Children's Curiosity as a Vehicle for Learning: You Don't Have to Teach Children to Ask "Why?"

Oct 23 - 9:45 - 11:00
Mt. Hood A
Prepared by Soobin Oh

Name

Role

Place of practice

Your interest in this session

What does it mean to be ambitious in our instruction?

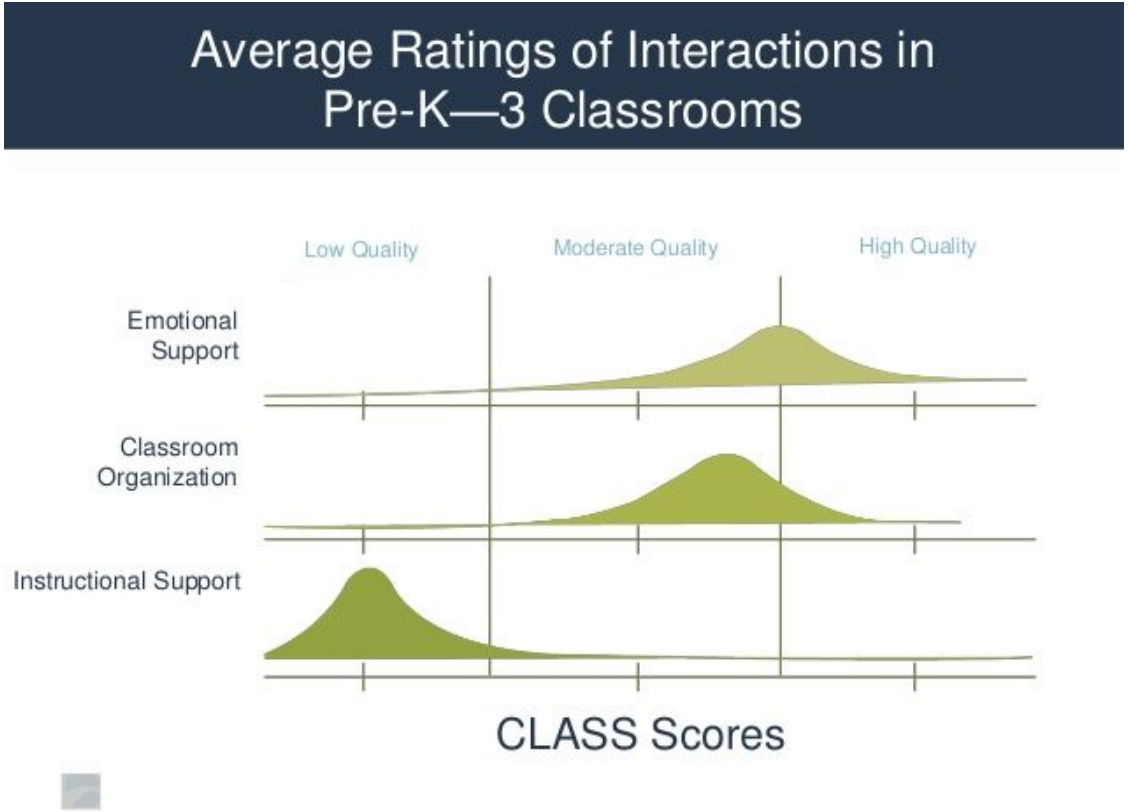
TABLE 5

Comparison of Organizational Structures and Practices of

AMBITIOUS INSTRUCTION

WHEN ESSENTIAL IS STRONG	WHEN ESSENTIAL IS WEAK
1. **Leaders communicate that social-emotional learning is the priority of the program** and foundational to all other learning and development for all students of all abilities.	1. **Leaders communicate that discreet skill development is the focus of the program** and the curriculum for all students of all abilities.
2. **Teachers emphasize inquiry-based learning** approaches and the integration of early literacy and math skills development into ongoing investigations that build background knowledge and experience prior to kindergarten.	2. **Teachers emphasize rote learning** approaches (e.g., number and letter identification, writing name, holding pencil and scissors) to make sure children meet kindergarten readiness goals.
3. **Teachers use assessment data** to design meaningful learning opportunities that address diverse learning needs.	3. **Teachers rarely, if ever, use assessment data** while lesson planning; rather, they rely on activities in prepackaged curriculum.
4. **Teachers partner with families** to develop meaningful learning opportunities at home.	4. **Teachers give families homework folders** to complete with their child that practice writing letters, numbers, and their name.

