Bringing Math to Life: Sparking Joy and Curiosity through Play!

Deanna Pecaski McLennan, Ph.D.

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Deanna Pecaski McLennan

Mother, Educator, Author, Instructor

#Reggio, #Math, #Art and #Kinder enthusiast

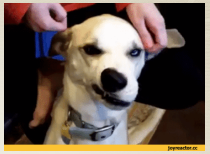
Goals For Today

#MathematicalMindset
#RedefineMath
#PraticalEasyMathIdeas
#ShareTheLearning

On a scale of doggies
how do you feel about math?

1

2



3

4

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What is your why?
Why do you keep showing up?

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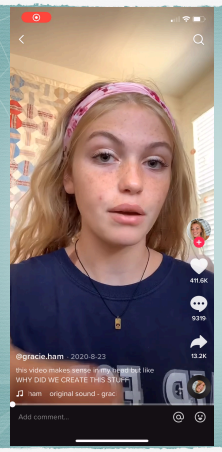

What is math?
Why study math?
What is a student's *why*?

(a teen perspective)

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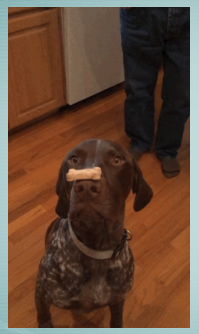

My why…

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From this…

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…to this!

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What changed for me?

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Our beliefs regarding math will (in)directly influence others.

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Why Reframe Math for Children?

* Math is everywhere and does not exist in isolation in the classroom
* Math is an organic, beautiful subject not confined to textbooks and worksheets
* Math can be authentic and connected immediately to children's lives
* We want children to engage in meaningful inquiries and persevere in challenging tasks
* Many children grow distant from math through repeated negative experiences
* We want children to develop into critical producers, not consumers, of information
* Strong math skills equal a strong workforce in the maths and sciences

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Math is everywhere!
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Create a Classroom that Welcomes Math
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Our Classroom

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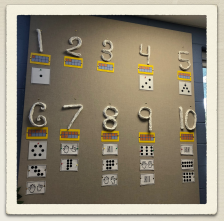
Co-create the Space



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Let's Define….

Teacher-provided activities are planned and led by the teacher. The teacher takes the lead, selecting the activity, setting the goals, and guiding the process.

Student-initiated activities are those where students lead and explore their interests and choices. Students have autonomy in their learning, making choices about activities, materials, and goals.

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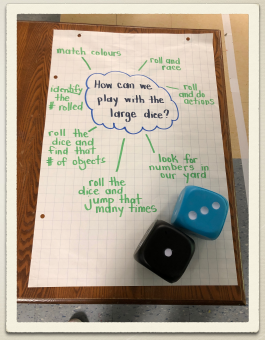
Meaningful Invitations



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Refresh and Mathematize

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Bringing Math Learning Outdoors

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How much time do your students spend outdoors outside of scheduled recess?

1 - never
2 - once a week
3 - a few times a week
4 - daily

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Every Space Has Potential!

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Educator Provided Invitations

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Simple wooden boards become…

A bridge

A car track

A fort

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Observing and Responding

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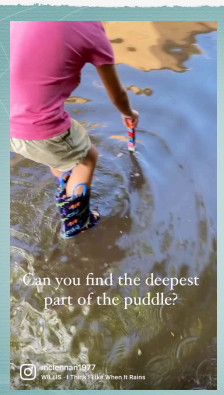

Where is the deepest part of the puddle?

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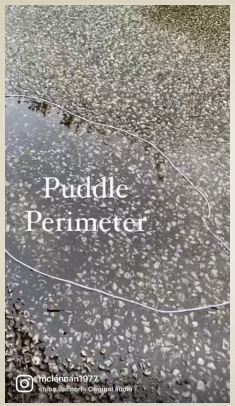

How big around are the puddles?

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Risky play led to an interest in recording ourselves using slow motion and comparing jumps using observation.

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Environmental Math

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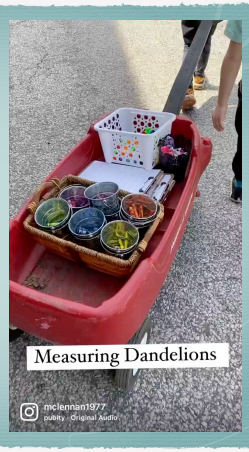
Turning observations into math research!



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Finding Math in Art

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Process or Product?

