

## **Foil Boats**

In this activity, you will use the materials listed below to build a boat with the greatest buoyant force possible.

### **Materials**

- 1 sheet of aluminum foil (3" x 3")
- Paper clips
- Dish pan
- Water



### **Process**

1. Grab all your supplies.
2. Make your sheet of aluminum foil into what you think is the best floating shape of boat.
3. Test your boat in a water filled dish pan, does it float? If it doesn't float, make new shapes until it does. What do you notice about the shapes that float?
4. Once you've got a floating boat see how many paper clips it can hold without sinking! Which shapes can hold the most weight? Why do you think that is?

### **So What's Happening?**

*Buoyant force* is the upward force that keeps things afloat. The buoyant force is equal to the weight of the water the boat displaces. Heavy objects, like ships, will sink unless shaped a certain way.

### **Vocabulary**

- **Buoyant force** - the upward force that keeps things afloat.
- **Buoyancy** – how much something sinks or floats in the water.

### **For More Information**

Explorit Science Center. "Science Bytes: Float, Sink, or Swim." Last Modified 2011.

<http://www.explorit.org/science/bytes/float.html>

Georgia State University: HyperPhysics. "Buoyancy." Last Modified 2011.

<http://hyperphysics.phy-astr.gsu.edu/Hbase/hframe.html>