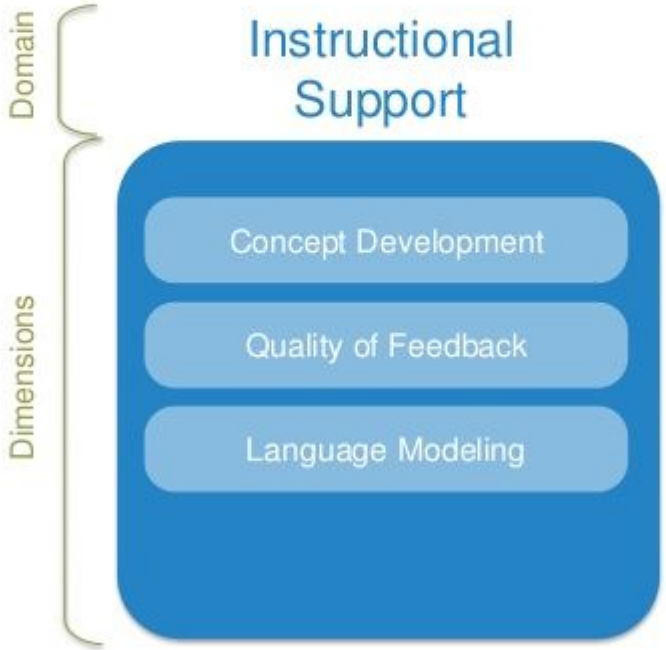
CLASS “Instructional Support” Domain is one of the hardest scores to improve



Dimensions of Instructional Support

Every CLASS Domain has "Dimensions"

Each Dimension has "Indicators"



CLASS Instructional Support Domain
Concept Development Dimension

Indicator	What it means
Deepen and Expand Understanding	Asking “why” and “how” questions. Acknowledging what children notice.
Creating	Supporting children’s initiative to make or produce something.
Integration	New ideas connect to previous knowledge
Connections to the Real World	New ideas connect to real things in the world (as opposed to abstract things).

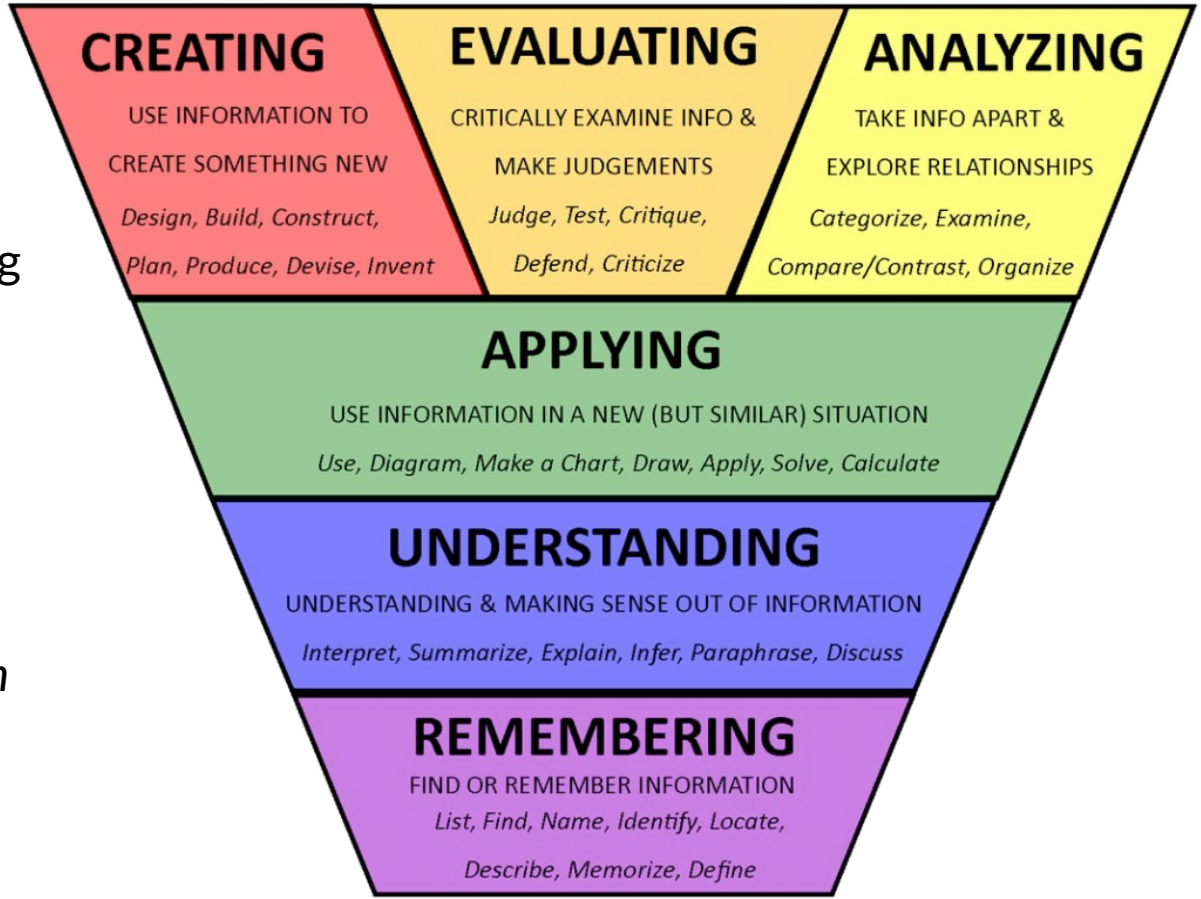
CLASS Instructional Support Domain
Quality of Feedback Dimension

Indicator	What it means
Feedback Loops	Back-and-forth exchanges Follow up Questions
Prompting Thought Processes	Ask students to explain thinking
Providing Information	Expansion Clarification

Our Questions

Are we only and always asking children to recount, recall, or identify?

