

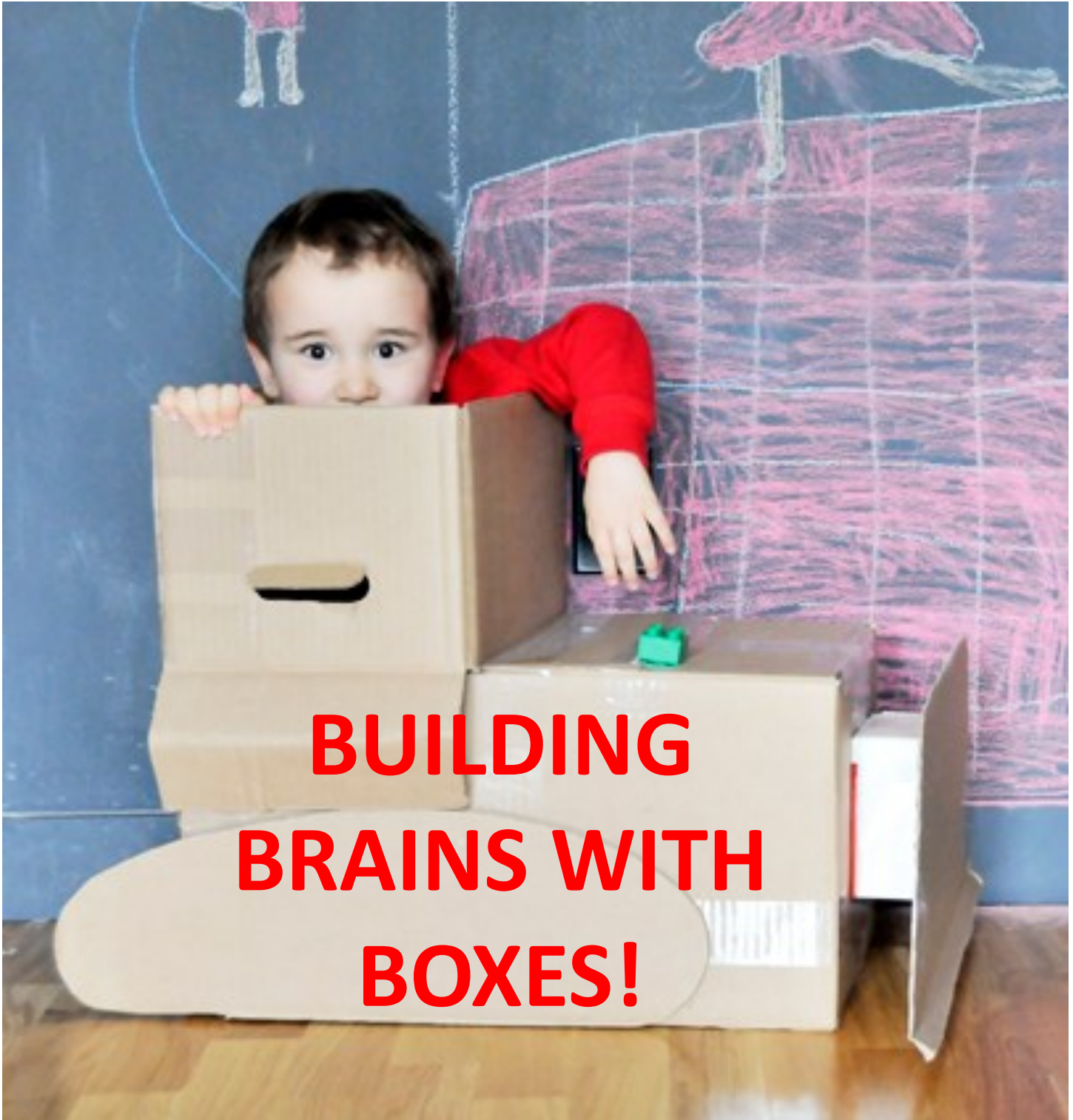
# Clarendon

Early Education Services, Inc.



Learning  
Experiences  
And  
Resources  
Now!

*Special Preschool STEM Edition!*



**BUILDING  
BRAINS WITH  
BOXES!**

# Welcome!



## WHAT IS STEM?



Young children are naturally curious about the world around them. By providing engaging, age-appropriate experiences related to science, technology, engineering and math, we can help children to develop important skills for future success in school and in life. It is important to understand that many of these skills are developed through daily explorations that do not require any special materials. Please refer to the *Massachusetts Guidelines for Preschool Learning Experiences* and the *Early Learning Guidelines for Infants and Toddlers* for wonderful age-appropriate ideas.

