

Description: Children will experiment and explore what objects sink or float!

Materials

- Objects that float and sink
- Large clear bins of water
- Towels

Set Up

- Set up stations with bins of water on the tables.
- Place a variety of objects at each of the water stations.
- Invite children to pick an item and predict whether it will sink or float when you drop it in the water.
- Once they place the item in the water make an observation about what happened.

Head Start Early Learning Outcome Framework Alignment

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

DEVELOPMENTAL PROGRESSION		INDICATORS
36 to 48 Months	48 to 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.	By 60 Months <ul style="list-style-type: none"> • 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."

● **Goal P-SCI 5.** Child plans and conducts investigations and experiments.

DEVELOPMENTAL PROGRESSION		INDICATORS
36 to 48 Months	48 to 60 Months	By 60 Months
With adult support, engages in simple investigations and experiments, such as building a "bridge" out of classroom materials and seeing how many dolls it will hold before it collapses. Records data with teacher assistance, mostly using pictures and marks on a page.	With increasing independence, engages in some parts of conducting complex investigations or experiments. Increasingly able to articulate the steps that need to be taken to conduct an investigation. Uses more complex ways to gather and record data, such as with adult support, makes a graph that shows children's favorite snacks.	<ul style="list-style-type: none"> • Articulates steps to be taken and lists materials needed for an investigation or experiment. • Implements steps and uses materials to explore testable questions, such as "Do plants need water to grow?" by planting seeds and giving water to some but not to others. • Uses senses and simple tools to observe, gather, and record data, such as gathering data on where children's families are from and creating a graph that shows the number of children from different countries.

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 and exploratory activity, there is no wrong way to do it! Keeping that in mind, here are some suggestions:

Here are some activity extensions and adaptations:

- Have the children sort all of the objects between float and sink before putting them in the water.
- Challenge the children to take one of the items that floats and get it to sink, and vice versa.
- Try using different foods from your kitchen before you eat them.

Predicting: Feather Rockets

Head Start Activity

Description: Children will make and launch feather rockets.

Materials

- Straws
- Feathers
- Buckets/containers to use as targets

Set Up

- Set out the supplies on the table.
- Invite the children to practice blowing through their straw
- Have them choose a feather and place it inside the end of the straw
- Tell them to aim the straw in the direction of the target and blow into the straw to see where the feather goes.

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- **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.	
		<ul style="list-style-type: none"> • 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.

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- Use tape to make a starting point and then have everyone launch their rockets at once to see which one goes the farthest.
- Try using different tools to measure how far each of the feathers went
- Use tape to mark where you think your rocket will land and then test out your hypothesis.

Description: Children will build different structures out of blocks and then roll balls at them to see if they will fall down.

Materials

- Foam blocks
- Soft soccer balls
- Tape

Set Up

- Use tape to mark off the sections of the room where the children should build their structures.
- Let the children build different towers and then let them roll the balls to try and knock them down.

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- Challenge the children to build structures of different heights and then knock them down.
- Try sorting the blocks into different piles before using them to build.
- Experiment with rolling the balls at different speeds. Does it work better if the ball is going fast or slow?

Credits and rights

Developed by the Sciencenter for the Collaborative for Early Science Learning.

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