EXPLORATION, PLAY AND INQUIRY AS PEDAGOGICAL APPROACHES

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Technology Rich Inquiry Based Research

IF EXPLORATION, PLAY AND INQUIRY ARE PEDAGOGICAL APPROACHES, WHAT DO ALL THESE TERMS MEAN, ANYWAY?

HOW IS PEDAGOGY RELATED TO CURRICULUM AND PEDAGOGICAL **APPROACHES?**

QUESTIONS ABOUT PEDAGOGY, CURRICULUM AND PEDAGOGICAL APPROACHES ARE NOT EASY TO ANSWER. OUR **ROLE AS EDUCATORS IS** TO CONTINUOUSLY **REFLECT ON OUR** PRACTICE AS IT **CONNECTS TO** PEDAGOGY, CURRICULUM AND PEDAGOGICAL APPROACHES. REMEMBER THE RELATIONSHIP IS COMPLEX AND NUANCED.

PEDAGOGY AND CURRICULUM

This?



Or This?



Cognitive **Group Time** Outdoor **Topic** Inquiry **Dramatic** Art Play

Pedagogy is how learning happens.

Curriculum is the content of the learning.

Curriculum and pedagogy are shaped by views of children, the role of educators and families and the inter-relationships between them. (How Does Learning Happen, 2014)

PEDAGOGICAL APPROACHES THAT NURTURE LEARNING AND DEVELOPMENT IN THE EARLY YEARS INCLUDE THE FOLLOWING:

RESPONSIVE RELATIONSHIPS: establishing positive, responsive adult-child relationships

LEARNING THROUGH EXPLORATION, PLAY AND INQUIRY: providing inclusive learning environments & experiences that encourage exploration, play, & inquiry

EDUCATORS AS CO-LEARNERS: engaging as co-learners with children, families/caregivers, and others

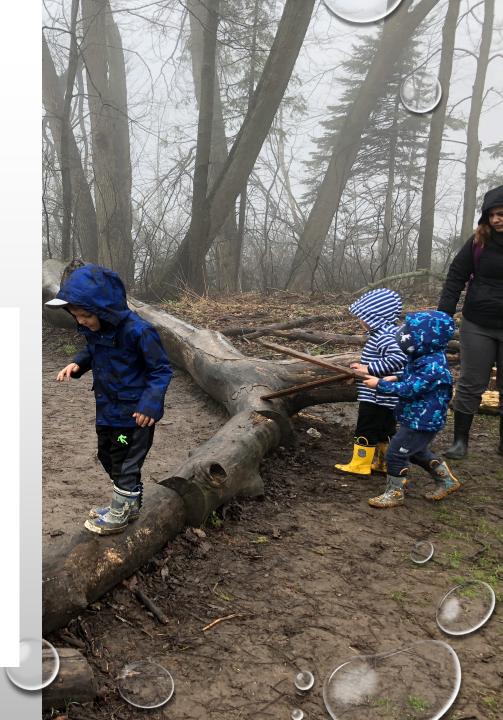
ENVIRONMENT AS THIRD TEACHER: planning and creating environments as a "third teacher"

PEDAGOGICAL DOCUMENTATION: using pedagogical documentation to value, discuss, and make learning visible

REFLECTIVE PRACTICE AND COLLABORATIVE INQUIRY: participating in ongoing reflective practice and collaborative inquiry with others

LOOK AT THIS PHOTO AND THINK ABOUT THE ANSWERS TO THESE FIVE QUESTIONS:

- 1. WHAT IS THE CHILD ON THE LOG EXPLORING?
- 2. HOW IS THIS PLAY?
- 3. WHAT IS THIS CHILD LEARNING?
- 4. WHY IS THE EXPERIENCE MEANINGFUL?
- 5. HOW DOES THIS EXPLORATIVE PLAY CONNECT TO INQUIRY?





RELATE YOUR THINKING TO THESE ANSWERS:

- 1. THE CHILD IS EXPLORING PHYSICAL LITERACY.
- 2. THE CHILD HAS FREELY CHOSEN TO BALANCE ON THE LOG THEREFORE THE EXPERIENCE IS PLAY.
- 3. THE CHILD IS LEARNING ABOUT BALANCE.
- 4. IT IS MEANINGFUL LEARNING BECAUSE THE CHILD IS GAINING CONFIDENCE, BUILDING PHYSICAL CAPACITY IN A WAY THAT IS SELF-DIRECTED WHICH SUPPORTS MOTIVATION TO PLAY AND LEARN.
- 5. IT IS THE ROLE OF THE EDUCATOR, TO CONSIDER WAYS TO CONNECT THE EXPERIENCE TO AN INQUIRY APPROACH TO CURRICULUM.

