

While you are waiting for Teacher Time to begin...



1. Download the Viewer's Guide from the "Resources" icon.


Use the Viewer's Guide to take notes during the webinar.



2. Use the "Ideas" icon to share...

What are some of your favorite building materials to use in your classroom?

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TEACHER TIME

Little Scientists: Exploring **ENGINEERING** with Preschoolers

March 3, 2020

Hosts: Judi Stevenson-Garcia & Treshawn Anderson



NCECDTL

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STEAM for Infants, Toddlers & Preschoolers



Science Technology Engineering Art Math

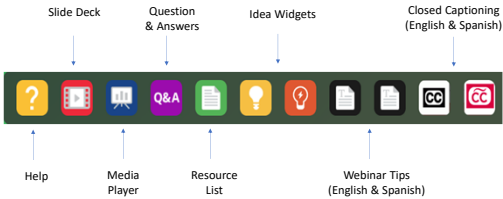
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Teacher Time Advisor:
Gail Joseph
University of Washington




Q & A Facilitator:
Jan Greenberg

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Slide Deck Question & Answers Idea Widgets Closed Captioning (English & Spanish)

Help Media Player Resource List Webinar Tips (English & Spanish)




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Viewer's Guide

NCECDTL National Center on Early Childhood Development, Teaching and Learning
2019-2020 TEACHER TIME
LITTLE SCIENTISTS... EXPLORING ENGINEERING WITH PRESCHOOLERS

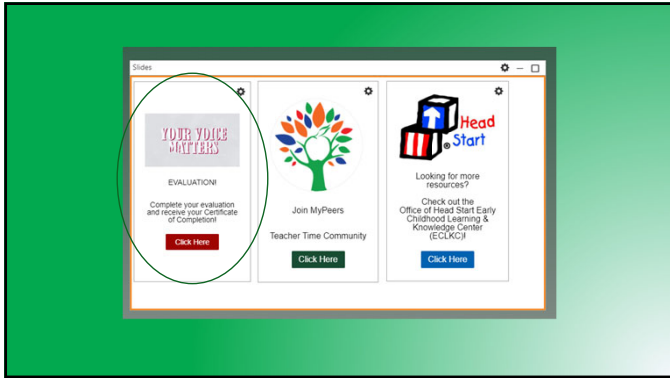
Viewer's Guide
This guide is designed to help you reflect on the ways you can support engineering thinking and learning with preschoolers. Bright resources and activities presented in the webinar can be found on the Resource section of this guide.

1. Engaging Environments

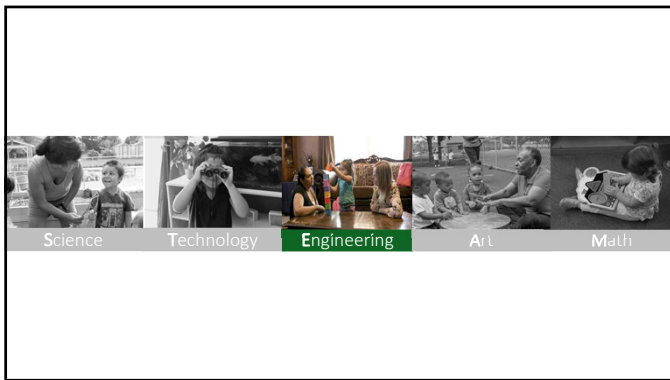
RESOURCE	ENGAGING ENVIRONMENT	DEALS
	Open-ended	
	Fixed	
	Available	

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Early Childhood Development, Teaching and Learning

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Engineering in Early Childhood



- Using materials in new ways
- Designing
- Testing how things work
- Problem solving
- Building structures

Engineering helps us understand how and why things work.