- Science curriculum for young children means providing opportunities for observing, exploring, asking questions and seeking answers, making predictions and sharing what is discovered.
- Learning about technology can mean using computers, but for young children it also involves using simple tools and being creative.
- Engineering for young children involves building things, planning projects and solving problems.
- As children are exploring size, quantity, shape, patterns, sequencing and numbers using concrete materials, they are learning basic math concepts and skills.

We hope you will find in the following pages how to easily incorporate STEM-related activities into your daily practice.

The U.S. Department of Agriculture prohibits discrimination against its customers, employees, and applicants for employment on the bases of race, color, national origin, age, disability, sex, gender identity, religion, reprisal, and where applicable, political beliefs, marital status, familial or parental status, sexual orientation, or all or part of an individual's income is derived from any public assistance program, or protected genetic information in employment or in any program or activity conducted or funded by the Department. (Not all prohibited bases will apply to all programs and/or employment activities.)

If you wish to file a Civil Rights program complaint of discrimination, complete the USDA Program Discrimination Complaint Form, found online at [http://www.ascr.usda.gov/complaint\\_filing\\_cust.html](http://www.ascr.usda.gov/complaint_filing_cust.html), or at any USDA office, or call (866) 632-9992 to request the form. You may also write a letter containing all of the information requested in the form. Send your completed complaint form or letter to us by mail at U.S. Department of Agriculture, Director, Office of Adjudication, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, by fax (202) 690-7442 or email at [program.intake@usda.gov](mailto:program.intake@usda.gov).

Individuals who are deaf, hard of hearing or have speech disabilities may contact USDA through the Federal Relay Service at (800) 877-8339; or (800) 845-6136 (Spanish).

USDA is an equal opportunity provider and employer.

Greetings! All of us at Clarendon are very pleased to present a special Preschool STEM (Science, Technology, Engineering and Mathematics) edition of *LEARN*. This is the first of four months of curriculum focusing on a STEM-related topic with a section dedicated to our preschoolers. This project is made possible through generous grant funding from the Massachusetts Department of Early Education and Care.

Please use the new *Massachusetts Preschool STE Standards* and the *Massachusetts Curriculum Frameworks for Mathematics* that we hope will guide your daily practice and help you as you talk with parents about the importance of learning through play and exploration. As you use this curriculum, you may discover that many of your daily activities with young children are actually building skills in science, technology, engineering and math!

Please note that hands-on STEM-related activities for infants, toddlers and school age children are included in the other parts of this guide. Remember to use a project-based approach and encourage children's natural curiosity throughout the day!

# LEARNING EXPERIENCES AND INVESTIGATIONS

## OUR PHILOSOPHY

**Children learn through positive interactions with caring adults who understand how children develop and provide opportunities for meaningful hands-on learning experiences. They learn best through engaging their senses and need individual support as they explore and discover themselves, others and the world around them in the context of their families and cultures.**

## ART

### Cardboard Box Collage

Materials: Large cardboard boxes, crayons, markers, paint and brushes,

collage materials, glue, scissors, tape

Procedure: Ask children to work in pairs or individually. Talk about what they would like to do with their box. Allow them to choose paint and collage materials to create their vision, both inside and outside the box. Assist children who want to cut holes in the box.

Adaptations: Help younger children by providing larger brushes and large stickers.

Goals: Encourage creativity, exploration of art materials, cooperation and use of fine motor skills.



## BLOCKS

### Our Neighborhood

Materials: Large shallow cardboard box, small boxes, blocks, cars, crayons/markers, small paper pads.

Procedure: Take a walk around the neighborhood taking breaks for the children to draw what they see. Take photos. At your program, encourage the children to make a map of the neighborhood in the shallow box by drawing and using blocks and accessories. Ask them to use their drawings from the walk and photos for ideas, and ask questions about what they noticed or found most interesting during the walk.

Adaptations: Provide separate boxes for younger children with larger blocks and accessories.

Goals: Encourage awareness of familiar places, use vocabulary related to direction and location and create a representation of their neighborhood.



#### Objectives for Development and Learning:

7. Demonstrates fine-motor strength and coordination

33. Explores the visual arts

Aligns with:

Visual Arts 18-Explore a variety of age-appropriate materials and media to create two- and three-dimensional artwork. 20-Explore and experiment with wet and dry media in a variety of colors including black and white.

Cognitive Development 66-The younger toddler explores with sensory art materials and uses them to create visual effects.

Physical Health and Well-Being 10- The older infant demonstrates strength and coordination of small motor muscles.

#### Objectives for Development and Learning:

9a-Uses an expanding expressive vocabulary

12-Remembers and connects experiences.

14-Uses symbols and images to represent something not present.

32-Demonstrates simple geographic knowledge.

Aligns with: History and Social Science 4-Engage in activities that build understanding of words for location and direction.

5-Construct and describe simple maps of their immediate neighborhood.