THE ROLE OF THE EDUCATOR

- IS TO PROVIDE ENVIRONMENTS AND EXPERIENCES TO ENGAGE CHILDREN IN ACTIVE, CREATIVE, AND MEANINGFUL EXPLORATION, PLAY, AND INQUIRY
- THIS IS A PROGRAM EXPECTATION FROM HOW DOES LEARNING HAPPEN? (2014).

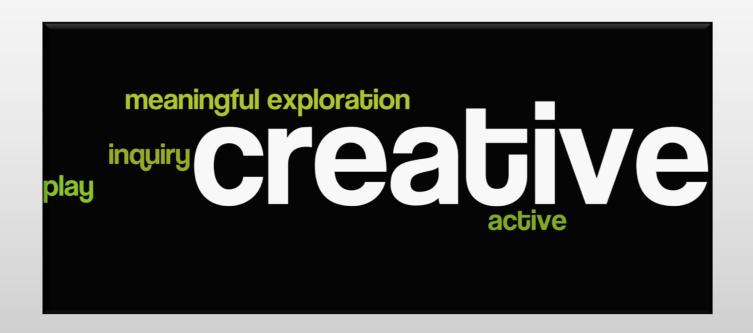


WHAT DOES AN ACTIVE ENVIRONMENT LOOK LIKE?



- CLOSE YOUR EYES AND IMAGINE AN ACTIVE ENVIRONMENT FOR CHILDREN.
- WHAT DID YOU SEE IN YOUR MIND'S EYE?
- WHAT WORDS WOULD YOU USE TO DESCRIBE AN ACTIVE ENVIRONMENT?
- WRITE THESE WORDS DOWN.

WHAT DOES A CREATIVE ENVIRONMENT LOOK LIKE?



- CLOSE YOUR EYES AND IMAGINE A CREATIVE ENVIRONMENT FOR CHILDREN.
- WHAT DID YOU SEE IN YOUR MIND'S EYE?
- WHAT WORDS WOULD YOU USE TO DESCRIBE A CREATIVE ENVIRONMENT?
- WRITE THESE WORDS DOWN.

Active environments are where children are engaged with a variety of open-ended materials indoors and outdoors.

Creative environments
have multiple
opportunities to express
themselves in a hundred
languages and more.

WORD MATCH - DO YOUR WORDS APPEAR HERE?

WHAT DOES MEANINGFUL MEAN?



- MEANING MAKING RELATES TO CONSTRUCTIVISM THEORY AS THE PROCESS BY WHICH WE LEARN.
- MEANINGFUL EXPLORATION
 REFERS TO A CHILD'S
 INVESTIGATION OF THE WORLD
 IN WAYS THAT RELATE TO THEIR
 OWN LEARNING AND
 INTERESTS.
- "WHAT MOTIVATES A CHILD'S
 ACTIONS; WHAT IS
 MEANINGFUL TO HIM OR HER;
 WHAT BRINGS A CHILD JOY?"
 (HDLH, 2014, P. 18).

WHAT IS INQUIRY?



- INQUIRY MEANS THE ACT OF INVESTIGATING.
- INQUIRY-BASED LEARNING IS AN APPROACH TO TEACHING AND LEARNING THAT PLACES STUDENTS' QUESTIONS, IDEAS AND OBSERVATIONS AT THE CENTRE OF THE LEARNING EXPERIENCE (ONTARIO MINISTRY OF EDUCATION, 2013, P.2).
- IN EARLY CHILDHOOD EDUCATION
 WE HAVE REFERRED TO THIS
 APPROACH AS EMERGENT
 CURRICULUM.



EMERGENT CURRICULUM

 THE EMPHASIS OF THE CURRICULUM IS FOCUSED ON PLANNING THAT NEEDS TO EMERGE FROM THE DAILY LIFE OF CHILDREN AND ADULTS, PARTICULARLY FROM THE CHILDREN'S OWN INTERESTS.

 WHEN AN EMERGENT CURRICULUM REFLECTS CHILDREN'S THINKING AND AVOIDS THE NOUN (I.E. CARS) AND FOCUSES ON THE VERB (I.E. MOVEMENT) IT ASSUMES A HIGHER LEVEL OF EFFECTIVENESS.

