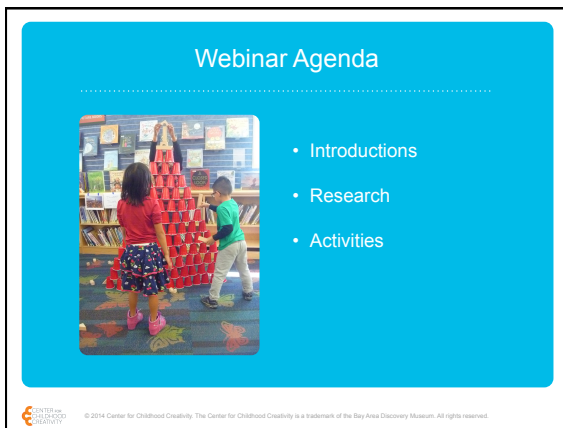
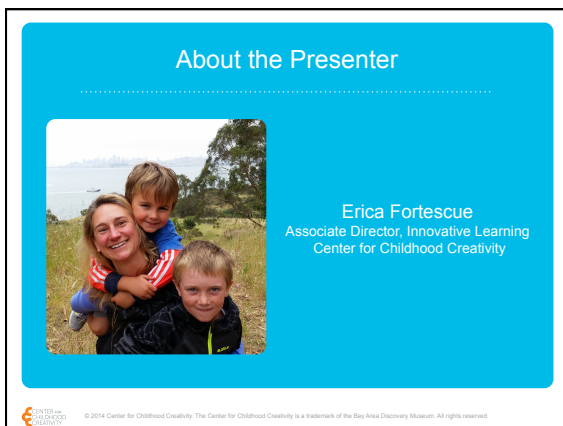


Promoting Creativity in Childhood: - Moving from Why? To How?

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Research



Shared Discoveries



Creativity and the Brain



C'REATE



7 Components of Creativity

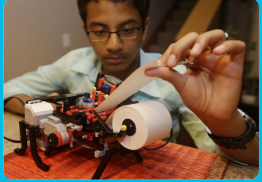


School Readiness
(in progress)




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Key Research Questions



1. What **SKILLS** contribute to children's creativity?
2. What types of learning **ENVIRONMENTS** foster creativity in children?



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What **SKILLS** contribute to children's creativity?

Competencies	Description
Imagination Originality Imaginative competence	Imagining involves generating original ideas that are novel or unique and using these ideas to solve problems, create new experiences, and make connections between the external and the internal knowledge and experiences.
Flexibility Mental operations Cognitive and non-cognitive	The flexibility of cognitive and creative thought helps with the ability to generate a wide range of ideas and solutions to a problem. Flexibility is the ability to think about a problem in a new way, to see it from a different perspective, and to generate a new solution.
Decision Making Reasoning Problem solving Critical thinking	Children, parents, and teachers working together are important in the decision-making process. Children's decision-making skills are developed through the process of making choices and solving problems.
Communication Self-Expression Communication Teamwork	Communication is the process of sharing ideas and experiences with others. It is an essential part of the creative process, as it allows children to share their ideas and receive feedback.
Motivation Intrinsic motivation Extrinsic motivation	Motivation is the force that drives children to engage in a task or activity. It is an essential part of the creative process, as it allows children to persist in the face of challenges.
Collaboration Teamwork Social skills	Collaboration is the process of working together with others to achieve a common goal. It is an essential part of the creative process, as it allows children to learn from each other and to work together to solve problems.
Action & Movement Physical activity Fine motor skills	Physical activity is an essential part of the creative process, as it allows children to express their ideas and to develop their fine motor skills.

This research was made possible by the generous support of **Debra Chiswick**.

What types of **ENVIRONMENTS** foster creativity in children?

C
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Research shows: When children learn in an environment that is rich in resources, they are more likely to engage in creative play and to develop their creative skills.

How to apply: To foster children's creativity, parents and teachers should provide a variety of materials and resources that children can use to explore and experiment.

Research shows: When children learn in an environment that is supportive of their ideas and experiences, they are more likely to engage in creative play and to develop their creative skills.


How to apply: To foster children's creativity, parents and teachers should provide a safe and supportive environment where children can express their ideas and experiences without fear of judgment.

Research shows: When children learn in an environment that is challenging and stimulating, they are more likely to engage in creative play and to develop their creative skills.

How to apply: To foster children's creativity, parents and teachers should provide a variety of challenges and problems that children can solve and explore.

Research shows: When children learn in an environment that is collaborative and supportive, they are more likely to engage in creative play and to develop their creative skills.