Approaches to Learning 11-The young toddler expands his exploration of the environment.



# LEARNING EXPERIENCES AND INVESTIGATIONS

## TOYS AND GAMES

### *Matching and Sorting*

Materials: Small cardboard boxes, colored paper or stickers, variety of objects for sorting (buttons, small animals, small blocks)

Procedure: Glue a piece of a different color of paper inside each box. Encourage the children to sort different items by color into the appropriate boxes.

Adaptations: Use larger objects and boxes for younger children to match by color. Add dots or numbers to the boxes. Help children to add the appropriate number of items to each box, matching the dots or numbers.

Goals: Provide opportunities for matching and sorting with concrete objects.

*Objectives for Development and Learning:*

13. Uses classification skills.

20. Uses number concepts and operations.

*Aligns with:*

*Mathematics 1. Listen to and say the names of numbers in meaningful contexts.*

*Mathematics 2. Connect many kinds/quantities of concrete objects and actions to numbers.*

## SENSORY PLAY

### *Dump and Fill*

Materials: Sand, small boxes, sand scoops or large spoons, large plastic container or shallow box

Procedure: Put clean sand in a large plastic container with small boxes and sand scoops.

Allow children to fill and dump the boxes, encouraging them to compare amounts.

Adaptations: Add water or try other materials.

Goals: Promote understanding of quantity and use of physical skills during a sensory activity.

*Objectives for Development and Learning:*

7. Demonstrates fine motor strength and coordination.

22. Compares and measures.

*Aligns with: Mathematics 12. Listen to and use comparative words to describe the relationships of objects to one another. Cognitive Development 60-The younger toddler experiments with various wet and dry materials to discover their properties.*

## STORIES AND BOOKS

### *Sitting in My Box*

Materials: *Sitting in My Box* book (or tell a similar story), large shallow box, plastic or stuffed animals



Procedure: Read or tell the story. A boy is sitting in a box reading a book about animals, and the animals invite themselves in! Encourage the children to create their own story, act it out, and write their own books based on their experiences.

Adaptations: Take photos of younger children to make their books and encourage older children to write their stories on the computer.

Goals: Help children relate books to their own experiences and provide a creative opportunity for using language and emergent writing skills.

*Objectives for Development and Learning:*

29. Demonstrates knowledge about self.

19. Demonstrates emergent writing skills.

*Aligns with:*

*Language Arts 16-Use their own words or illustrations to describe their experiences, tell imaginative stories or communicate information about a topic of interest.*

*Cognitive Development 73-The younger toddler is able to name self, body parts and significant people.*

*Language and Communication 17-The older infant builds and uses vocabulary through direct experiences and involvement with pictures and books.*

### **Suggested books:**

*Sitting in My Box*– Dee Lilligard-T/PS/SA

*Not a Box*– Antoinette Portis-PS/SA

*A Box Story*– Kenneth Lamug

*A Box Can Be Many Things*-Dana Rau-SA

*When This Box is Full*--Patricia Lilly-PS/SA

*This Is Our House*-Michael Rosen-PS/SA

*Little Elmo's Toy Box*-Sesame Street-I/T

*Henry's Box*-Angela McAllister-PS/SA

*The Big Brown Box*-Marisabina Russo

*The Button Box*-Margarette Reid-PS/SA

*Cristina Katerina and the Box*-Patricia Gauch-PS/SA

## SPECIAL SECTION:

# INNOVATIVE PRESCHOOL STEM EXPERIENCES!

*Funding for this project has been provided by the Massachusetts Department of Early Education and Care. We appreciate the generous support!*

### Science and Engineering Practices

*Engage in discussion before, during and after investigations.*

*Support thinking with evidence.*

*Observe and ask questions about observable phenomena.*

*Use their senses and simple tools to observe, gather and record data.*

*Plan and implement investigations using simple equipment, designing/building a solution to a problem.*

*Look for and describe patterns and relationships.*



### FOCUS ON SCIENCE: *Exploring Boxes*

Materials: Variety of boxes made from cardboard, wood, and metal, large sheet of paper and markers

Procedure: Make sure boxes are clean and free of hazards like staples. Have a number of different cardboard boxes available for children to explore, and other kinds of boxes to compare with cardboard. Discuss their experiences and record their observations, ideas and questions as a web on the large sheet of paper. Use open-ended questions like *What do you think we should try with the boxes? How do you think that box is made? How can you put the boxes together? What did you change?* Encourage the children to ask questions, make comparisons and predict what might happen during their investigations. *Which is bigger/longer/heavier? Are all the boxes the same shape?* Provide opportunities for children to share their ideas and work on projects together. Follow the children's interests and encourage their creative use of the boxes to stack, line up or use for dramatic play. Provide additional flexible materials like flashlights, blankets, blocks, string for measuring or other accessories to extend their learning. Post the web to review children's experiences and to add new ideas during the month. Encourage children to make drawings of their projects and take photos to document their work.