Sources of Emergent Curriculum

- Children's interests
- Teachers' interests
- Developmental tasks
- Things in the physical environment
- People in the social environment
- Curriculum resource materials
- Serendipity—unexpected events
- Living together: conflict resolution, caregiving, and routines
- Values held in the school and community, family, and culture
 (Adapted from Jones & Nimmo 1994, 127.)



FEATURES OF EMERGENT CURRICULUM

Emergent curriculum is not a linear process.

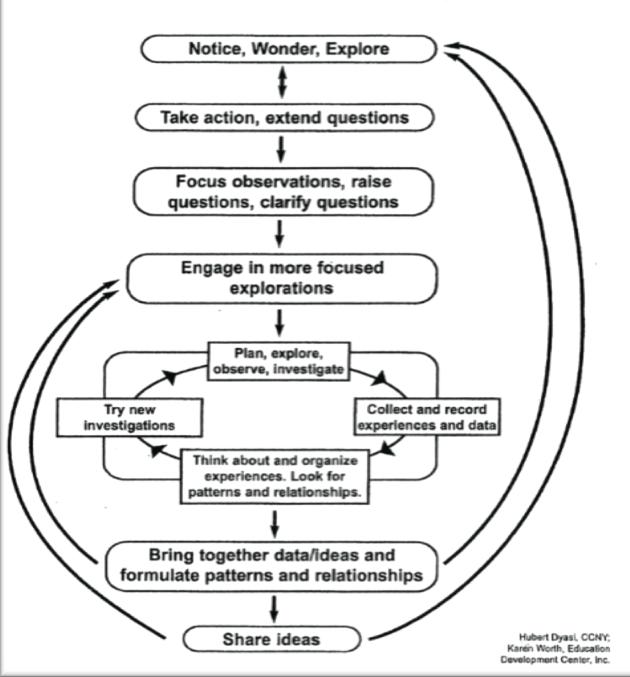
Emergent curriculum is cyclical.

Emergent curriculum is flexible and responsive.

Emergent curriculum is collaborative.

Emergent curriculum makes children's learning and teacher's thinking visible.

YOUNG CHILDREN'S INQUIRY



THE SCIENTIFIC METHOD IS INQUIRY AND IS EMERGENT (WORTH, 2010)



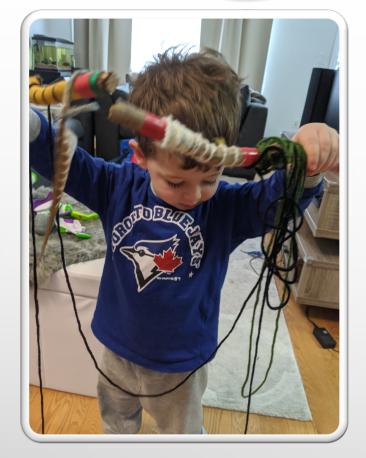
EMERGENT CURRICULUM CONSIDERATIONS

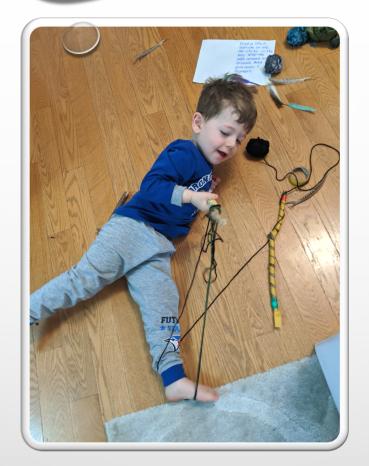
Emergent curriculum happens when you support inquiry-based learning. One form of inquiry-based learning is project work which involves children investigating a question or problem over time.

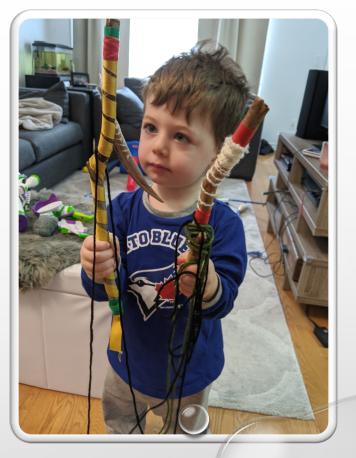
Inquiry and projects require that the learner is active.

Active learning is learning that involves active manipulation by the learner and is environmentally based.

