

**2<sup>nd</sup> Grade: Lesson 1.4**  
**Activity Sheet**  
**Using the Properties of Materials**  
**to Improve a Model Boat**

**Name:** \_\_\_\_\_

**Date:** \_\_\_\_\_

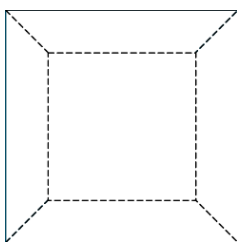
**Safety:** Wear safety goggles, and be sure to follow all safety instructions given by your teacher.  
Wash your hands after completing the activity.

**ACTIVITY**

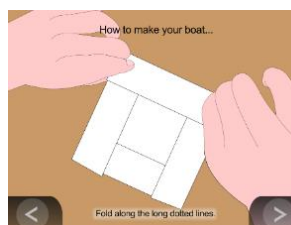
**Materials**

- Paper boat template
- Tape

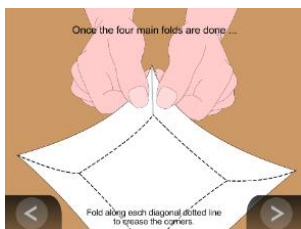
1. Follow your teacher's instructions and the pictures below to fold and tape the paper square to make a boat.



1. Lay your boat template flat on your table or desk



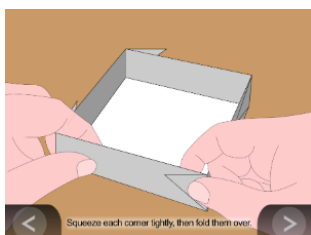
2. Fold each side in along the dotted line and make a nice crease.



3. Open the sides up and then fold the corners.



4. Squeeze each corner and fold it toward a side of the boat.



5. Fold each corner to the side of the boat. Be sure the sides stand up well.



6. Tape the corners securely to the sides of the boat.

2. Your teacher put a paper boat in water and added pennies to the boat.

How many pennies did the boat hold before sinking? \_\_\_\_\_

What happened to the paper that the boat was made from?



## ACTIVITY

### Question to investigate:

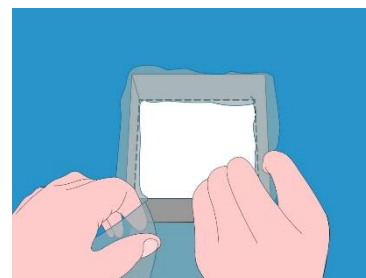
How can you use paper, plastic, and aluminum foil to design and build a boat that holds the most weight without sinking?

### Materials

- Centimeter ruler
- 80+ pennies
- Plastic (15 cm x 15 cm square)
- Copier paper (15 cm x 15 cm square)
- Aluminum foil (15 cm x 15 cm square)
- Scissors
- Tape
- Container with water

### Procedure

1. Use plastic, aluminum foil, and tape to cover your boat.



### 3. Make a prediction

How many pennies do you think your boat will hold now that it is covered with plastic and aluminum foil?

I think that our boat will hold \_\_\_\_\_ pennies before sinking.

2. Put your boat in the water and test it to see how many pennies it can hold without sinking.

### 4. What actually happened?

We discovered that our boat held \_\_\_\_\_ pennies before sinking.



5. Why do you think adding aluminum foil and plastic helped your boat hold more pennies before sinking?