Adaptations: Provide smaller boxes for non-mobile children to explore.

Goals: Encourage science inquiry skills, understanding of physical properties of materials and balance, basic understanding of geometry and measurement using non-traditional items.

#### **Aligns with MA Preschool Guidelines:**

*Inquiry Skills 1-Ask and seek out answers to questions about objects and events with the assistance of interested adults. 4-Record observations and share ideas through simple forms of representations such as drawings.*

*Physical Sciences 1-Manipulate a wide variety of familiar and unfamiliar objects to observe, describe and compare their properties using appropriate language. 22-Experiment with a variety of objects to determine when the objects can stand and ways that objects can be balanced.*

*Technology and Engineering 23-Explore and describe a wide variety of natural and man-made materials through sensory experiences.*

#### **Aligns with PreK STE Standards:**

*PreK-PS1-1. Investigate the natural and human-made objects, describe, compare, sort and classify objects based on observable physical characteristics, uses, and whether something is manufactured or occurs in nature.*

*PreK-PS2-2. Through experience, develop awareness of factors that influence whether things stand or fall.*

# LEARNING EXPERIENCES AND INVESTIGATIONS

## FOCUS ON TECHNOLOGY:

### ***Making Paper Boxes***

Materials: Stiff paper, scissors, tape, glue, pencils, rulers, markers

Procedure: Provide the above materials and challenge the children to build their own box. Encourage planning as well as trial and error. *How many sides will your box have? Will the sides all be the same size? What can you use to connect the bottom?* Help them to use the tools, and call their attention to the numbers and marks on the rulers. Discuss how rulers are used to measure. Support the sharing of ideas, and ensure the children that there are different ways to make a box!

Adaptations: Help younger children with folding and cutting, or provide a box for them to deconstruct and reconstruct.

Goals: Provide opportunities to use simple tools, plan and share ideas and create a simple object.



### ***Aligns with PreK STE Standards:***

*PreK-PS1-1. Investigate the natural and human-made objects, describe, compare, sort and classify objects based on observable physical characteristics, uses, and whether something is manufactured or occurs in nature.*

### ***Aligns with MA Preschool Guidelines:***

*Inquiry Skills 1-Ask and seek out answers to questions about objects and events with the assistance of interested adults.*

*Physical Sciences 1-Manipulate a wide variety of familiar and unfamiliar objects to observe, describe and compare their properties using appropriate language.*

*Technology and Engineering 23-Explore and describe a wide variety of natural and man-made materials through sensory experiences.*

*24-Demonstrate and explain the safe and proper use of tools and materials.*

### ***Cars and Garages***

Materials: Small cars, cardboard boxes, flat pieces of cardboard, tape, markers or paint

Procedure: Talk with the children about how they might use boxes to build a parking garage for cars.

Encourage them to work together to plan how cars will enter and exit, how many levels it will have, and try out their ideas. Introduce the idea of using ramps. *How will the cars get to the second floor? Can cars go up stairs? What else could you try?*

Provide tape for the children to attach the components. Encourage them to create signs for the cars (slow, stop, enter, etc.) and draw to further express their ideas about the garage.

Adaptations: Provide materials for children to experiment with rolling cars down ramps.

Goals: Encourage children to construct something that meets their needs and explore ramps and wheels.



### ***Aligns with PreK STE Standards:***

*PreK-PS2-1. Using evidence, discuss ideas about what is making something move the way it does and how some movements can be controlled.*

*PreK-PS2-2. Through experience, develop awareness of factors that influence whether things stand or fall.*

### ***Aligns with MA Preschool Guidelines:***

*Inquiry Skills 1-Ask and seek out answers to questions about objects and events with the assistance of interested adults.*

*Technology and Learning 23-Explore and describe a wide variety of natural and man-made materials through sensory experiences.*

*24-Demonstrate and explain the proper use of tools and materials.*

*25-Explore and identify simple machines such as ramps, gears, wheels, pulleys, and levers through play experiences.*

# LEARNING EXPERIENCES AND INVESTIGATIONS

## FOCUS ON ENGINEERING

### **Build a Special Space**

Materials: Cardboard boxes of different sizes, tape, collage materials, glue, string, scissors

Procedure: Talk with children about creating a special space using boxes. *What should the space be used for? What should we try? How will you get in and out of the space? How big should it be? How will you connect the parts?* Encourage them to work cooperatively to build a space that meets a need, like a space to read, a space to draw, a space to display projects, etc. Document the process with photos or video, and when it is complete, create a class book or video based on the project.