To learn something new, children must become aware, explore, inquire, use, and apply.







WHAT IS THIS CHILD LEARNING WHILE HE EXPLORES?









TECHNOLOGY?



ENGINEERING?



ARTS?



WATH[§]

STEAM LEARNING

- STEAM EDUCATION IS AN APPROACH TO LEARNING THAT USES SCIENCE, TECHNOLOGY, ENGINEERING, THE ARTS AND MATHEMATICS AS ACCESS POINTS FOR GUIDING STUDENT INQUIRY, DIALOGUE, AND CRITICAL THINKING.
- STEAM LEARNING IS CONSIDERED IMPORTANT TO 21ST CENTURY EDUCATION.
- IT IS NOT THE MOST IMPORTANT CONSIDERATION FOR YOUNG CHILDREN ... FOR OUR YOUNGEST LEARNERS IT SHOULD BE ALL ABOUT PLAY!

WHAT IS PLAY?



- PLAY IN OUR SPECIES SERVES MANY VALUABLE PURPOSES.
- IT IS A MEANS BY WHICH CHILDREN DEVELOP THEIR PHYSICAL, INTELLECTUAL, EMOTIONAL, SOCIAL, AND MORAL CAPACITIES.
- IT IS A MEANS OF CREATING AND PRESERVING FRIENDSHIPS.
- THAT, IN ADULTS AS WELL AS
 CHILDREN, IS UNIQUELY SUITED FOR
 HIGH-LEVEL REASONING, INSIGHTFUL
 PROBLEM-SOLVING, AND ALL SORTS
 OF CREATIVE ENDEAVORS.

DR. PETER GRAY



Play is self-chosen and selfdirected; players are always free to quit.



Play is activity in which means are more valued than ends.



Play is guided by mental rules.



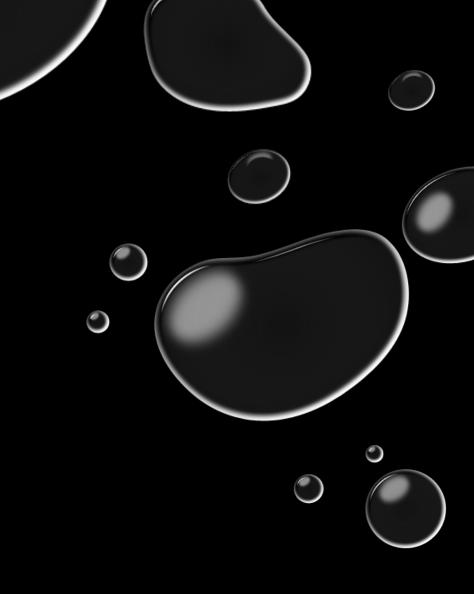
Play is non-literal, imaginative, marked off in some way from reality.

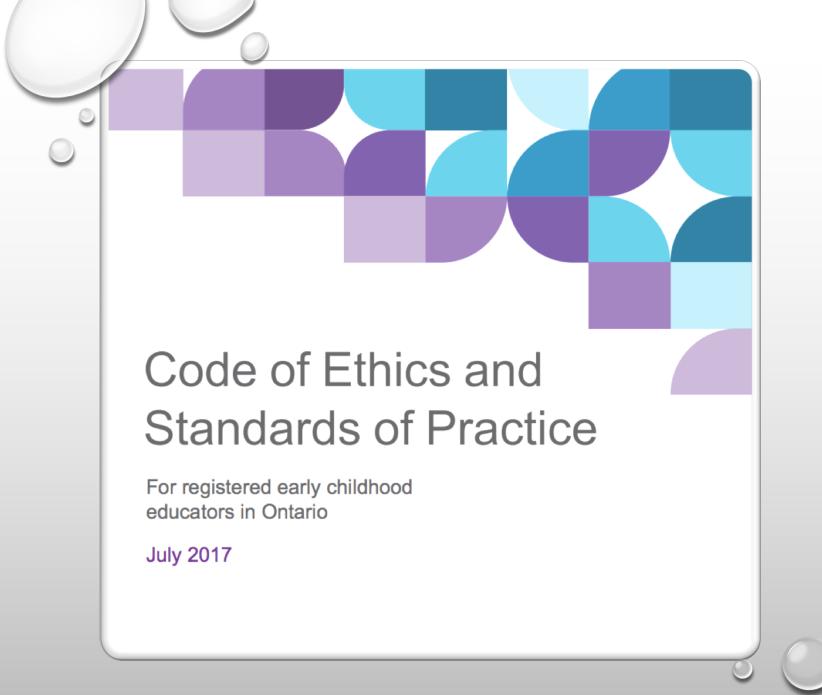


Play involves an active, alert but non-stressed frame of mind.