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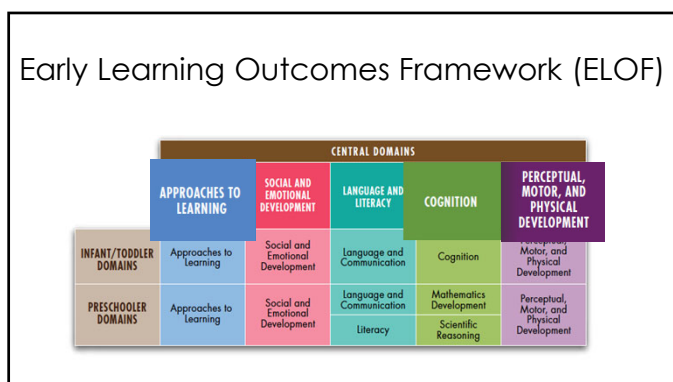
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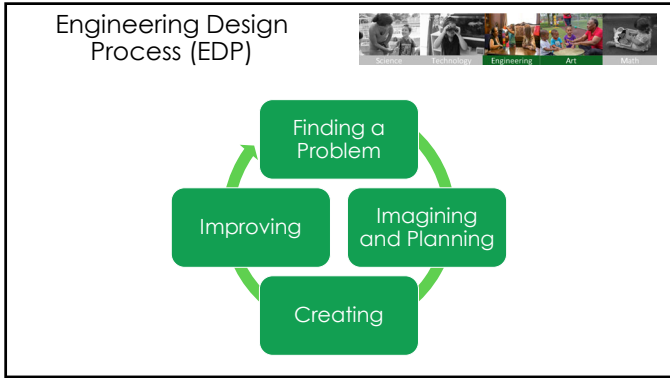
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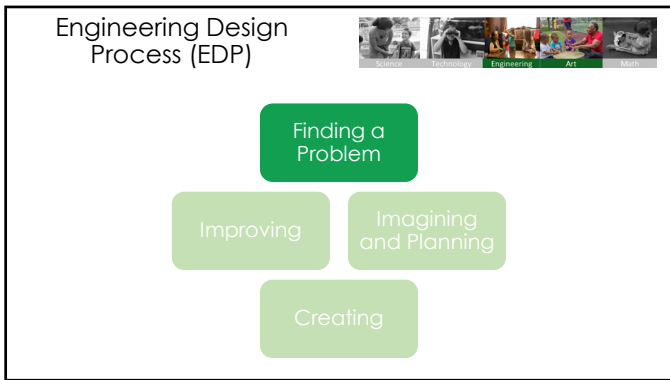
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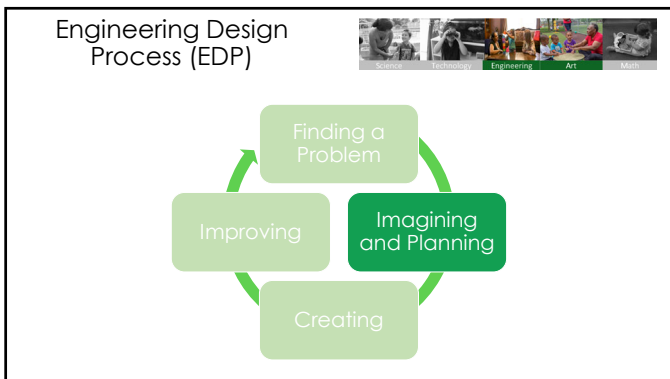
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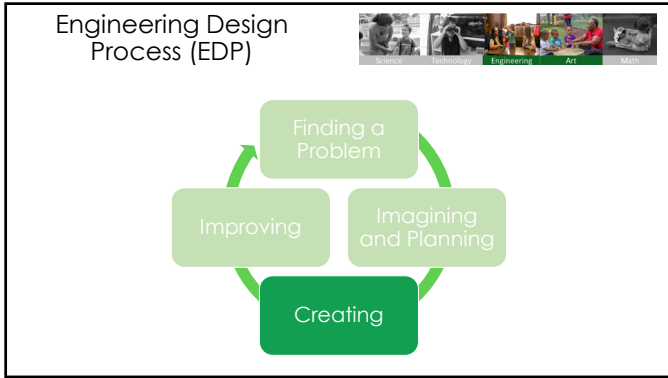
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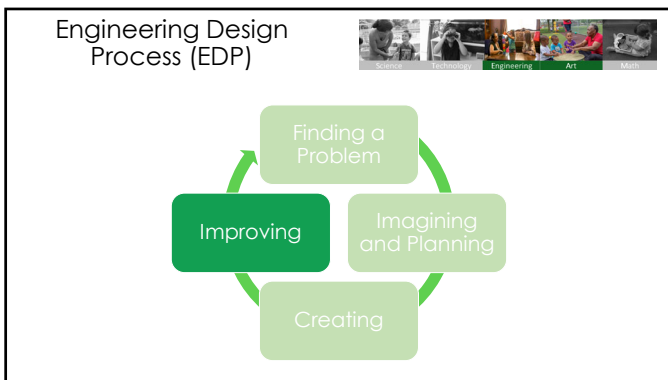
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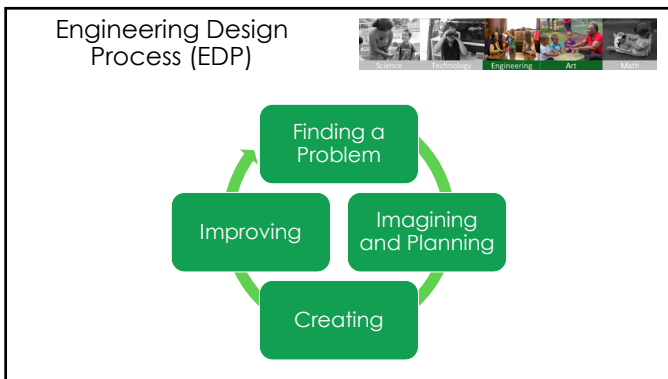
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What might children think, say, or do while designing and building a city?

