



- If you are viewing this course as a recorded course after the live webinar, you can use the scroll bar at the bottom of the player window to pause and navigate the course.
- This handout is for reference only. It may not include content identical to the PowerPoint. Any links included in the handout are current at the time of the live webinar, but are subject to change and may not be current at a later date.



© 2018 continued.com, LLC. No part of the materials available through the continued.com site may be copied, photocopied, reproduced, translated or reduced to any electronic medium or machine-readable form, in whole or in part, without prior written consent of continued.com, LLC. Any other reproduction in any form without the permission of continued.com, LLC is prohibited. All materials contained on this site are protected by United States copyright law and may not be reproduced, distributed, transmitted, displayed, published or broadcast without the prior written permission of continued.com, LLC. Users must not access or use for any commercial purposes any part of the site or any services or materials available through the site.

Budget Friendly Creative Play Ideas to Target STEM Standards in the Early Childhood Classroom

Amber Tankersley, Ph.D.

Objectives

As a result of this course, participants will be able to:

- 1) Identify basic STEM skills, concepts, and/or goals that are appropriate for an early childhood classroom.
- 2) Identify and explain how to evaluate inexpensive materials to target STEM standards in an early childhood classroom.
- 3) Explain how to Implement creative play experiences that target STEM standards for young children.

What does STEM look like in an early childhood classroom?

EC Math & Science Goals

Math

- Counting
- Sorting & classifying
- Shapes & space
- Measuring

Science

- Exploration & observation
- Tools for inquiry
- Changes & reactions
- Problem solving
- Vocabulary
- Application of information
- Reporting data

Different areas of science

EC Engineering & Technology Goals

Engineering

- Exploration
- Discovery
- Using tools
- Simple machines
- Problem solving
- Construction

Technology

- Using tools
- Technology literate
- Meeting student needs
- Promoting social development

Incorporating STEM in the EC Classroom Through Play!

Intentional vs. Accidental

Planned
Experiences

Classroom
Environment

Spontaneous
Experiences

When & Where?

- Arrival
- Outside time
- Snack time
- Learning centers
- Small group
- Meeting time
- Dismissal
- Outdoor environment
- Library corner
- Block area
- Sensory tables
- Manipulatives area
- Discovery center
- Art area
- Snack table
- Music time
- Field trips and guests

Does STEM + EC = \$\$\$

- Sounds expensive
- Specialized catalogs and vendors
- Some available materials
 - Limiting
 - One purpose
 - Expensive
- You don't have to break the bank to incorporate STEM standards in your classroom!

Locating Resources

Repurposed

Free &
Found

Inexpensive

Getting Ideas

- Teacher web pages and blogs
- Books, magazines, journals
- Visiting other classrooms and programs
- Conferences and meetings

Suggested Materials

Straws

- Math
 - Counters
 - Seriating
 - Measuring
 - Sorting
 - Shapes
 - Angles
- Science
 - Water table props
 - Straw planes
 - Bubbles
 - Blowers
 - Chemistry
- Arts & Crafts
 - Blow painting
 - Pop art
 - Sculptures

Animal Figures

- Sorting
- Counting
- Guess by sound
- BINGO game
- Feely game
- “Feeding” game—dice

Sticky Notes

- Graphing
- Voting
- Sequencing
- Patterning
- Seriation
- Measuring
 - Linear
 - Calendar
- Secret sticky note game
- Memory game
- Bingo markers
 - Traditional game
 - Items on notes

Wooden Blocks

- Sorting by shape
- Patterns
- Fill in block shapes
- Fractions
- Simple machines
- Rainy day block game
- Task cards
- Block props
 - Aluminum foil
 - Tape
 - String
 - Cellophane
 - Lights
 - Marbles
 - Tubes
 - Molding
 - Building surfaces

Cardboard Tubes

- Sensory table
 - Sand
 - Boats
- Classroom pets
- Outside
 - Spyglasses
 - Bug observation
- Block area
- Ball courses

Lidded Containers

- | | |
|------------------------------|------------------------------|
| ▪ Counting containers | Types of containers |
| ▪ “banks” | ▪ Butter tubs |
| ▪ Show and share boxes | ▪ Baby food jars |
| ▪ Collections | ▪ Mint containers |
| ▪ Musical shakers | ▪ Disposable food containers |
| ▪ Mini science observatories | ▪ Take out containers |
| ▪ Bug jars | ▪ Film canisters |
| ▪ Guessing jars | |

Plastic Bottles

- Sensory bottles
 - Wave bottles
 - Color mixing
 - Bells
 - Magnets
 - Shakers
- “I Spy” bottles
- Terrariums & farms
- Bubble blower
- Caps

Wrap Up

CONTINUED™

Questions?

Please contact me at atankersley@pittstate.edu