Are we actually interrupting deeper and higher thinking with our questions?



Bloom's Taxonomy

What is research telling us about how young children learn?

Children's prior knowledge and experiences

How can we account for and attend to children's prior knowledge and experiences in our curriculum and in our instruction?

Building Theories with Children

What do you know about…?

Why do you think that is?

Tell me more…

That’s an interesting theory….

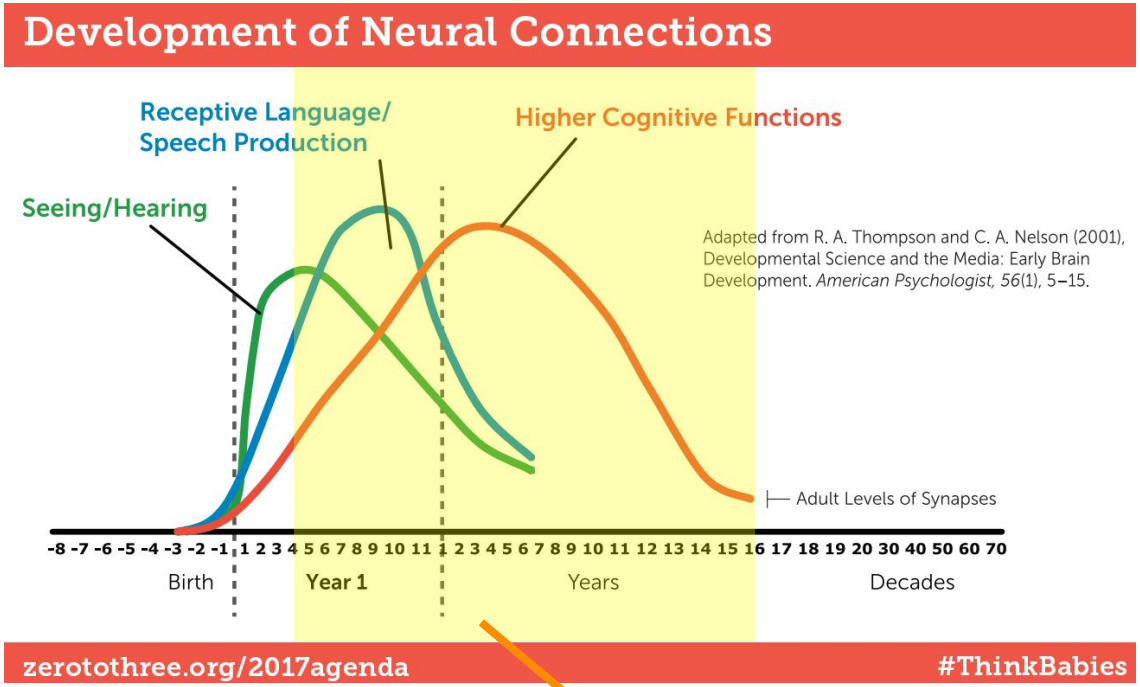
Let’s find out together

Children as active participants in their learning

Rather than passive recipients of knowledge

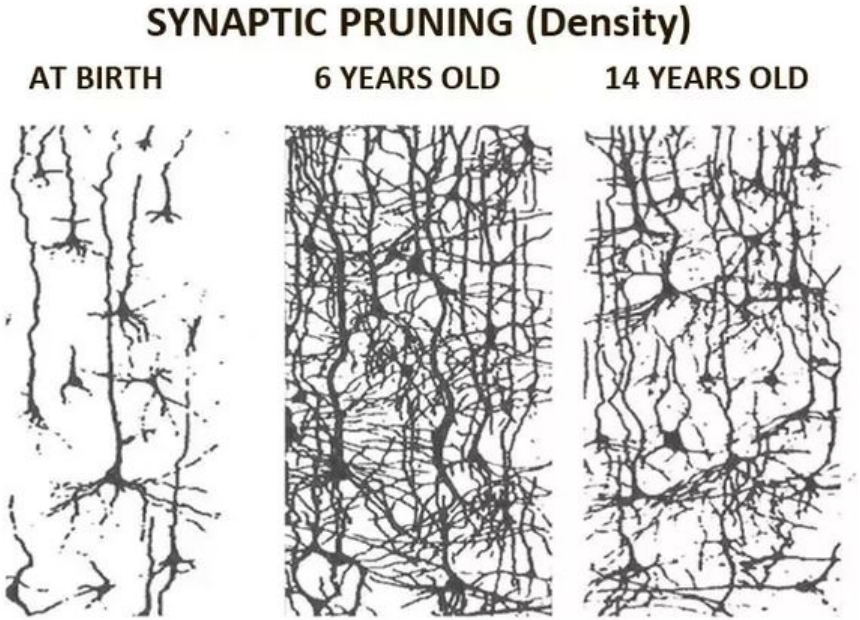
Honing in on the process of learning, not just the product.