Adaptations: Provide materials for children to create their own private spaces. Help them make holes for windows, etc., that will allow for supervision.

Goals: Provide an opportunity to explore design, construction and tool use while working cooperatively.

#### **Aligns with PreK STE Standards:**

*PreK-PS2-1. Using evidence, discuss ideas about what is making something move the way it does and how some movements can be controlled.*

#### **Aligns with MA Preschool Guidelines:**

*Inquiry Skills 1-Ask and seek out answers to questions about objects and events with the assistance of interested adults.*

*Physical Sciences 1-Manipulate a wide variety of familiar and unfamiliar objects to observe, describe and compare their properties using appropriate language.*

*Technology and Engineering 23-Explore and describe a wide variety of natural and man-made materials through sensory experiences.*

*24-Demonstrate and explain the safe and proper use of tools and materials.*

*25-Explore and identify simple machines through play experiences.*



### **Creating Critters**

Materials: Shoeboxes and small cardboard boxes, tape, collage materials, construction paper, glue, string, scissors, paper fasteners

Procedure: Read a book or tell a story about how

different animals move. Ask the children to identify how animals move in the same and different ways as people. *Do birds use their wings like we use our arms? How do ants move with so many legs? Do we drink water the same way as dogs do?* Provide the materials above for the children to create their own animals, using smaller boxes for legs, construction paper for wings, etc. Help the children to use paper fasteners to allow legs and wings to move. As they work, discuss body parts and functions as well as movement. Write down their observations and display with their creations!

Adaptations: Use animal or insect puppets to talk about how animals accomplish tasks and how we do things in the same and different ways.

Goals: Encourage exploration of how body parts are used to accomplish different tasks.

#### **Aligns with PreK STE Standards:**

*PreK-PS2-1. Using evidence, discuss ideas about what is making something move the way it does and how some movements can be controlled.*

*PreK-PS2-2.Through experience, develop awareness of factors that influence whether things stand or fall.*

#### **Aligns with MA Preschool Guidelines:**

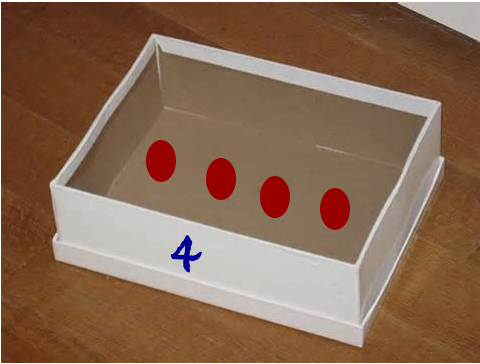
*Inquiry Skills 1-Ask and seek out answers to questions about objects and events with the assistance of interested adults.*

*Technology and Engineering 24-Demonstrate and explain the safe and proper use of tools and materials.*

*26-Observe and describe ways that animals, birds and insects use various parts of their bodies to accomplish certain tasks and compare them to ways people would accomplish a similar task.*



# LEARNING EXPERIENCES AND INVESTIGATIONS



## FOCUS ON MATHEMATICS: *Number Blocks*

Materials: Cardboard or shoe boxes, glue sticks, white paper, markers, scissors

Procedure: Ask children to glue paper to cover the outsides of boxes and help them to trim the edges to fit. Give each child a box and help to write a different number on each. Ask each child to draw a number of items of their choice on the box to match the written number. Help the children to put the boxes in order from 1-10 by lining them up on the floor or stacking. Encourage each child to toss a block and say an idea for a movement to make the number of times on the block, like *clap 4 times, jump 6 times*, etc.

Adaptations: Use dots or stickers to represent numbers. Help younger children with one-to-one correspondence by encouraging them to put one item in each of several boxes.

Goals: Provide opportunities to explore quantity and numbers through physical play using concrete materials.

### **Aligns with MA Preschool Guidelines:**

*Mathematics 1. Listen to and say the names of numbers in meaningful contexts.*

*2. Connect many kinds/quantities of concrete objects and actions to numbers.*

*4. Use concrete object to solve simple addition and subtraction problems using comparative language (more than, fewer than, same number of).*

## **Measuring with Boxes**

Materials: Shoe boxes or other boxes of the same sizes, large sheet of paper, markers

Procedure: Challenge children to stack boxes in a tower as tall as themselves. Help each child to write their name on the paper and record how many blocks are in the tower that matches his or her height. Ask the children to think of other things they could measure with the boxes. *How big is the kitchen? How many boxes long is the table?*

Encourage them to compare their size with the sizes of other objects, and to estimate sizes of different objects or spaces.

Adaptations: Help children to measure each other with boxes while lying on the floor. Ask children to think of other items to use for measuring and try their ideas (hands, feet, small blocks, string, etc.)!