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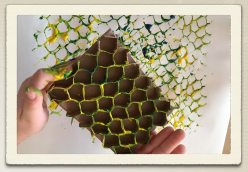
Teacher Provided Invitations



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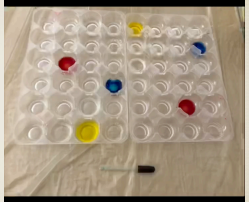
Colour Mixing Invitation



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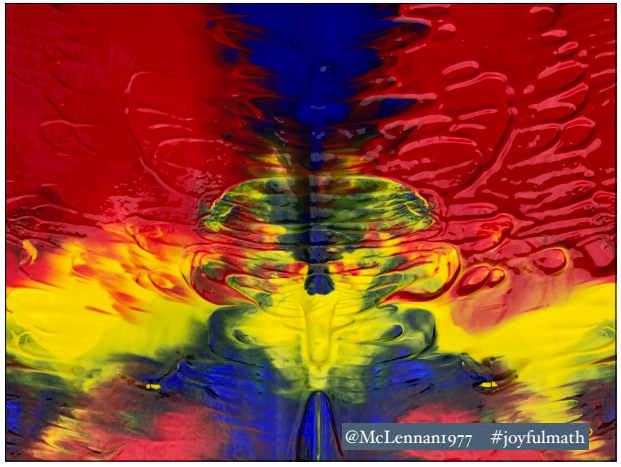

Concentric Circles

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Integrating Literacy and Math

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Educator Prompts
Today's star is
Notice and Wonder
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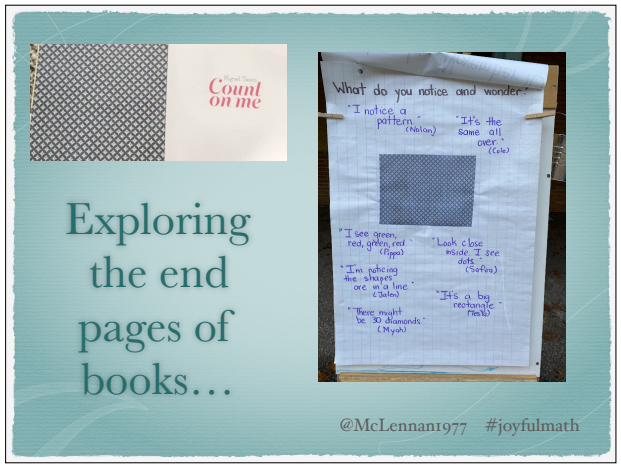
Count on me
Exploring the end pages of books…
What do you notice and wonder?
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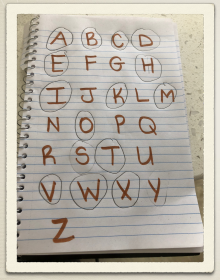
Responding to Children's Observations and Questions



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The 'recipe' for turning an ordinary moment into a math moment…

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"[A teachable moment] is not something you can plan for; rather, it is a fleeting opportunity that must be sensed and seized by the teacher."

Havighurst, 1952

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Give children time, space and resources to explore.
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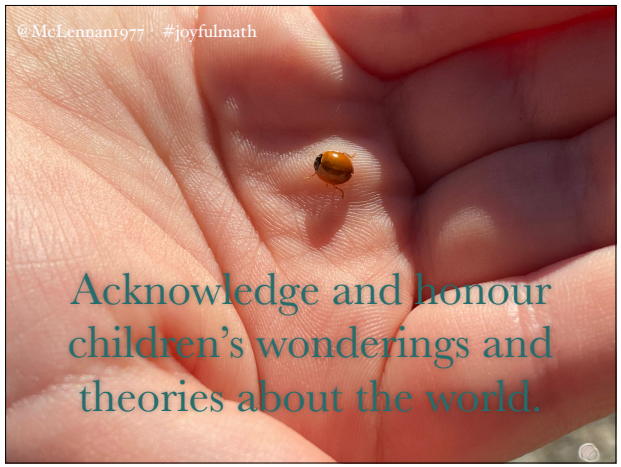
Observe their play carefully and ask open-ended questions.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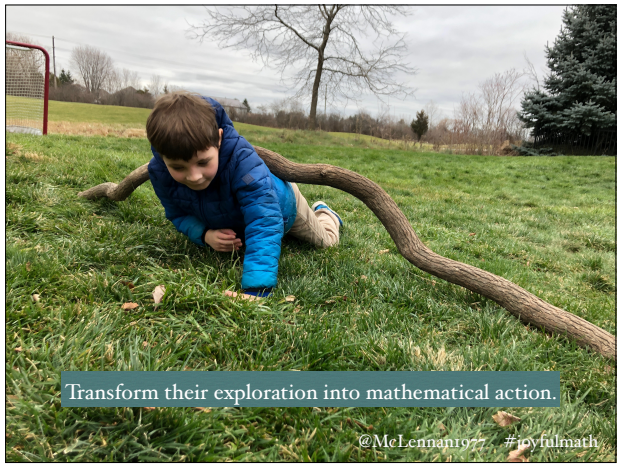
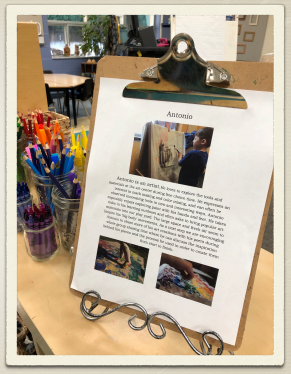
Acknowledge and honour children's wonderings and theories about the world.



