



Sinking Science and Floating Fun

Why do some things sink while others float? While taking a break from your quiet water paddling, gather some objects from the shore: a twig, a rock, an acorn, a leaf, or another small item. Which of these things do you think will float? What do you think will sink? Place the items into two groups—one group for the things that you believe will float and one group for those that you believe will sink. Now it's time to experiment! Take one object from the "Float" group. Place it on the surface of the water. Does it float? Test an object from the other group. Does it sink? Continue testing all of your objects. Did all of the objects behave the way that you thought they would? Compare the objects. How are the floating objects the same? How are they different? When you look at all of the sinking objects, do they all look the same? Do they feel the same? What do they all have in common that makes them sink?

Try it at home: What makes it float?

You need:

- A small, shallow dish filled with water
- 1-inch square of tissue paper
- Paper clip
- Pencil or craft stick

An object's shape and density, or how much "stuff" makes up the object, will determine if it will float. The surface of the water also helps things to float. The water molecules, or tiny building blocks that make the water, like to stay close together. Together they form a skin over the surface of the water. This skin is called surface tension. To see how surface tension helps objects to float, try the following experiment:

Fill a shallow dish or bowl with water. Place a paper clip on the surface of the water. Does it float? As unbelievable as it sounds, a paper clip can float on water! If your paper clip did not float, that is okay. The surface tension, or skin on the top of the water, may have broken, causing the paper clip to sink. Place a 1-inch tissue paper square on the surface of the water. Gently place your paper clip in the surface of the tissue paper square. Using a pencil or craft stick, carefully push down on the outer edges of the tissue paper square. The tissue will begin to fall down to the bottom of the bowl. As the tissue paper sinks, what happens to the paper clip?