

**Grade Level:** Grade 5

**Topic:** Sinking and Floating

**Title:** *Making a Sinker Float*

## **Objectives**

- Students will investigate and record whether changing the shape of a piece of clay has an effect on its ability to float.
- Students will find and record three different designs.
- Students will discuss and compare the designs of clay boats in an oral presentation.

## **Standards**

- 5.2.4 – Keep a notebook to record observations and be able to distinguish inferences from actual observations.
- 5.2.6 – Write instructions that others can follow in carrying out of procedures.
- 5.7.4 – Select a focus, organizational structure, and point of view for an oral presentation. **(Language Arts)**

## **Materials**

- Plastic tub
- Water
- Lump of clay (30 grams)
- Science notebook
- Marbles

Adapted from the STC Floating and Sinking Unit, Lesson 6.

## **Activity**

1. Distribute all materials.
2. Teacher direction: Explain objectives of lesson.
3. Notebook entries
  - a. Name, date, time
  - b. Give students question: “Does the shape of an object affect whether it floats or sinks?”
  - c. Create chart/table in Science notebook for design and test outcome.
  - d. Students will write procedures in Science notebook.
4. Complete activity based on student written procedure. Record results in Science notebook.
5. Students will write a conclusion in Science notebook, based on question investigated.
6. Students will do an oral presentation in class, describing their results.

### Extension

Test boat designs by adding marbles to see which design will carry the most cargo. Students record results of the extension activity in their science notebooks.

## **Assessment:**

### Rubric

To receive a 4, students should

- Complete all of number 3
- Explain different ways to make objects that are sinkers into floaters
- Generate new questions

To receive a 3, students should

- Name, date and time in Science notebook
- Create and complete a chart
- Have written procedures
- Use all materials
- Use all information to form a conclusion based on question

To receive a 2, students should

- Chart incomplete
- Written procedures incomplete
- Did not use all materials
- Conclusion did not match data collected

To receive a 1, students should

- Components of notebook missing
- No conclusion present
- Did not use materials to make predictions
- Did not answer question