S.T.E.M. (Science, Technology, Engineering, and Math) Programs Made Easy

Red Hook Preschool Partnership
March 13, 2014
Objectives

• Be able to identify age-appropriate STEM concepts for Preschool
• Recognize when you are already using STEM in your classroom.
• Be able to list at least two simple ways you can reinforce existing STEM content and add more
• Have at least 1 passive program idea you could use
Why we don’t do more S.T.E.M. programming (or think we don’t)

• It’s hard enough meeting all of the requirements.
• I don’t have time or energy to try to add S.T.E.M. too.
• I don’t know enough about science or math.
• Cost
• I don’t have resources or materials
Preschool S.T.E.M. Concepts

Counting

Nutrition

Animals
- Colors
- Matching
- Nature
- Weather
- Machines
- Habitats
- Size comparison
- Measuring
- Patterns

- Senses
- Body parts
- Floating vs. sinking
- Transportation
- Shapes
- Sorting
- Opposites
- Weather
- Graphs
But you are already doing it....

<table>
<thead>
<tr>
<th>LIFE</th>
<th>PHYSICAL</th>
<th>OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>FALL</td>
<td>FALL</td>
<td>FALL</td>
</tr>
<tr>
<td>WINTER</td>
<td>WINTER</td>
<td>WINTER</td>
</tr>
<tr>
<td>SPRING</td>
<td>SPRING</td>
<td>SPRING</td>
</tr>
<tr>
<td>OTHER</td>
<td>OTHER</td>
<td>OTHER</td>
</tr>
</tbody>
</table>
Enriching The S.T.E.M. Content In Your Classroom

- Finger plays – both Math and Science. Repeat the rhyme, even if you have the words available.
- Use Non-fiction books or Concept books
- Choose a science-oriented activity. For example: Can you hop like a rabbit?
- Ask question and write down answers – make a graph. Sample questions: Favorite color; type of pet; color shirt; eye color; hair color; number of siblings
- Incorporate a demonstration. Example: Read *little blue and little yellow* by Leo Lionni and demonstrate color mixing
Passive S.T.E.M. Programs

- Interactive chart or graph – children come in and put a sticker in the appropriate column
- Seedling in a bag
- Simple sorting activities – by color or size
- Copy a pattern
- Measuring – tape a line on the floor and measure with different units like kid feet, elephant feet, dog feet, hands. Introduces concept of different units.
STEM at Preschool Storytime

Preschool STEM activities

- Counting
- Color identification/mixing
- Patterns
- Weather
- Senses
- Transportation/Directions
- Body Parts
- Habitats
Simple Simple Simple

- Fingerplays
- Rhymes
- Repetition
- Songs
- Movement
- Interaction
Colors

- Mouse Paint
  by Ellen Stoll Walsh
- Felt Board and story
- Color Mixing
Habitats

- Farm Life
- Movement
- Simple story
- Easily retold
More Movement plus Transportation

- The Wheels on the Bus
- Physics
- Scientific Process
- Singing/Repetition
Use of Music

● Everybody Dance
● Movement/Directions
● Identification of body parts
Even more movement and STEM

- I Know a Chicken
- Movement
- Use of colored eggs
Senses

- Identify common fruits and vegetables
- Identifying senses
- Using Senses
- Simple
Senses and Color

Growing Vegetable Soup

Written and illustrated by Lois Ehlert
More Senses and Color

Planting a Rainbow by Lois Ehlert
Froggy, Fashion, and Science
Farmer’s Market Activities

- One activity per month
- Simple craft (less than 5 minutes)
- Pertain to farming, nutrition, sustainability, etc.
- Low cost and easy cleanup
Holiday Themes in STEM

• Earth Day
  April 22nd
• Groundhog Day
  February 2nd
• 100 Days of School
  Mid Feb???
• Arbor Day
  Last Friday in April

• Any others?
Top 5 Best Science Sites for Kids

- **Peep and The Big Wide World** is a great site for preschoolers. It has some simple games that teach science and math principles, but my favorite part is the Science Anywhere page which has dozens of ideas on how to turn any situation into a teachable moment with lots of activities, projects and fun facts you can do anywhere.

- **Science Toy Maker** has lots of instructions for classic science toys you can make at home.

- **Ology** is the American Museum of Natural History's kid site, loaded with fun and interesting stuff for kids. One good thing for NYC kids is that each page has an At The Museum section which follows up on what they saw during their visit.

- **PBS Kids** is a great site for preschoolers on up with lots of educational games that kids love because they star their favorite characters, but I just learned about this new show and the corresponding website, called [Dragonfly](#). Dragonfly is a science news show on PBS where kids investigate and report on their own scientific findings. You can watch the episodes online, but the site also has some cool science-based online games, experiments and activities and more.

- **Funology** is full of science activity ideas, including indoor and outdoor games and has a page of science experiments that you can do at home with things you already have in your house. Sure to keep you busy for many hours any time of year.