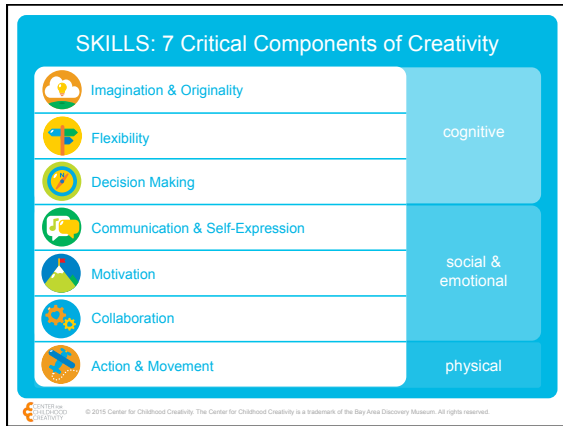
How to apply: To foster children's creativity, parents and teachers should provide a variety of opportunities for children to work together and to learn from each other.

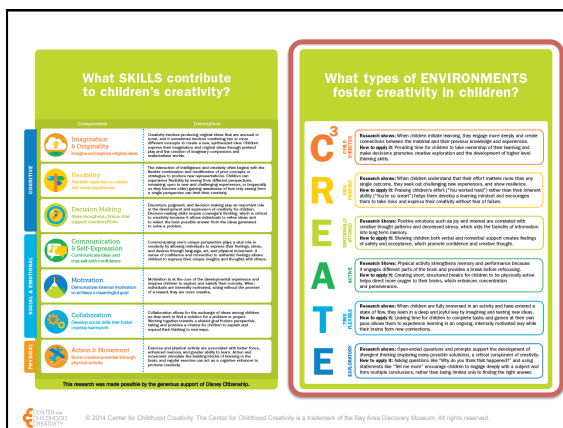


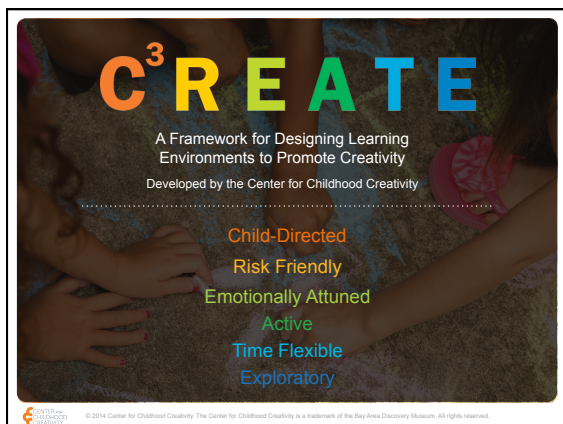
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Features of Child-Directed Learning



- Choice
- Curiosity
- Connection

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Child-Directed

Not new ideas:
Dewey, Piaget, Vygotsky, Bruner, Montessori

What is new is the neurological evidence showing why?




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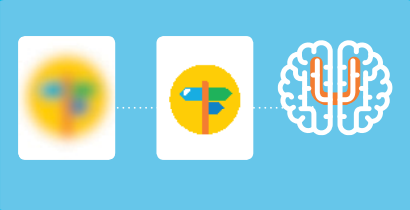
Child-Directed



Choice signals storage from working memory to long term memory

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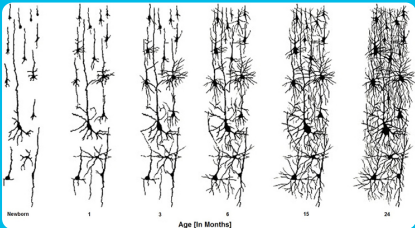
Wired for Curiosity:
Why learning feels so good



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Child-Directed

New learning that **CONNECTS** to prior experience facilitates neural pathway growth

