Using Tools: Flubber

Head Start Activity

Description: Children will explore flubber using a variety of different tools.

Materials

- Flubber (see recipe below)
- Trays
- Rulers
- Plastic rolling pins
- Plastic cookie cutters
- Plastic balance
- Plastic potato mashers
- Plastic scissors

Set Up

- Set out a variety of tools on the tables.
- Hand out trays with a handful of flubber on them.
- Encourage the children to use the different tools to explore the flubber.

Head Start Early Learning Outcome Framework Alignment

Goal P-SCI 1. Child observes and describes observable phenomena (objects, materials, organisms, and events).

DEVELOPMENTAL PROGRESSION		INDICATORS
36 to 48 Months	**48 to 60 Months**	**By 60 Months**
Uses the five senses to observe objects, materials, organisms, and events. Provides simple verbal or signed descriptions. With adult support, represents observable phenomena, such as draws a picture.	Makes increasingly complex observations of objects, materials, organisms, and events. Provides greater detail in descriptions. Represents observable phenomena in more complex ways, such as pictures that include more detail.	• Identifies the five senses (smell, touch, sight, sound, taste) and uses them to make observations. • Uses observational tools to extend the five senses, such as a magnifying glass, microscope, binoculars, or stethoscope. • Describes observable phenomena using adjectives and labels, such as lemons taste sour and play dough feels sticky. • Represents observable phenomena with pictures, diagrams, and 3-D models.

This program was made possible by the Institute of Museum and Library Services

Goal P-MATH 8. Child measures objects by their various attributes using standard and non-standard measurement. Uses differences in attributes to make comparisons.

DEVELOPMENTAL PROGRESSION		INDICATORS
36 to 48 Months	**48 to 60 Months**	**By 60 Months**
With adult support, begins to understand that attributes can be compared, such as one child can be taller than another child.	With some adult support, uses measurable attributes to make comparisons, such as identifies objects as the same/different and more/less.	• Measures using the same unit, such as putting together snap cubes to see how tall a book is. • Compares or orders up to 5 objects based on their measurable attributes, such as height or weight. • Uses comparative language, such as shortest, heavier, or biggest.

These images have been adapted from: U.S. Department of Health and Human Services, Administration for Children and Families. "Head Start Early Learning Outcome Framework." *Head Start Early Learning Outcome Framework*, Office of Head Start. https://eclkc.ohs.acf.hhs.gov/sites/default/files/pdf/elof-ohs-framework.pdf

Suggestions for Teaching

Depending on the age of the children, this activity will look different. This is open ended and sensory, there is no wrong way to explore the flubber!

Here are some activity extensions and adaptations:

- Try making impressions with different tools. Try child-safe kitchen gadgets, shells, leaves, etc.
- Encourage children to make different patters using the different tools provided.
- Try hiding different items in the flubber and challenging the children to find them.
- Experiment with different materials like kinetic sand or playdough.

Flubber Recipe

Materials:

- 3 cups of water
- 2 cups of Elmer's white glue
- Liquid watercolor
- 2 tsp 20 Mule Team Borax

1. In a large container combine and mix:
   1 ½ cups very warm water
   2 cups Elmers white glue
   A few drops of water color and/or glitter if using clear glue
   Make sure this combination is completely mixed

2. In a small container combine and mix:
   1 1/3 cups very warm water
   2 level tsp 20 Mule Team Borax. Adults, please do this step.
   (Please see NOTES section below for safety information about Borax.) Make sure the Borax is completely dissolved.

3. Combine the glue and borax mixtures:
   Mix well using your hands until all the liquid is absorbed. You may need to squish, mix, and break up the flubber to get it fully combined. Store the flubber in a plastic, air-tight container at room temperature. For best results, measure precisely and mix well as noted above.

   White vinegar removes flubber from carpet, clothes, and hair.

Using Tools: Flower Dissection

Head Start Activity

Description: Children will use science tools to pull apart, poke, and explore flowers.

Materials

- Flowers
- Magnifying glass
- Tweezers
- Plastic scissors
- Double sided tape
- Paper
- Tray

Set Up

- Provide children with a tray, flower and variety of tools
- Allow them time to explore the flower using the tools provided.

Head Start Early Learning Outcome Framework Alignment

Goal P-SCI 2. Child engages in scientific talk.

DEVELOPMENTAL PROGRESSION		INDICATORS
36 to 48 Months	**48 to 60 Months**	**By 60 Months**
Begins to use scientific vocabulary words with modeling and support from an adult. Sometimes repeats new words offered by adults.	Uses a greater number of scientific vocabulary words. Repeats new words offered by adults and may ask questions about unfamiliar words.	• Uses scientific practice words or signs, such as observe, describe, compare, contrast, question, predict, experiment, reflect, cooperate, or measure. • Uses scientific content words when investigating and describing observable phenomena, such as parts of a plant, animal, or object.