You can see in the chart below that neural science has confirmed that the brain develops well into elementary school



The yellow shows how the majority of neural connections form and are honed while we are teaching our early learners

“Pruning” is an activity of the brain that progresses well into adolescence meaning we as early educators are quite literally shaping children’s brains



Which means while kids are in our classrooms and developing new skills and knowledge, **they need to “use it” or “lose it”**

Image source: Quora.com (2018).

“Children are creative, curious, social, and active. The unfortunate thing is that schools tend to punish those attributes.”

Dr. Steve Tozer
10/21/19

Topics Covered:

Ambitious Instruction

CLASS Instructional Support Domain

Bloom's Taxonomy

Key Findings on the Science of Learning and Development

Pruning and Neuroplasticity

Discussion

Were there any ah-ha moments?

What did you hear that was most striking?

How does this connect to what you've seen or experienced?

Relaxed Alertness

What do you notice?

Image source: Westminster School (2018).

“Aesthetic Experiences” are when our senses operate at their peak in comparison to “anesthetic experiences” where our senses must be deadened in order to participate

Image source: Debi Keyte-Hartland (2016).

*"**People in a state of Relaxed Alertness experience low threat and high challenge**. Essentially, the learner is both relaxed and to some extent excited or emotionally engaged at the same time. This is the foundation for taking risks in thinking, questioning, and experimenting, all of which are essential to mastering new skills and engaging higher-order thinking. In this state the learner feels competent and confident and has a sense of meaning or purpose."*

-12 Brain/Mind Learning Principles in Action: Teach for the Development of Higher-Order Thinking and Executive Function

(Caine, Caine, McClintic, & Klimek)

Research shows that young learners thrive when they feel securely supported to pursue their own curiosity and grow

Characteristic of the classroom → **Effect of this characteristic on children:**

- ✔ Safety and belonging
- ✔ Strong attachments to teachers/educators
- ✔ Content that builds on children's prior knowledge
- ✔ Children discuss their own brains and brain function ("metacognition")
- ✔ Children's voice drives their learning
- ✔ Children see "mistakes" as growth opportunities

Children are in an optimal state of relaxed alertness for learning

Let's brainstorm and discuss where we see relaxed alertness:

1		(*5 min*) **Pair up and discuss with a partner a physical space or time** during the day in your classroom that seems to promote relaxed alertness
2		(*1 min*) **Write down on a sticky note** a short description of one or both of the spaces/times, and post somewhere on the wall
3		(*5 min*) **Silently do a gallery walk** to read the other post-its participants posted about spaces/times of relaxed alertness
4		(10 min) **The full group discusses** the common themes and other observations about what promotes relaxed alertness

Our Environments and Materials

Environments of “Yes”

Environments that shift to reflect children’s curiosities

An abstract, consumer-driven, corporate-created image of childhood.

Elements of Design

Decorations: *Avoiding overuse of primary colors and clutter*

Classrooms that support peaceful relaxation

Image sources: Association for Psychological Science (2014) and Literacy League (2016).

The Classroom as a “Palette”

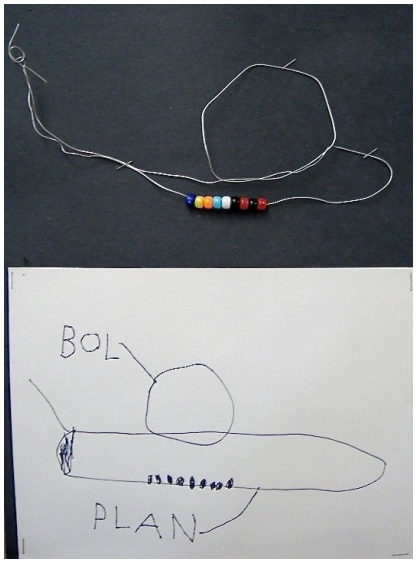
Neutral colors

Children’s thinking and work adds the color.

All items on the wall have purpose and support thinking and reflection.