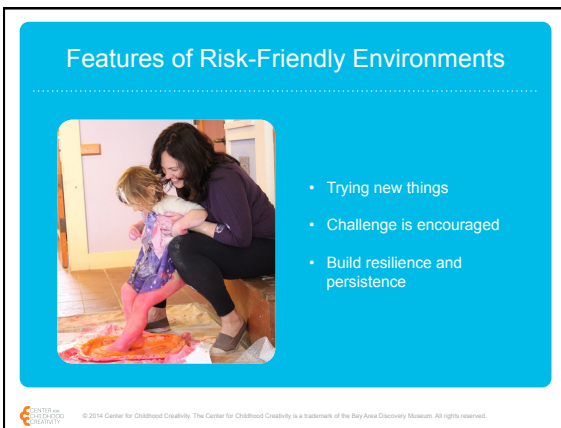


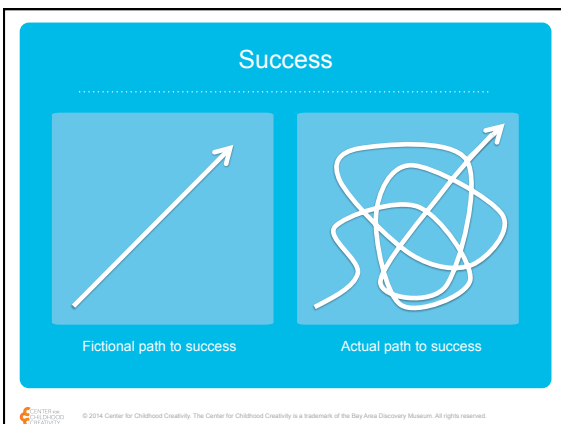
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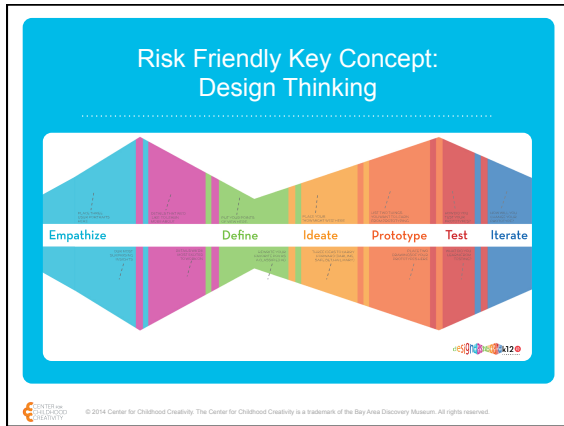




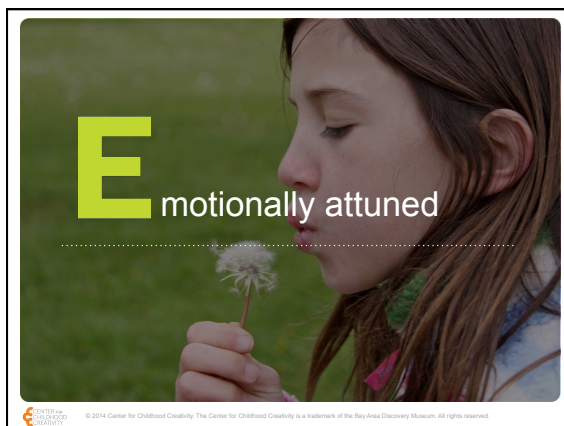


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Features of Emotionally Attuned Learning



Research shows:

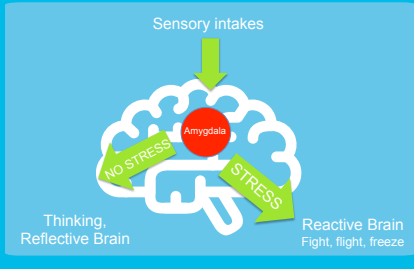
- Positive emotions increase creativity and learning

How to apply it:

- Mind feelings to build the mind

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Emotionally Attuned: The Amygdala as a Gateway to Learning



Sensory intakes

Thinking, Reflective Brain

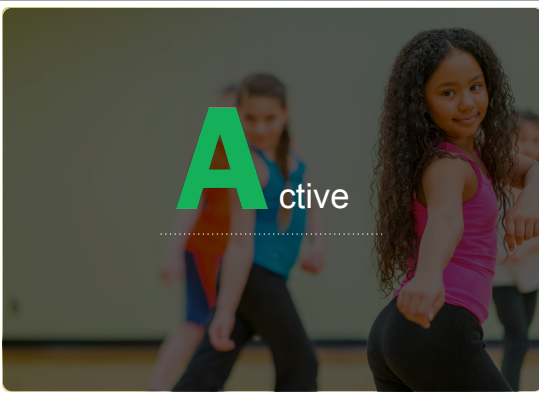
Reactive Brain
Fight, flight, freeze

NO STRESS

AMYGDALA

STRESS

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Active

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Features of Active Learning




- Physical
- Participatory
- Playful




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How to Apply it: Brain Breaks

Short physically active breaks help to enhance children's concentration and perseverance






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Time flexible




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Features of Time Flexible Learning:
FLOW and Deep Learning



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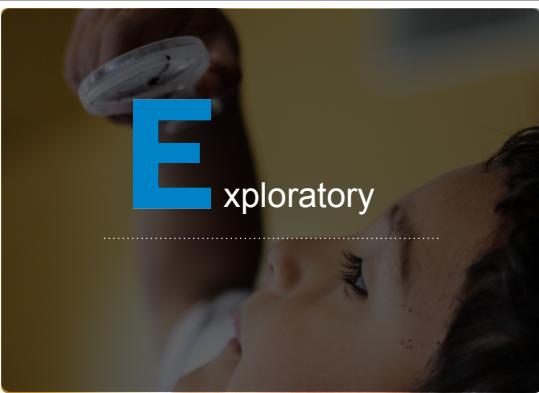
Features of Time Flexible Learning:
FLOW and Deep Learning



"You know that what you need to do is possible to do, even though difficult, and sense of time disappears. You forget yourself. You feel part of something larger."