LEARNING THROUGH PLAY

PLAY DEFINES THE PRACTICE OF EARLY CHILDHOOD EDUCATION





THE PRACTICE OF EARLY CHILDHOOD EDUCATION

THE EARLY CHILDHOOD EDUCATORS ACT, 2007 (THE ECE ACT) DEFINES THE PRACTICE OF EARLY CHILDHOOD EDUCATION AS, THE PLANNING AND **DELIVERY OF INCLUSIVE PLAY-**BASED LEARNING AND CARE PROGRAMS FOR CHILDREN IN ORDER TO PROMOTE THE WELL-BEING AND HOLISTIC DEVELOPMENT OF CHILDREN.



CMEC Statement on Play-Based Learning

At the recent World Conference on Early Childhood Care and Education, organizers, keynote speakers, scientists, experts, and political figures underscored the enormous benefits of early learning.¹ CMEC agrees with this position and believes that purposeful playbased early learning sets the stage for future learning, health, and well-being.

Learning through play is supported by science.

The benefits of play are recognized by the scientific community. There is now evidence that neural pathways in children's brains are influenced and advanced in their development through exploration, thinking skills, problem solving, and language expression that occur during play.

Research also demonstrates that play-based learning leads to greater social, emotional, and academic success. Based on such evidence, ministers of education endorse a sustainable pedagogy for the future that does not separate play from learning but brings them together to promote creativity in future generations. In fact, play is considered to be so essential to healthy development that the United Nations has recognized it as a specific right for all children.²

Learning through play is supported by experts.

Learning through play is supported by early years experts. Lev Vygotsky identified play as the leading source of development in terms of emotional, social, physical, language, or cognitive development. Psychologist David Elkind that "play is not only our creative drive; it's a fundamental mode of learning." Such experts recognize that play and academic work are not distinct categories for young children: creating, doing, and learning are inextricably linked. When children are engaged in purposeful play, they are discovering, creating, improvising, and expanding their learning. Viewing children as active participants in their own development and learning allows educators to move beyond preconceived expectations about what children should be learning, and focus on what they are learning.

¹ Wood, E. (2004). "Developing a pedagogy of play." In J. Cullen (Ed.) Early childhood education: Society and culture. London, UK: Sage.



Learning through play is supported by children and parents.

Learning through play is supported by children. It is their natural response to the environment around them. When children are manipulating objects, acting out roles, or experimenting with different materials, they are engaged in learning through play. Play allows them to actively construct, challenge, and expand their own understandings through making connections to prior experiences, thereby opening the door to new learning. Intentional play-based learning enables children to investigate, ask questions, solve problems, and engage in critical thinking. Play is responsive to each child's unique learning style and capitalizes on his or her innate curiosity and creativity. Play-based learning supports growth in the language and culture of children and their families.

When children are playing, children are learning.

Given the evidence, CMEC believes in the intrinsic value and importance of play and its relationship to learning. Educators should intentionally plan and create challenging, dynamic, play-based learning opportunities. Intentional teaching is the opposite of teaching by rote or continuing with traditions simply because things have always been done that way. Intentional teaching involves educators being deliberate and purposeful in creating play-based learning environments — because when children are playing, children are learning.

FROM THE EXPERTS

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)

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)

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)



Almost all creativity involves purposeful play

PLAY-BASED LEARNING!

- LEARNING THROUGH PLAY IS SUPPORTED BY SCIENCE.
- LEARNING THROUGH PLAY IS SUPPORTED BY EXPERTS.
- LEARNING THROUGH PLAY IS SUPPORTED BY CHILDREN AND PARENTS.
- WHEN CHILDREN ARE PLAYING, CHILDREN ARE LEARNING.

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).

CMEC.—Canadian Delegation Report from the World Conference on Early Childhood Care and Education, Moscow, Russian Federation, September 27–29, 2010.

