

Will It Sink or Float?

WHAT ARE WE INVESTIGATING?

How does density affect an object's ability to sink or float?

MATERIALS:

- Clear Cup or Bowl
- Water
- Food to test (fruit snacks, crackers, raisins, potato chips, rice, etc.)
- Strive Academy's Engineering Design Process Handout (found at www.striveacademy.org)
- Pencil or Pen

EXTENSION:

- * Try this variable - repeat the experiment but try different liquids. Instead of water, try vinegar, milk, or orange juice.
- * Try this variable - repeat the experiment but try different temperatures of water in your cup/bowl. Does a change in temperature affect if the foods sink or float?

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DIRECTIONS:

1. Gather all of your materials. Our materials are just suggestions - feel free to add other things too!
2. On your handout (found at www.striveacademy.org), fill in the title of your experiment (Will It Sink or Float?).
3. On your handout, fill in your hypothesis. You want to answer the question: When I put my food items in the water, which items will sink and which will float? Make a list of the food items that you are going to test. Next to each food, put an "S" if you think it will sink and put an "F" if you think it will float.
4. On your handout, sketch a design of your experimental setup. Feel free to use color and label the materials that you will be using!
5. Fill the cup or bowl halfway full of water.
6. Take your first piece of food. Put it in the water and make some observations about what happens.
7. Under "Data Collection/Observations", write the name of the food and next to it, write if it sinks or floats.
8. Repeat Steps 6 & 7 for all of your food items.
9. Under "Results", draw or write some observations about which types of food sink and which types of food float.
10. Answer the "Analysis" questions on your handout:
 - How did your results compare with your hypothesis? Were you correct about which foods you thought would sink and float?
 - Which types of food tended to sink more often? Which types of food tended to float more often?
 - Some of your foods may have started out by floating, but then began to sink. What could have caused this to happen?

**** Try the extension activities on the first page for more fun! ****