Empowering Children Using Documentation



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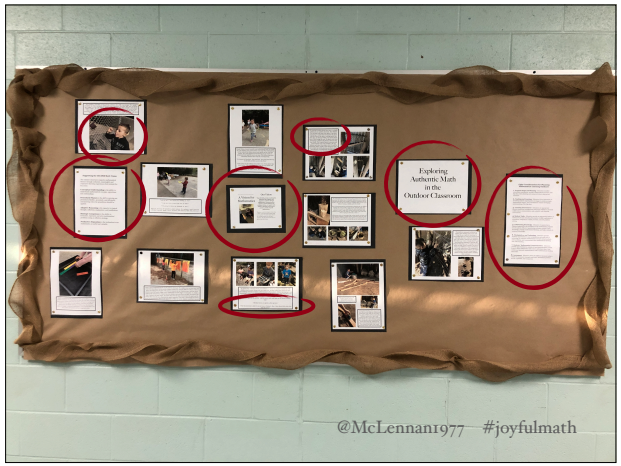
Exploring
Authentic Math
in the
Outdoor Classroom
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The Many 'Languages'
of Learning
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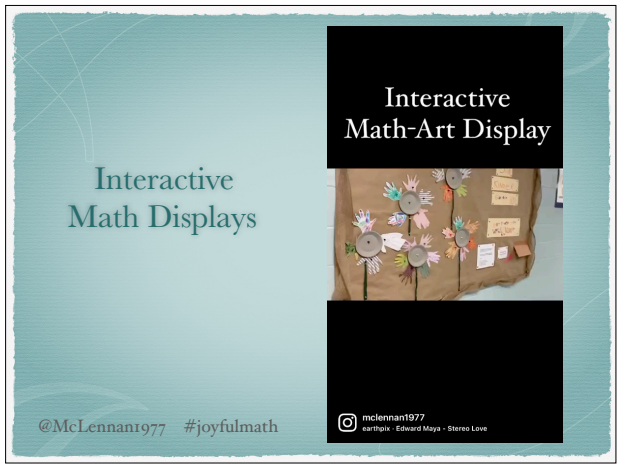
Interactive
Math Displays
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Interactive
Math-Art Display
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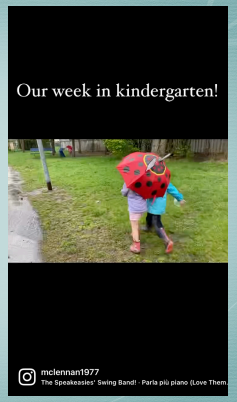
earthpix · Edward Maya · Stereo Love

Co-creating instagram reels as documentation



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A Playground for Mr. Big Legs

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Finding a Harvestman arachnid sparked:

- Rich observation and communication
- Research, planning and problem-solving
- Integration of literacy and mathematics
- Extensive spatial reasoning; proportional reasoning
- Reflection and revision
- A greater respect for the nature in our play yard

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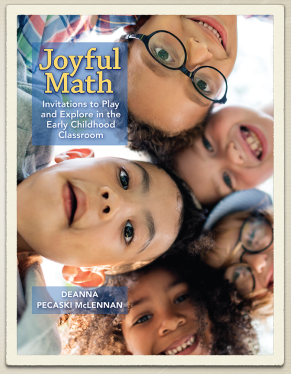
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