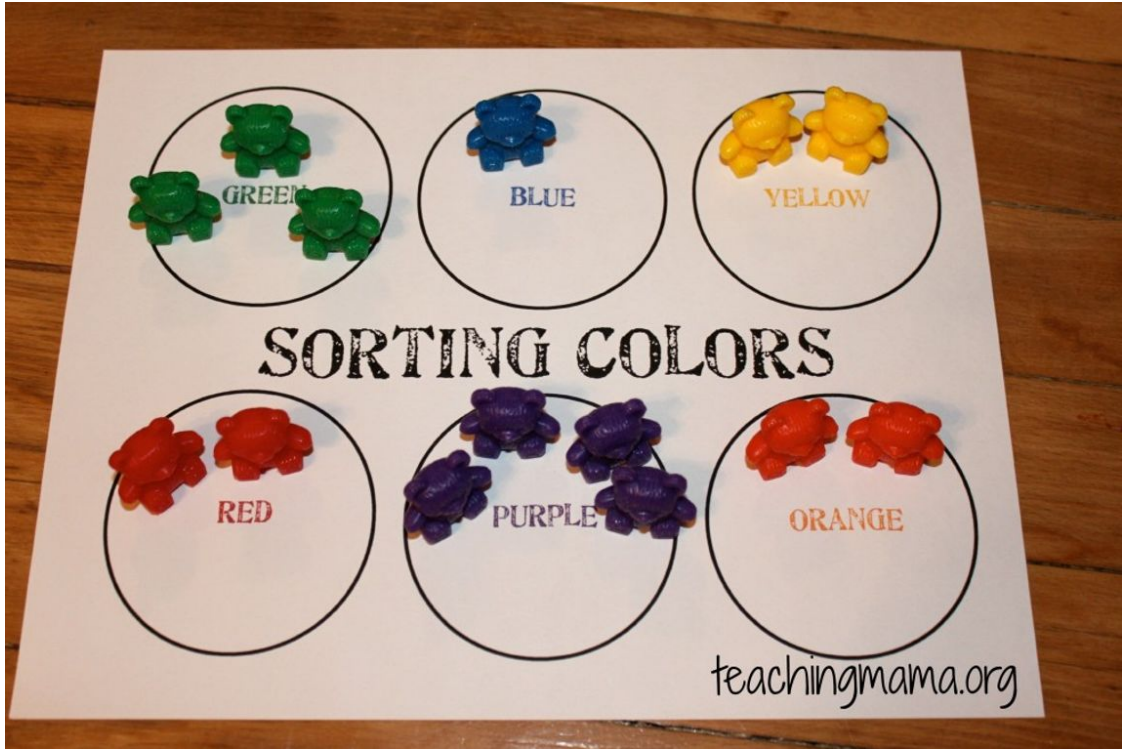
Intentionality

Intelligent Materials



Closed Materials

Sorting


BLUE
YELLOW
SORTING COLORS
RED
PURPLE
ORANGE
teachingmama.org

More than Sorting

Image source: Medium Education (2018).

Three Vignettes:

"Classroom Life" and

a Culture of Research


Glucocorticoid responses to adrenocorticotropic hormone (ACTH) in red-sided garter snakes (Thamnophis sirtalis): Effects of sex and season
Introduction and General Methods
Effects of ACTH treatment on CORT


PORTLAND UNION STATION


Amtrak
Employee Use Only


Superliner
31013


Superliner


NUT-FREE ZONE
PRACTICUM STUDENT


Blocks


VROOM VROOM
Aydin

And the story goes on...

And on...

Co-authoring and co-architecting the experience

- Requires us to focus more on process rather than the product.
- Reframes the teacher as all-knowing and all-providing to searching for answers together.
- Observation and listening is the primary instrument of planning. Curriculum is “emergent.”
- Belonging comes from the relationships.
- Significance comes from seeing that your voice shapes the daily experience.

Born with the ability to be curious

We don’t have to teach them how to be curious.

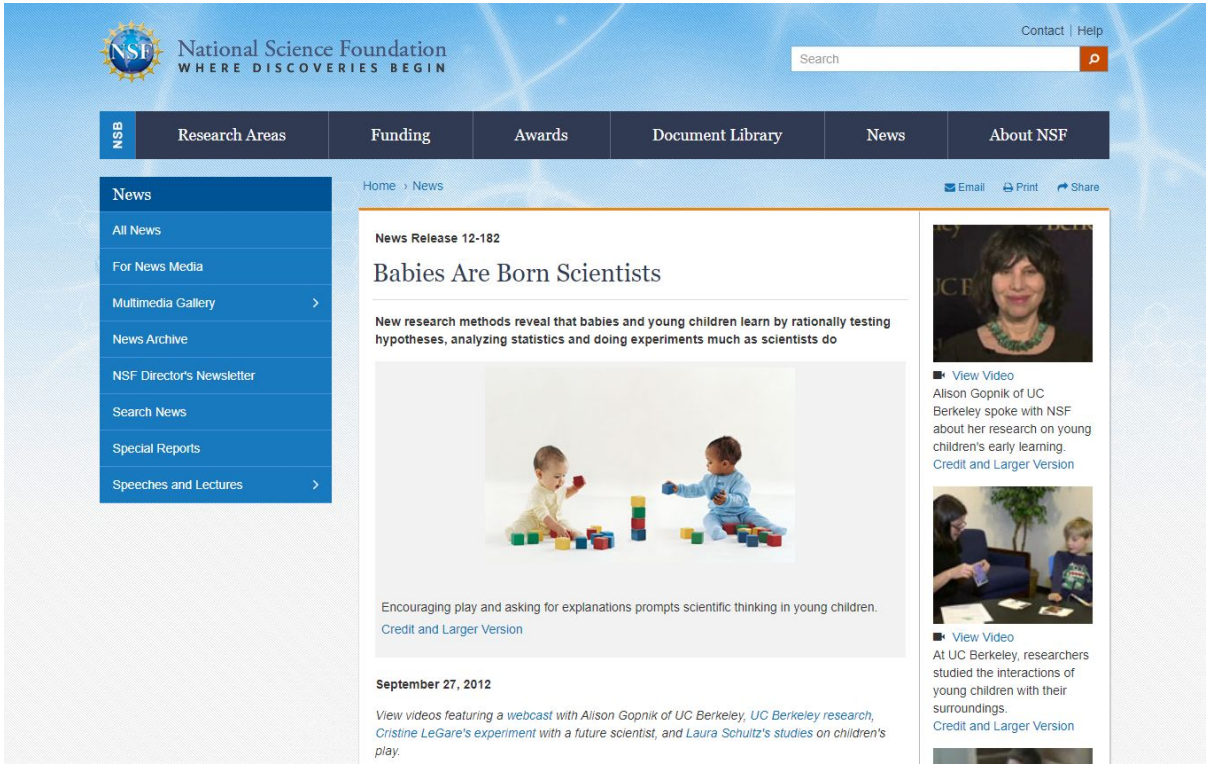
We don’t have to teach children how to ask “why?”