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Exploratory



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Features of Exploratory Learning



- Open-ended
- Divergent Thinking
- Metacognition

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Closed-Ended and Open-Ended Questions

$5 + 5 = ?$

Convergent Thinking

What two numbers combine to make ten?

Divergent Thinking

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Powerful Phrases

I wonder ...

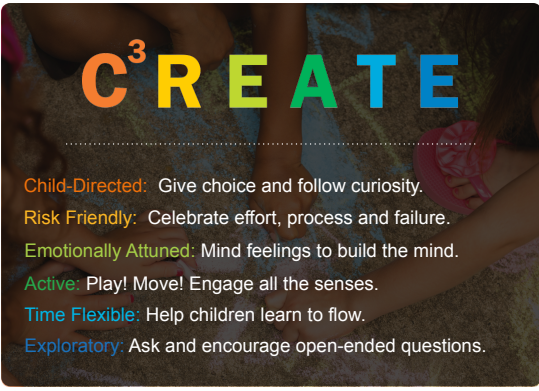
I notice ...

Tell me more...

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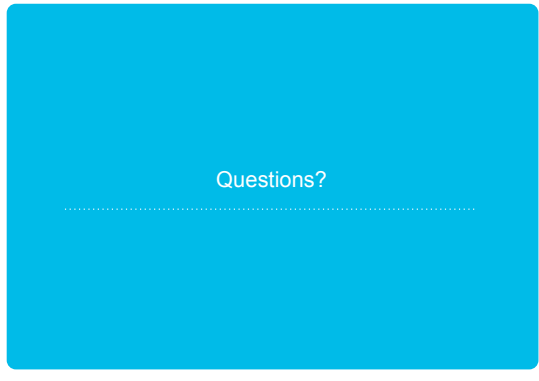
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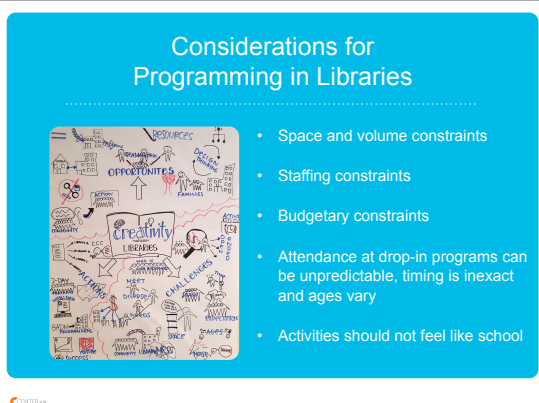
Child-Directed: Give choice and follow curiosity.
Risk Friendly: Celebrate effort, process and failure.
Emotionally Attuned: Mind feelings to build the mind.
Active: Play! Move! Engage all the senses.
Time Flexible: Help children learn to flow.
Exploratory: Ask and encourage open-ended questions.

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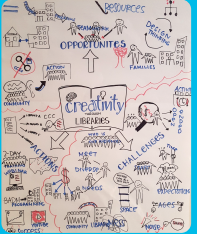


Questions?

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Considerations for Programming in Libraries



- Space and volume constraints
- Staffing constraints
- Budgetary constraints
- Attendance at drop-in programs can be unpredictable, timing is inexact and ages vary
- Activities should not feel like school

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How Can We Incorporate These Lessons into Library Programs?

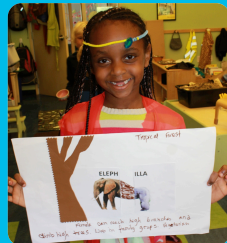


- Emphasize the learning process over the end product
- Shift language to open-ended prompts
- Choose activities for playfulness and tinkering. Ask yourself if the activities you offer allow children to choose, be curious and lead.



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Activity: Animal Remix



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Activity: Finish the Drawing



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Activity: A-Maze-ing Design



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Activity: Ice Exploration



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Resources: Register Now for Training

Building Blocks of Creative Thinking
2-Day Training Immersion
September 24 & 25, 2015
Sausalito, CA
Discounted Library Educator Rate: \$115

Space is limited!
Cami Gordon: (415) 339-3963 or cgordon@badm.org

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