



Sink or Float?

A Molly Brown House Museum

History @ Home Titanic Experiment

Ages: Pre-K– 5th grade

Time: 20-30 minutes

Objective: Students will make predictions and observations about flotation.

Materials:

8 small objects- Examples: a coin, a rock, a leaf, a small orange, a crayon, cotton ball, rubber ducky, marble, a lego

A bowl or clear container to fill with water (a pitcher or large Tupperware works great!)

Sink or Float Worksheet

Pen, pencil or marker

Paper towels

Background:

The Titanic was built in 1912 by the White Star Line. It was the largest moveable man made object ever built up to that point. It was the size of almost 3 football fields and was as tall as an 11 story building! It weighed as much as 8,000 elephants– 53,000 tons. How can something made out of metal and weighing that much float in the water? Today, we are going to do an experiment to see what will sink and what will float.

Procedure:

1. Fill your container with water.
2. Talk about flotation: Does everything float? Does everything sink? Why do you think things float or sink?
3. Predict it!: Hand out the worksheets (if using). We are going to make predictions about if these objects will sink or float in the water. A prediction is just a guess and there is no right or wrong answer. So let's look at each object, write the name down or draw it in the OBJECT column and then guess if it will sink or float when we put it in the water. If you think it will sink, put a x in the "Sink" column, if it will float, put an X in the "float" column under PREDICT IT!
4. Test It!: Now it is time to test our predictions. We are going to drop the objects into the water one and a time and write down on our chart what happened. Does it Sink or Does it float?
5. Make Sense of It: (Can talk about what they are made out of, weight of the objects etc.)

What is the same about the objects that floated?

What is the same about the objects that sank?

How are the objects that floated different than the ones that sank?

6. Wrap up: Why do things float? (can change this discussion based on the ages of the students)

Flotation has to do with the DENSITY and BOUYANCY. Objects that are BOUYANT can float because they are less DENSE than water. Objects that sink are MORE DENSE than water. So which objects are more dense than water? (all the ones that sank) Was the Titanic more or less dense than water if it floated? What happened to make it sink? (it became less dense because it filled with water)