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Supporting ENGINEERING

Engaging Environments Nurturing, Responsive, and Effective Interactions Learning Experiences and Opportunities

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Supporting ENGINEERING

Engaging Environments Nurturing, Responsive, and Effective Interactions Learning Experiences and Opportunities

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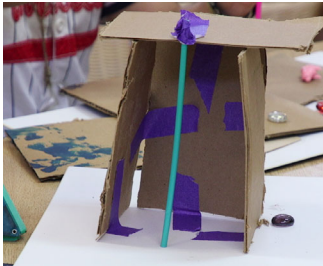
Supporting Engineering Learning



Materials are:
Open-ended
Varied
Accessible

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Open-ended



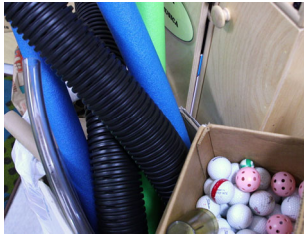
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Open-ended



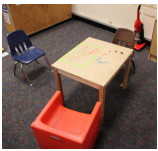
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Varied



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Accessible



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Reflection

- Used a variety of open-ended materials
- Children brought in items from home to reflect their culture
- Materials were easily accessible



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Teacher Time Minute

How open-ended, varied, and accessible are the materials in your learning environment?





Teacher Time

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Share your favorite open-ended engineering materials

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Nurturing
Show interest in and support children's curiosity

Responsive
Use back-and-forth conversations in response to children's questions and ideas

Effective
Support children's development and learning across ELOF domains



Nurturing, Responsive, & Effective Interactions

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Nurturing
Interested in what he was building, listened to his ideas

Responsive
Responded to his ideas and supported him in building his structure

Effective
Supported his physical and cognitive development

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Use scaffolds






What can you do to make this even taller?




Do you need help balancing your block on top?

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Speak engineering and encourage children to use engineering language

Your structure keeps falling. How can you make it more stable?



I see you carefully balancing the dominoes. Are dominoes easier or harder to stack than blocks?



You used the connector to hold the tubes together. How will you get your structure to stand up?

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Use mechanistic language



"The battery gives the CD player power. When the batteries are connected to these buttons, the CD player will work because it has power."

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Engineering Design Process




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Use scaffolds

Speak engineering and encourage children to speak engineering

Support use of the engineering design process



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Teacher Time Minute

How did this teacher support engineering skills and thinking?



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Video Reflection



Use scaffolds

Speak engineering and encourage children to speak engineering

Use mechanistic language

Support use of the engineering design process

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Don't just READ it...STEAM it!

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Guest Expert:
Gail Joseph
University of Washington




Don't just READ it...STEAM it!

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Guest Expert:
Gail Joseph
University of Washington



Don't just READ it...STEAM it!

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Engineering & the Arts



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Reflection

How can you use the design engineering process during art, music, and dramatic play experiences?



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Review





Engaging Environments

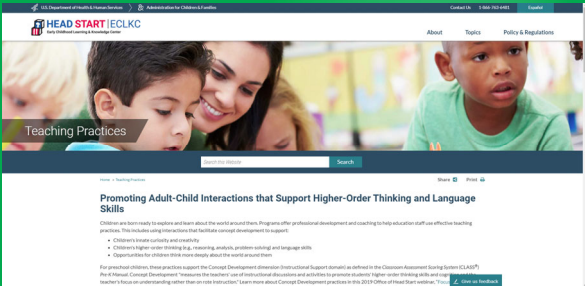


Nurturing, Responsive, and Effective Interactions



Learning Experiences and Opportunities

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HEAD START ECLKC

Teaching Practices

Promoting Adult-Child Interactions that Support Higher-Order Thinking and Language Skills

Children are born ready to explore and learn about the world around them. Programs offer professional development and coaching to help education staff use effective teaching practices. This includes using interactions that facilitate language development to support:

- Children's basic vocabulary and vocabulary
- Children's higher-order thinking (e.g., reasoning, analysis, problem solving) and language skills.
- Opportunities for children to think more deeply about the world around them.

For preschool children, these practices support the Concept Development dimension (Structural Support domain) as defined in the Classroom Assessment Scoring System (CLASS®). The Concept Development dimension "empowers the teacher's use of instructional decisions and activities to promote children's higher-order thinking skills and language skills." Teachers focus on understanding rather than on rote instruction. Learn more about Concept Development practices in this 2019 Office of Head Start webinar, "The... [View on YouTube](#)

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Helpful Resources

Ready DLE logo, **T4T Text4Teachers** logo, and **ELOF2GO** app icon (Your Mobile ELOF Ages Birth to Five).

Upcoming Teacher Time Episodes:
April 7, 2020 Little Scientists—Exploring **MATH** with Infants and Toddlers
May 5, 2020 - Little Scientists—Exploring **MATH** with Preschoolers

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