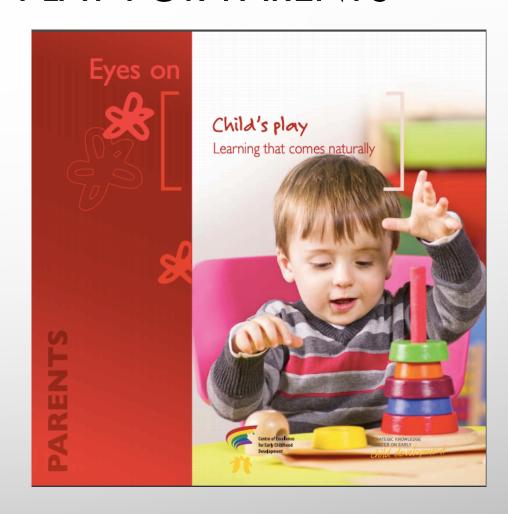
³ "Fact Sheet: A Summary of the Rights Under the Convention on the Rights of the Child," Article 31. Retrieved on February 11, 2010 from http://www.unled.org/cn/llles/Rights_overview.pdf

FURTHER SUPPORT OF PLAY FOR PARENTS

- IN DRAMATIC PLAY YOUR CHILD IS USING THEIR
 IMAGINATION, STORYTELLING AND PROBLEM-SOLVING
 SKILLS. THESE SKILLS WILL HELP THEM TO LEARN TO READ,
 WRITE AND COMMUNICATE VERBALLY.
- IN COGNITIVE PLAY YOUR CHILD IS USING LANGUAGE AND THINKING SKILLS.
- IN PRETEND PLAY YOUR CHILD MAY USE OBJECTS
 CREATIVELY.
- IN PHYSICAL PLAY THE FOCUS IS ON MOTOR

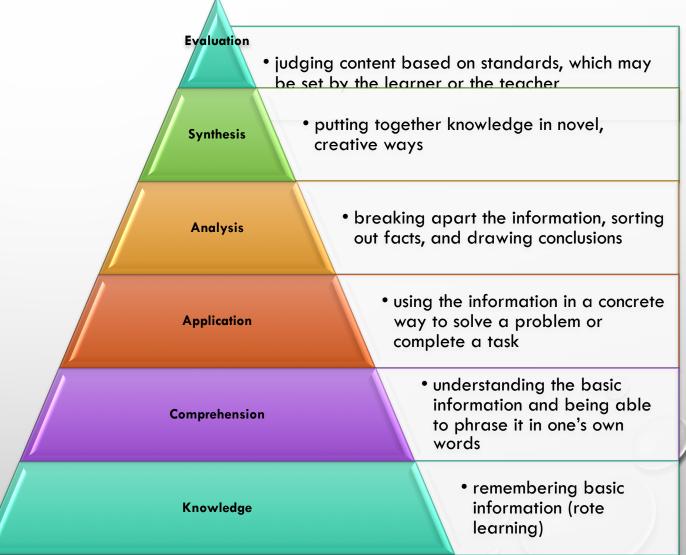
 DEVELOPMENT (STRENGTH, ENDURANCE, SKILL), PHYSICAL

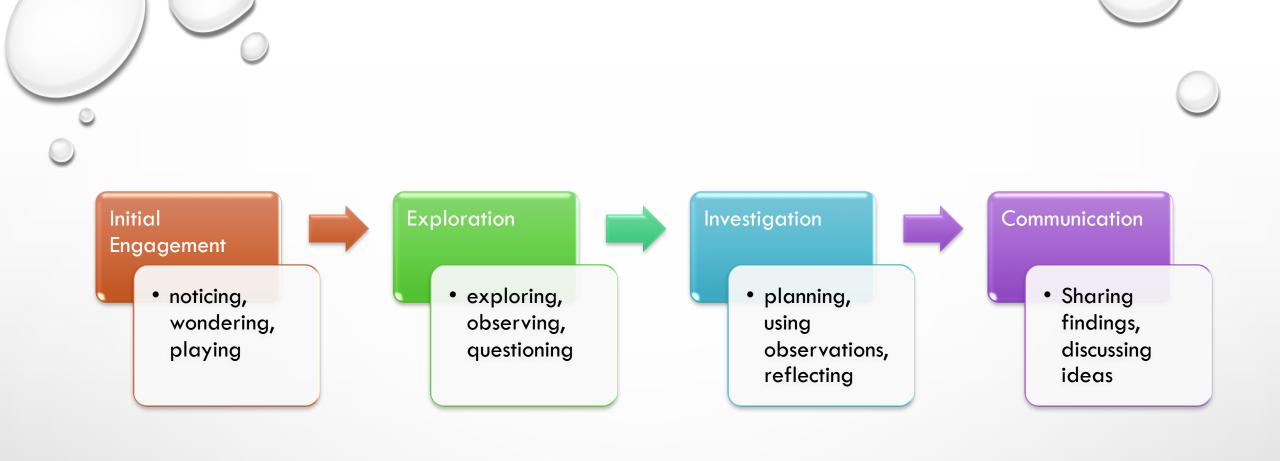
 HEALTH, WHICH HELPS THEIR ABILITY TO CONCENTRATE.
- IN PLAY, YOUR CHILD DEVELOPS SOCIAL SKILLS
 (PROBLEM- SOLVING, COOPERATION) AND IS ABLE TO
 EXPRESS POSSIBLE STRESSES AND PROBLEMS.