Goal P-MATH 1. Child knows number names and the count sequence.

DEVELOPMENTAL PROGRESSION		INDICATORS
36 to 48 Months	**48 to 60 Months**	**By 60 Months**
Says or signs some number words in sequence (up to 10), starting with one. Understands that counting words are separate words, such as "one," "two," "three" versus "onetwothree".	Says or signs more number words in sequence.	• Counts verbally or signs to at least 20 by ones.

This program was made possible by the Institute of Museum and Library Services

These images have been adapted from: U.S. Department of Health and Human Services, Administration for Children and Families. "Head Start Early Learning Outcome Framework." *Head Start Early Learning Outcome Framework*, Office of Head Start. https://eclkc.ohs.acf.hhs.gov/sites/default/files/pdf/elof-ohs-framework.pdf

Suggestions for Teaching

Depending on the age of the children, this activity will look different. This is an open ended activity, there is no wrong way to explore the flowers!

Here are some activity extensions and adaptations:

- Explore using the flower parts to make a pattern or design.
- Try to arrange the flower parts to look like the flower at the beginning.
- Sort the different parts into piles.

Using Tools: Exploring Ice

Head Start Activity

Description: Build and explore with ice cubes.

Materials

- Ice cubes with items in them
- Salt
- Spoons
- Droppers
- Water
- Trays
- Tweezers
- Craft sticks
- Magnifying glasses
- Small plastic toys

Set Up

- Freeze the small toys in ice cubes.
- Give each child a tray with an ice cube, salt, water, and a variety of other tools.
- Allow them time to explore different ways to try and get the plastic toy out of the ice.

Head Start Early Learning Outcome Framework Alignment

Goal P-SCI 1. Child observes and describes observable phenomena (objects, materials, organisms, and events).

DEVELOPMENTAL PROGRESSION		INDICATORS
36 to 48 Months	**48 to 60 Months**	**By 60 Months**
Uses the five senses to observe objects, materials, organisms, and events. Provides simple verbal or signed descriptions. With adult support, represents observable phenomena, such as draws a picture.	Makes increasingly complex observations of objects, materials, organisms, and events. Provides greater detail in descriptions. Represents observable phenomena in more complex ways, such as pictures that include more detail.	• Identifies the five senses (smell, touch, sight, sound, taste) and uses them to make observations. • Uses observational tools to extend the five senses, such as a magnifying glass, microscope, binoculars, or stethoscope. • Describes observable phenomena using adjectives and labels, such as lemons taste sour and play dough feels sticky. • Represents observable phenomena with pictures, diagrams, and 3-D models.

This program was made possible by the Institute of Museum and Library Services

● **Goal P-SCI 4.** Child asks a question, gathers information, and makes predictions.

DEVELOPMENTAL PROGRESSION		INDICATORS
36 to 48 Months	**48 to 60 Months**	**By 60 Months**
Asks simple questions. Uses adults as primary resources to gather information about questions. With adult support and modeling, makes simple predictions, such as "I think that the golf ball will be heavier than the ping pong ball."	Asks more complex questions. Uses other sources besides adults to gather information, such as books, or other experts. Uses background knowledge and experiences to make predictions.	• Asks questions that can be answered through an investigation, such as "What do plants need to grow?" or "What countries do the children in our class come from?". • Gathers information about a question by looking at books or discussing prior knowledge and observations. • Makes predictions and brainstorms solutions based on background knowledge and experiences, such as "I think that plants need water to grow." or "I think adding yellow paint to purple will make brown."

These images have been adapted from: U.S. Department of Health and Human Services, Administration for Children and Families. "Head Start Early Learning Outcome Framework." *Head Start Early Learning Outcome Framework*, Office of Head Start. https://eclkc.ohs.acf.hhs.gov/sites/default/files/pdf/elof-ohs-framework.pdf

Suggestions for Teaching

Depending on the age of the children, this activity will look different. This is open ended and sensory, there is no wrong way to explore the ice!

Here are some activity extensions and adaptations:

- Let children use all of their senses to explore the ice cubes.
- Explore vocabulary such as cold, warm, frozen, and melt.
- Give children regular ice cubes and allow them to build different ice structures.

Credits and rights

Developed by the Sciencenter for the Collaborative for Early Science Learning.
Contact: Bethany Resnick bresnick@sciencenter.org

INSTITUTE of Museum and Library SERVICES

This project was made possible in part by the Institute of Museum and Library Services