsinLearning.pdf

Long, S., Volk, D. & Gregory, E. (2007). Intentionality and expertise: Learning from observations of children at play in multilingual, multicultural contexts. *Anthropology & Education Quarterly, 38*(3), 239-259.

Mead, M. (1978). *Responsive Systems in Aboriginal Learning*. Saskatchewan Ministry of Education. Regina, SK: Author.

Miller, E. & Almon, J. (2009). *Crisis in the Kindergarten: Why children need to play in school.* College Park, MD: Alliance for Childhood.

Play: The cultural context. (2012). Retrieved June 3, 2013 from Early Learning Early Grades website: http://www.galileonetwork.ca/earlylearning/?q=content/play-cultural-context

Saskatchewan Ministry of Education. (2010). *Kindergarten*. Regina, SK: Author.

Saskatchewan Ministry of Education. (2009). *Children first: A resource for Kindergarten.* Regina, SK: Author.

Smidt, S. (2013). *Introducing Malaguzzi: Exploring the life and work of Reggio Emilia's founding Father.* New York, NY: Routledge.

Stetson, C. (2013). *Using powerful interactions to support children's social-emotional and language Development.* Saskatoon, SK: Presentation.

Synodi, E. (2010). Play in the kindergarten: the case of Norway, Sweden, New Zealand, and Japan. *International Journal of Early Years Education 18*(3), 185-200.

Trembley, R.E., Boivin, M. & Peters, R.D. (Eds.). (2010). Play -Synthesis. *Encyclopedia on Early Childhood Development.* Retrieved from: http://www.child-encyclopedia.com/pages/PDF/synthesis-play.pdf

Vygotsky, L. (1966). *Play and its role in the mental development of the child*. Leningrad, Russia: Lecture for Hertzen Pedagogical Institute.

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