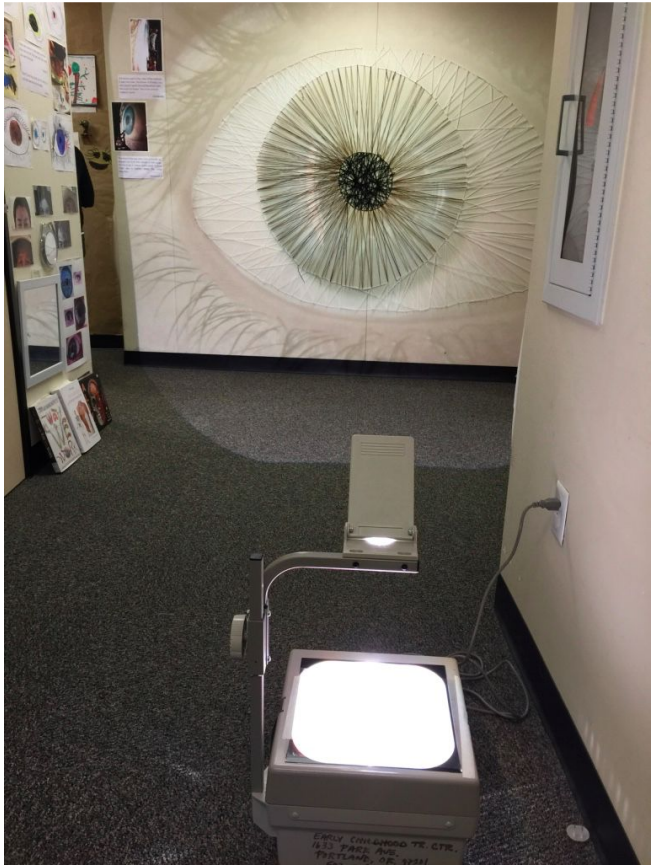
We don’t have to teach them how to search for meaning or how the world works.

Born with the ability to test hypotheses - Experimentation

Decades upon decades of research on the value of play, how play works to further development, how play is implemented in classrooms.

Takeaway: Environments (our spaces and materials) can be used to “provoke” or “invite” children’s questions and thoughts.