PLAY SUPPORTS HIGHER-ORDER THINKING

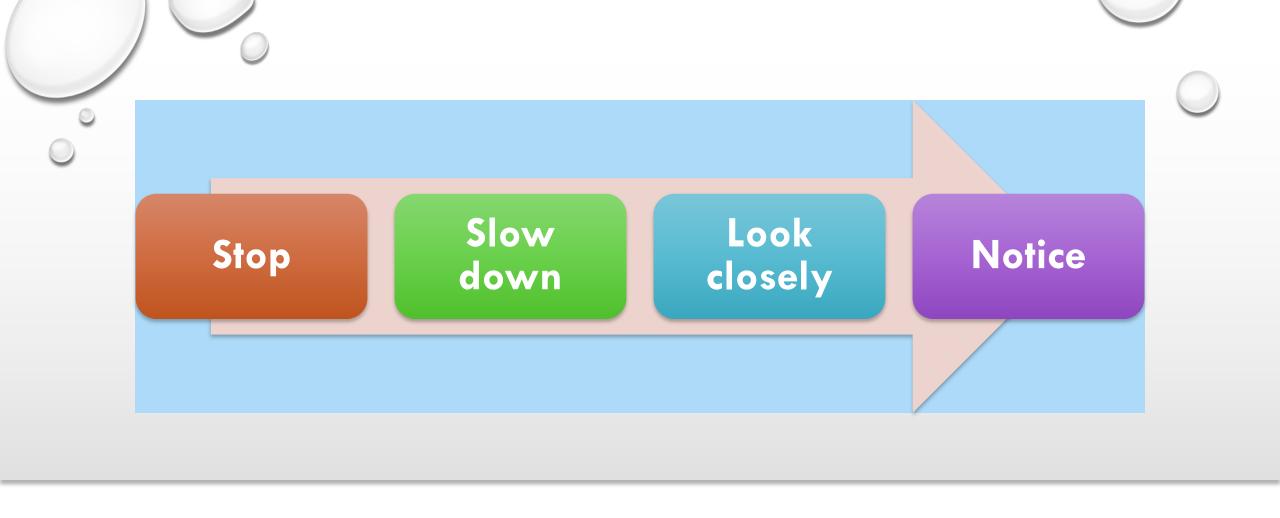
CHILDREN LEARN BEST WHEN THEY
ARE FULLY ENGAGED IN ACTIVE
EXPLORATION, PLAY AND INQUIRY
WHICH WILL LEAD TO HIGHERORDER THINKING.





CONNECTING EXPLORATION, PLAY AND INQUIRY

Elements of the child's inquiry process	When children are engaged in the inquiry process, they:	When educators are modelling or supporting the inquiry process, they:
Initial engagement – noticing, wondering, playing	 raise questions about objects and events around them 	observe and listen
Exploration – exploring, observing, questioning	 explore objects and events around them and observe the results of their explorations make observations, using all of their senses, and generate questions 	 act as co-learners with the children, posing thoughtful, open-ended questions encourage children to observe and talk among themselves and to the educators
Investigation – planning, using observations, reflecting	 gather, compare, sort, classify, order, interpret, describe observable characteristics and properties, notice patterns, and draw conclusions, using a variety of simple tools and materials 	 provide a rich variety of materials and resources, and strategically question and observe children to discover, clarify, and expand on the children's thinking model how to plan, observe, and reflect
Communication – sharing findings, discussing ideas	 work individually and with others, share and discuss ideas, and listen to ideas 	 listen to the children to help them make connections between their prior knowledge and new discoveries
Th	e Inquiry Process in the Kinderga Kindergarten Program, 2	



TEACHERS ENCOURAGE INQUIRY BY HELPING CHILDREN TAKE THE TIME TO NOTICE THE WONDERS OF THE WORLD

SEE, THINK, WONDER ENCOURAGES INQUIRY

SEE, THINK, WONDER IS A VISIBLE
THINKING ROUTINE (VTR) DEVELOPED
BY HARVARD UNIVERSITY'S PROJECT
ZERO FOR EXPLORING INTERESTING
THINGS. LOOK WHAT YOU CAN
NOTICE IN NATURE ACROSS FOUR
SEASONS ...