Goals: Provide opportunities to explore quantity and numbers through physical play using concrete materials.



### **Aligns with MA Preschool Guidelines:**

*Mathematics 1. Listen to and say the names of numbers in meaningful contexts.*

*2. Connect many kinds/quantities of concrete objects and actions to numbers.*

*12-Listen to and use comparative words to describe the relationships of objects to one another.*

*14-Use non-standard units to measure length, weight and the amount of content in familiar objects*



# LEARNING EXPERIENCES AND INVESTIGATIONS

## DRAMATIC PLAY

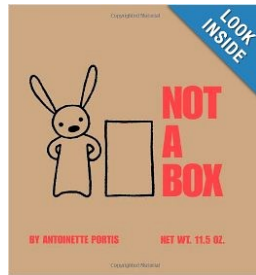
### *Not a Box*

Materials: Large cardboard boxes, markers, paint, tape, collage items, *Not a Box* book

Procedure: Read *Not a Box* with the children or watch it on Youtube (see *Resources*). Encourage children to develop their own creative ideas for boxes and write their stories.

Adaptations: Help younger children to sit in a box and imagine what it could be.

Goals: Allow children to engage in imaginative play, share ideas and relate books to their own experiences.



*Objectives for Development and Learning:*

36. Explores drama through actions and knowledge.

*Aligns with:*

*English Language Arts 6-Listen to a wide variety of age appropriate literature read aloud.*

*Theatre Arts 17-Create scenarios, props and settings for dramatizations and dramatic play.*

*Cognitive Development 70- The older toddler expands on pretend play and recreates familiar settings through the imaginative use of props and clothing.*

## OUTDOOR PLAY

### *Obstacle Course*

Materials: Cardboard boxes, tape

Procedure: Use a variety of boxes to create an obstacle course. Include boxes to climb through, jump over, run around, etc.

Adaptations: Make a tunnel from boxes for children to use indoors.

Goals: Promote physical activity, balance and coordination while learning positional words.

*Objectives for Development and Learning:*

4. Demonstrates traveling skills.

8. Listens to and understands increasingly complex language.

*Aligns with:*

*Physical Development 2. Build body awareness, strength, and coordination through locomotion activities.*

## DISCOVERY

### *Lights and Boxes*

Materials: Cardboard boxes, shoe boxes, flashlights, flameless tea lights, string lights, scissors

Procedure: Allow the children to explore boxes with flashlights and flameless tea lights. Help them to make holes in the boxes and discover how light passes through and what kinds of shadows are made.

Adaptations: Use string lights inside a large box to create a special private space, providing holes for supervision. Move a flashlight and encourage infants to follow patterns of light with their eyes.

Goals: Engage children in exploratory play to develop understanding of light and shadow.

*Objectives for Development and Learning:*

11d. Shows curiosity and motivation.

26. Demonstrates knowledge of the physical properties of objects and materials.

*Aligns with:*

*Inquiry Skills 1-Ask and seek out answers to questions about objects and events with the assistance of interested adults.*

*Technology and Engineering 23-Explore and describe a wide variety of natural and man-made materials through sensory experiences.*

*Cognitive Development 62-The older toddler asks questions and develops inquiry skills.*



# LET'S GET COOKING!



## Box Lunch!

Suggested ingredients:

Whole wheat bread

Turkey breast or other cold cuts

Lettuce

Mayonnaise

Egg slices

Carrot sticks, fresh peas, tomatoes

Crackers

Fresh fruit

Ask the children to help you prepare a box lunch. Provide one or two plastic food storage containers, a plastic knife, napkins or paper muffin cups and a paper plate for each child. Help each child to make a sandwich using the ingredients above, including a face or other garnish for fun, and place in a container. Encourage the children to sort the other food items in paper muffin cups or napkins in a container. While they are working talk with the children about the names of food items and ask open-ended questions about where the food items come from. *Where do you think eggs come from? What do you think is inside the peapod?* As the children eat, talk about likes and dislikes, textures and colors of food, and what they eat for lunch at home. Enjoy!

## STEM Skills and Cooking

Cooking projects are a wonderful way to encourage children's interest in science and math concepts. Using "science talk" by asking questions like, *I wonder what might happen if...? What do you think we could try? What do you notice?*, will encourage children's natural curiosity and help them to develop science inquiry skills.

Here are a few examples of STEM skills that can be incorporated into cooking projects:

**Science:** Ask questions and seek out answers, make predictions, use their senses to explore, investigate plants, compare temperature and explore liquids and solids.

**Technology:** Use simple tools for mixing, cutting, measuring and pouring.

**Engineering:** Explore simple kitchen gadgets and machines to find out what they do and how they work, and compare how people prepare/eat food with how other living things accomplish these tasks.