Learning About the Real World

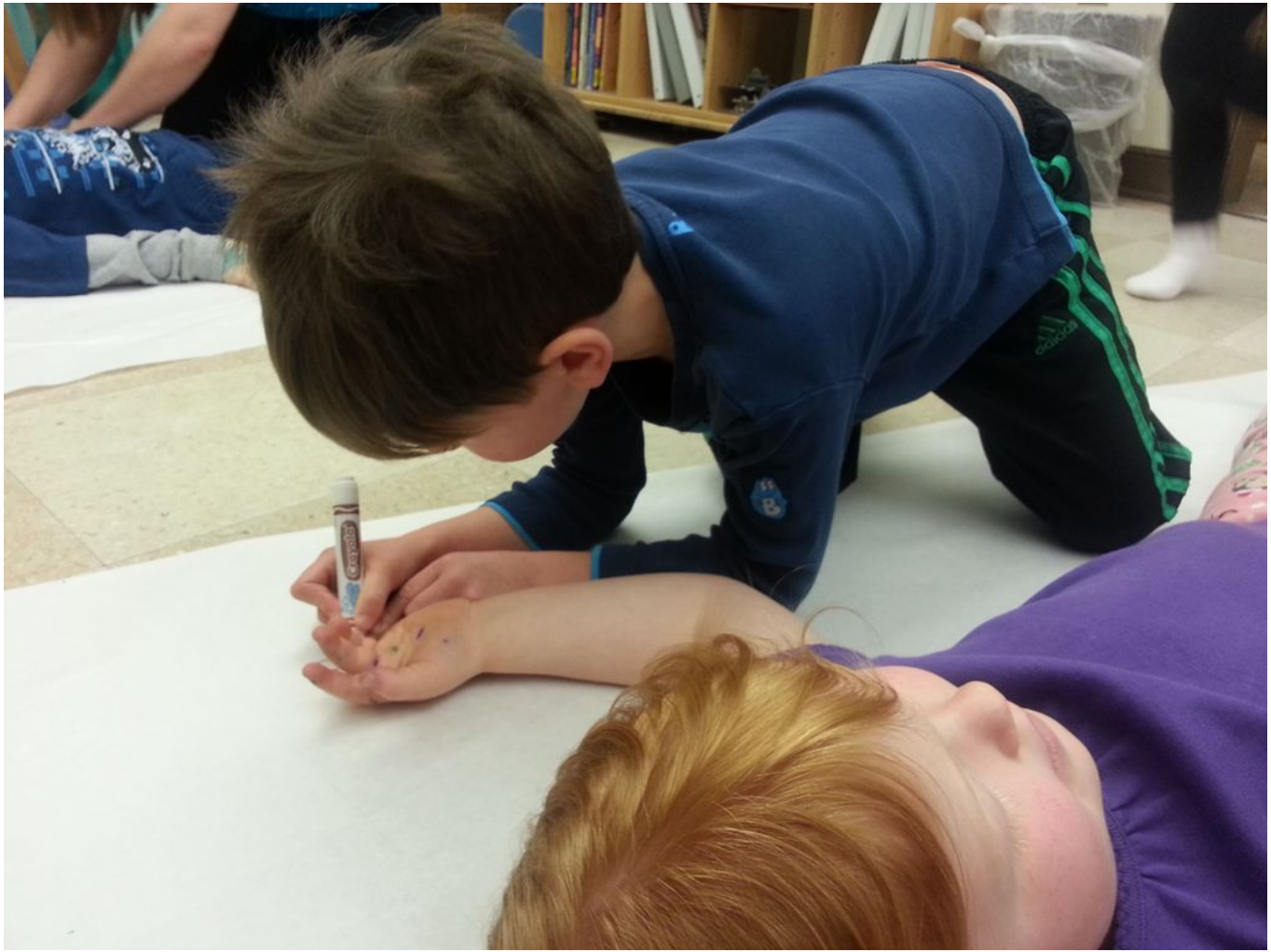
"The richer the world around me becomes, the richer the words I need to describe it."

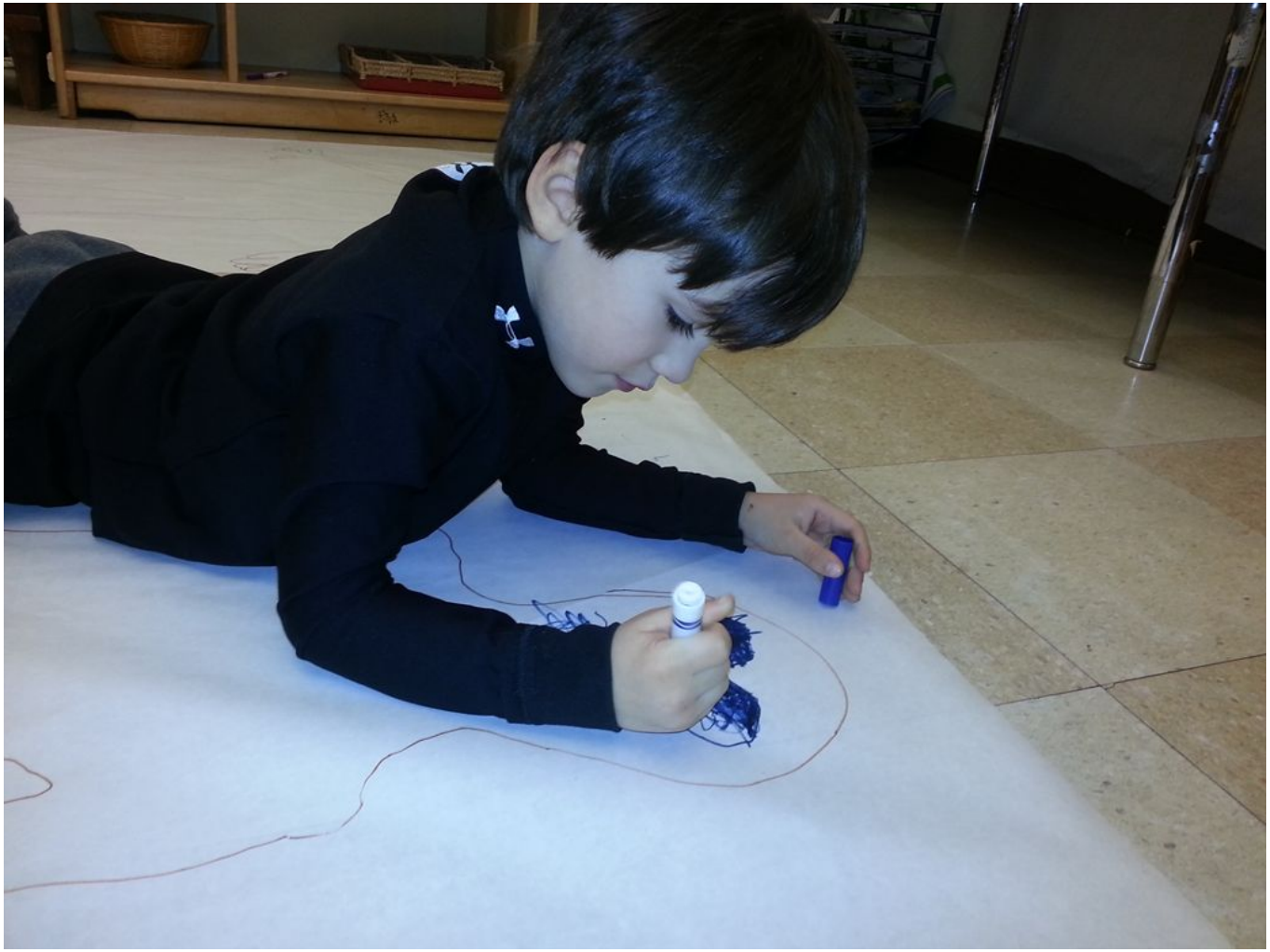
What are children invited to do in this space?