Spring

Buds sprouting Insects emerging

Caterpillars

Butterfly eggs on milkweed Spring bulbs blooming

Wildflowers and weeds appearing

Summer

Insects

Grasses and plants

Effect of the sunlight as it reflects and creates shadows

Twigs, sticks, acorns and pinecones

Leaves eaten by caterpillars or insects

Bees, butterflies, wasps and dragonflies

Fall

Leaves and fruits from trees that fall to the ground

Wild berries

Decaying wood and fungus.

Spiders and webs

Winter

Ice and frost on plants

Pine needles and pine cones

Animal tracks in snow

QUESTIONS FOR REFLECTION FROM HOW DOES LEARNING HAPPEN?

- WHAT QUESTIONS AND THEORIES DO THE CHILDREN SEEM TO BE EXPLORING THROUGH THEIR PLAY?
- WHAT ARE THEY WONDERING ABOUT IN THE WAYS THEY USE MATERIALS (E.G., WHAT DOES THEIR NON-VERBAL COMMUNICATION TELL YOU)?
- HOW CAN YOU MAKE THESE VISIBLE?
- WHAT ARE FAMILIES NOTICING AT HOME?

- WHAT NEXT STEPS MIGHT YOU TAKE, BASED
 ON THESE OBSERVATIONS, TO SUPPORT
 MORE COMPLEX PLAY AND INQUIRY? FOR
 EXAMPLE, HOW CAN THE CHILDREN'S
 QUESTIONS AND THEORIES BE TESTED,
 REVISED, AND COMMUNICATED?
- WHAT QUESTIONS DO YOU HAVE?
- WHAT SPARKS YOUR CURIOSITY?

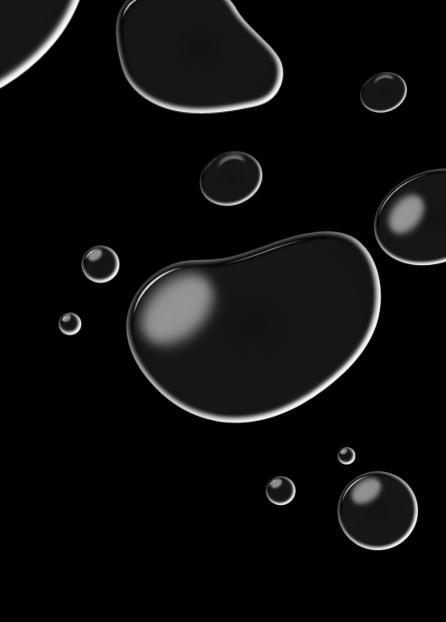
EXPLORATION, PLAY AND INQUIRY MORE REFLECTION QUESTIONS

- SINCE EDUCATORS ARE RESEARCHERS WITHIN THEIR
 PROGRAMS OR COMMUNITIES, WHAT WOULD YOU LIKE
 TO INVESTIGATE FURTHER IN YOUR PROGRAM?
- HOW WOULD YOU FURTHER COMPLETE THIS
 INVESTIGATION WITH YOUR COLLEAGUES OR WITH THE
 CHILDREN IN THE PROGRAM?
- (HOW DOES LEARNING HAPPEN? PAGES 39-40).



CREATIVE PLAY IS LIKE A SPRING THAT BUBBLES UP FROM DEEP WITHIN A CHILD

JOAN ALMON (1944-2019) CO-FOUNDER OF ALLIANCE FOR CHILDHOOD AND ADVOCATE FOR CHILDREN'S PLAY.



EARLY CHILDHOOD EDUCATORS CAN KEEP THE BUBBLES IN THE AIR BY EMBRACING EXPLORATION, PLAY AND INQUIRY AS PEDAGOGICAL APPROACHES



STAY IN TOUCH!



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Find my Facebook pages — Technology Rich Inquiry Based, Resources to Support Child Development and the York Region Nature Collaborative



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