**Mathematics:** Learn about numbers in meaningful contexts from recipes and counting ingredients, explore quantity and measurement, learn concepts of first, second, third, and half/whole, estimate and use comparative words.



**Beware of choking hazards and food allergies when planning any cooking project!**

# Resources !

## Great Places to Inspire Children's Curiosity!

<http://www.discoverymuseums.org/>-The Discovery Museums in Acton provide a science museum and a children's museum.

<http://www.bostonchildrensmuseum.org/>-The Boston Children's Museum has exhibits for children across all curriculum areas.

<http://www.springfieldmuseums.org/>-The four Springfield Museums include a science museum.

<http://www.ecotarium.org/>-The Ecotarium in Worcester is an indoor/outdoor science museum.

<http://www.childrensmuseumineaston.org/home0.aspx>-The Children's Museum in Easton provides a variety of exhibits and special programs.



## INTERNET RESOURCES

<http://brainbuildinginprogress.org/> -The *Brain Building in Progress* website has curriculum ideas to promote healthy development as well as other resources.

<http://www.mass.gov/edu/docs/eec/2013/20131008-prek-ste-standards.pdf>– Find the new *Massachusetts Preschool STE Standards* here.

<http://www.doe.mass.edu/candi/commoncore/>- Look here for the *Massachusetts Curriculum Frameworks for Mathematics*.

<https://intraweb.stockton.edu/eyos/page.cfm?siteID=72&pageID=23>– A box project with preschoolers is described on this site.

[http://www.eec.state.ma.us/docs1/curriculum/20030401\\_preschool\\_early\\_learning\\_guidelines.pdf](http://www.eec.state.ma.us/docs1/curriculum/20030401_preschool_early_learning_guidelines.pdf) – The *Massachusetts Guidelines for Preschool Learning Experiences* contains learning guidelines and ideas for learning experiences in all curriculum areas including STEM.

<http://www.bostonchildrensmuseum.org/sites/default/files/pdfs/STEMGuide.pdf>– This *STEM Sprouts Teaching Guide* includes ideas and links for preschool STEM activities.

<http://www.teachpreschool.org/2012/09/all-you-need-is-a-box/>- This site includes great ideas for exploring boxes with young children!

<http://www.pinterest.com/wh0datgurl/101-things-to-do-with-a-cardboard-box/>- This Pinterest site contains a variety of ideas for using boxes across the curriculum. Be selective!

<http://www.thecraftycrow.net/2012/04/what-can-you-make-from-a-cardboard-box-.html>– This site includes more ideas for activities with boxes and cardboard.

<http://illinoisearlylearning.org/tipsheets/toys-boxes.htm>– This tip sheet includes ideas for making toys from boxes and links to other resources.

<http://www.youtube.com/watch?v=3KXuBcdmktY>-Watch a fun Youtube video of *Not a Box!*

<https://www.youtube.com/watch?v=Avs7WKK3X38>-This is a Youtube video of *Sitting in My Box*.

# A Message to Families...

Clarendon educators are dedicated to building brains! This month we are using boxes to involve children in active learning experiences designed to help your child's brain grow! We hope that you will visit the *Brain Building in Progress* website for some wonderful ideas to try at home.

During the next few months our curriculum is focused on hands-on experiences with science, technology, engineering and math, called STEM activities. Young children are born to discover, and we are working to help them make sense of the world around them. Here are some examples of STEM experiences using boxes:

- Simply playing with boxes allows children to explore size, shape and weight as well as engineering concepts like balance. Making observations, predicting what might happen, and trying out new ideas are all important science inquiry skills.
- Building with boxes encourages children to use simple tools like scissors and tape. This is technology for young children!
- Sorting objects into boxes by color, size or shape is important to the development of early math skills.
- Getting into boxes or creating spaces with boxes encourages children to make comparisons and learn about bigger, smaller, wider, etc.



You have probably noticed that babies love boxes and young children often want to play with the box instead of the present inside. Feel free to encourage their investigations. You are your child's first teacher and even a simple box makes a great educational toy!

## Ask me about:

- Something I made with a box.
- How I measured myself with boxes.
- A story about a box that I liked.
- How I built something with my friends.
- How people use boxes.
- An art work I created using a box.
- How I sorted things in boxes.
- Things I used to put boxes together.



## INTERNET RESOURCES

<http://families.naeyc.org/article/why-babies-boxes-best>-Read an article that describes why babies love boxes!

<http://brainbuildinginprogress.org/> -The *Brain Building in Progress* website has wonderful ideas to try with your child.

<http://stem-app.wheelock.edu/>-Sign up for a new free STEM activity app that provides fun activities for school age children!