Sum is greater than its parts

Vignette #2

Vignette #3





Classroom Culture

A culture of research

A culture of planning

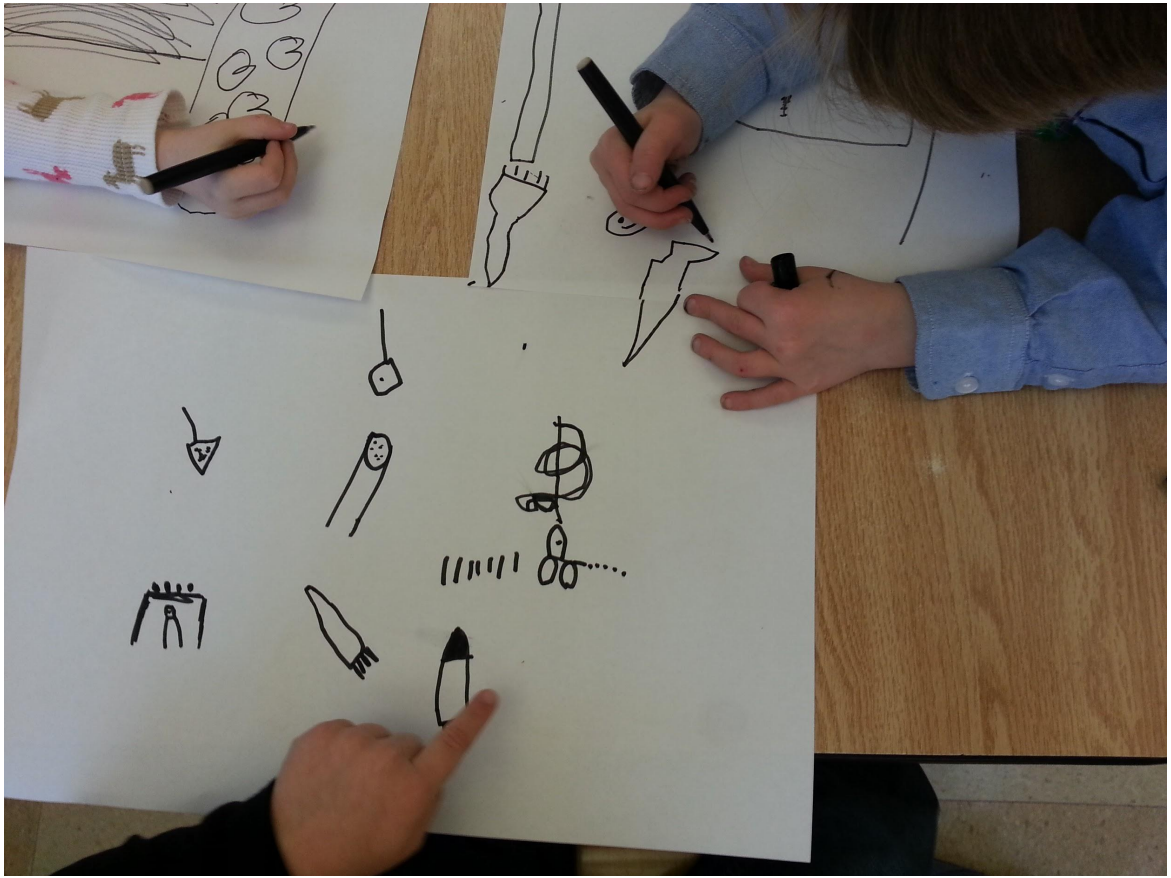
A culture of collaboration

A culture of listening

Children feeling belonging in the journey

Children feeling significant as contributors

Children as protagonists, authors, makers, creators, agents. Now.



Discussion

What is the overall culture of learning in your classroom?

What is the culture of learning you want to have in your classroom?

“Play is the highest form of research.”

Albert Einstein