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# Splash Science: Will It Sink or Float?

## Materials Needed:

- A large, clear container or tub filled with water (a plastic storage bin or a large mixing bowl works great)
- A towel to place under the bin for easy cleanup
- A collection of small, waterproof objects from around the house. Suggestions:
    - A plastic toy block
    - A small rock or pebble
    - A leaf from outside
    - A rubber duck or other bath toy
    - A metal spoon
    - A crayon
    - A piece of sponge
    - A bottle cap (plastic or metal)
    - A small ball (like a ping pong ball)
    - A coin
- Optional: A piece of paper with two columns drawn on it. One column with a picture of an object sinking, the other with an object floating.

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## Learning Objectives:

By the end of this lesson, your little scientist will be able to:

- Make a prediction (a guess) about whether an object will sink or float.
- Test their prediction by placing objects in water.
- Observe and describe what happens using words like "sink" and "float."
- Sort objects into two groups based on the results of the experiment.

## Lesson Procedure:

### 1. The Spark: Introduction & Prediction (5 minutes)

This part is all about building curiosity!

1. Sit with your child in front of the tub of water. Say something exciting like, **"Today, we are going to be water scientists! We're going to investigate a big question: Will it sink to the bottom, or will it float on the top?"**
2. Show them the collection of objects. Pick up one object, like the rubber duck. Ask, **"What do you think this duck will do in the water? Do you think it will sink or float?"**
3. Introduce the vocabulary in a physical way. For "float," make your hand glide on the surface of the water. For "sink," make your hand dive down to the bottom.
4. Lay out all the objects. Let your child hold each one. As they hold an object, ask them to make a prediction. If you are using the optional chart, have them place the object in the "sink" or "float" column before testing. Don't correct their guesses! The goal is to encourage thinking, not to be right.
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2. The Experiment: Making a Splash! (10-15 minutes)

This is the hands-on, fun part where your child becomes the lead scientist.

1. Let your child pick the first object to test.
2. Encourage them to say their prediction one more time. **"You think the rock will sink. Let's find out!"**
3. Have them gently place the object into the water. Dropping or throwing can affect the result, so "placing" is a good habit.
4. Watch together! React with excitement no matter the outcome. **"Wow! Look at that! The rock went straight to the bottom. It SINKS! Your prediction was right!"** or **"Oh, that's interesting! The leaf is staying on top. It FLOATS!"**
5. After testing an object, take it out of the water and place it into a "sink" pile or a "float" pile on the towel.
6. Continue this process one by one for all the objects, letting your child do all the placing and observing.

3. The Discovery: Talk About It (5 minutes)

This is where you help your child make sense of what they saw.

1. Look at your two piles of objects. Point to the "float" pile and ask, **"What did all of these things do in the water?"** (They floated!)
2. Point to the "sink" pile. **"And what about all of these things?"** (They sank!)
3. Ask simple, open-ended questions to encourage thinking. Don't worry about scientifically perfect answers.
    - "I wonder why the sponge floated but the rock sank?"
    - "What do you notice about the things that float?"
    - "The coin is so small, why do you think it sank so fast?"

Assessment (Informal Observation):

You can see what your child learned by simply observing them during the activity:

- Did they make predictions before testing the objects?
- Did they begin to use the words "sink" or "float" correctly?
- Were they able to help you sort the objects into the two groups after the experiment was over?

Differentiation and Extension:

For Extra Support:

- Focus on just the action and vocabulary. Test only 3-4 objects. Hold their hand as they place the object in the water. Repeat the key word many times: "Float, float, the boat floats!" Use hand gestures (thumbs up for float, thumbs down for sink).

For an Extra Challenge (Creativity & Problem-Solving):

- **The Boat Challenge:** Give your child a small piece of aluminum foil. First, have them squish it into a tight ball and test it (it will sink). Then, help them open it up and shape it into a small boat. Place it in the water. It floats! Now, see how many "sinker" items (like coins or pebbles) their boat can hold before it sinks. This introduces the concept of shape and water displacement in a very simple, creative way.

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