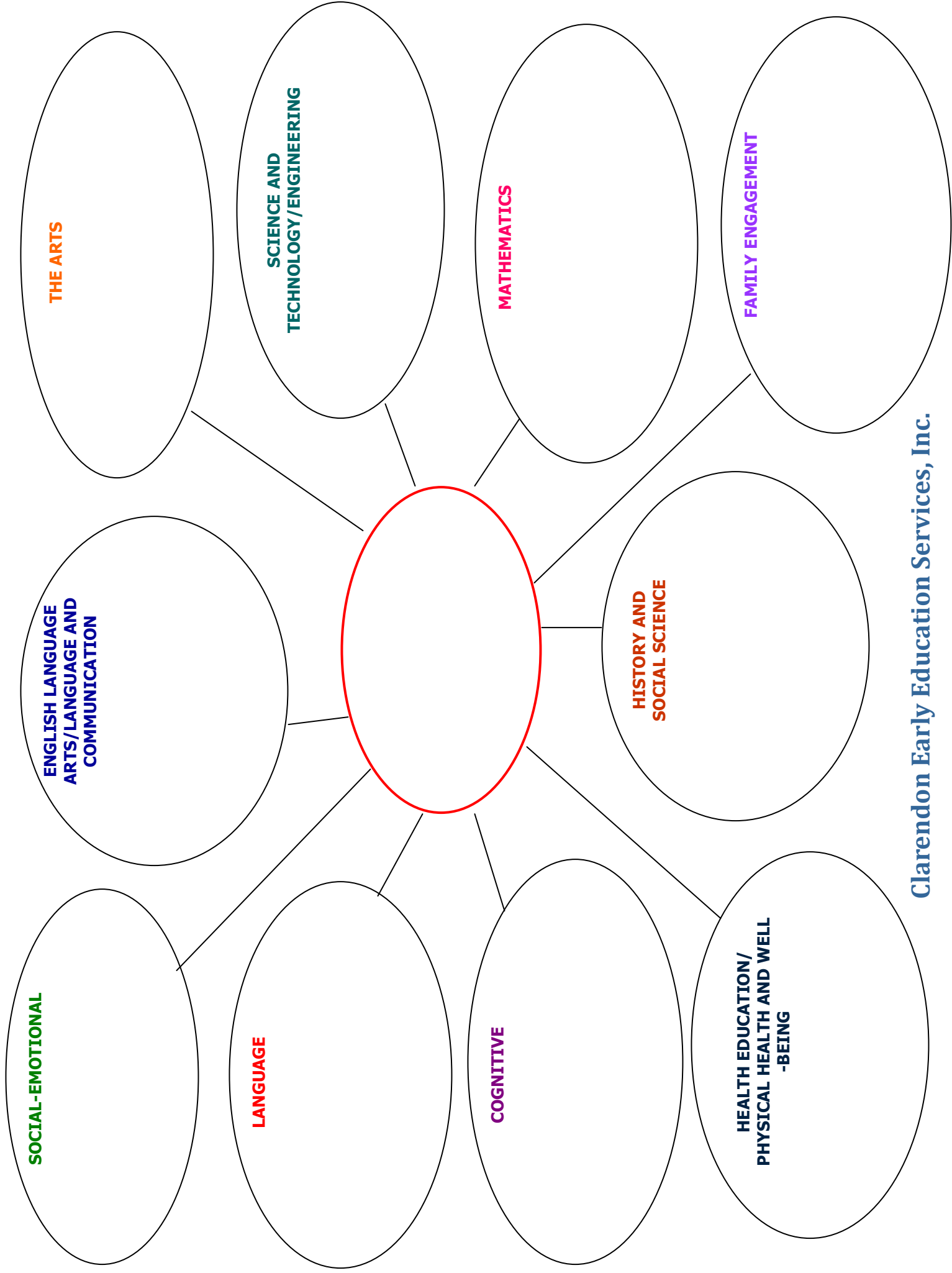
<http://www.youtube.com/watch?v=3KXuBcdmktY>-Watch a fun Youtube video of *Not a Box!*

<http://illinoisearlylearning.org/tipsheets/toys-boxes.htm>- This tip sheet includes ideas for making toys from boxes and links to other resources.



# Clarendon Early Education Services, Inc.





*This month in our program...*

**OUR FAVORITE ACTIVITIES...**

---

---

---

---

---

---

---

---

---

---

**CHANGES TO THE ENVIRONMENT...**

---

---

---

---

---

---

---

---

---

---

**SPECIAL EVENTS**



---

---

---

---

---

---

---

---

---

---

**CHILDREN'S INTERESTS TO FOLLOW UP...**

---

---

---

---

---

---

---

---

---

---

Name: \_\_\_\_\_

Weekly curriculum planning time: \_\_\_\_\_

Weekly meeting with assistant (if applicable): \_\_\_\_\_