

SINK OR FLOAT?

Why do some things sink and others float? Let's consider objects made out of iron. Iron is a dense metal, and a small coin made out of iron will sink. However, a huge ship made out of iron floats well enough to cross oceans. What makes this same metal act in such different ways?

It's all a matter of displacement. The ancient Greek mathematician and inventor Archimedes described this phenomenon in what is known as Archimedes' principle. This principle states that any object immersed in a fluid is acted upon by an upward, or buoyant, force equal to the weight of the fluid displaced by the object. As long as enough water gets displaced, the object will float. If it does not, then the object sinks. This means that a certain size needs to be maintained for the object so that it will float.

Gather up some household items to test for buoyancy, and fill a bowl with water to test each object in. We've attached a worksheet that you can use to mark down your results.

Check out these resources for more information and ideas for further investigation:

<https://www.pbslearningmedia.org/resource/ket-earlychild-sci10/sink-or-float/>

<https://www.stevespanglerscience.com/lab/experiments/sink-or-swim-surface-tension/>

<https://showmelibrarian.blogspot.com/2012/04/sink-or-float-titanic-edition.html>

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Can you guess which objects will sink and which will float? Make a prediction, test your objects in a bowl of water and draw or write down your results. Try these objects, or substitute whatever toys or household items you have on hand:

penny

pebble

eraser

button

sponge

pine cone

cork

key

ice cube

bottle cap

paper clip

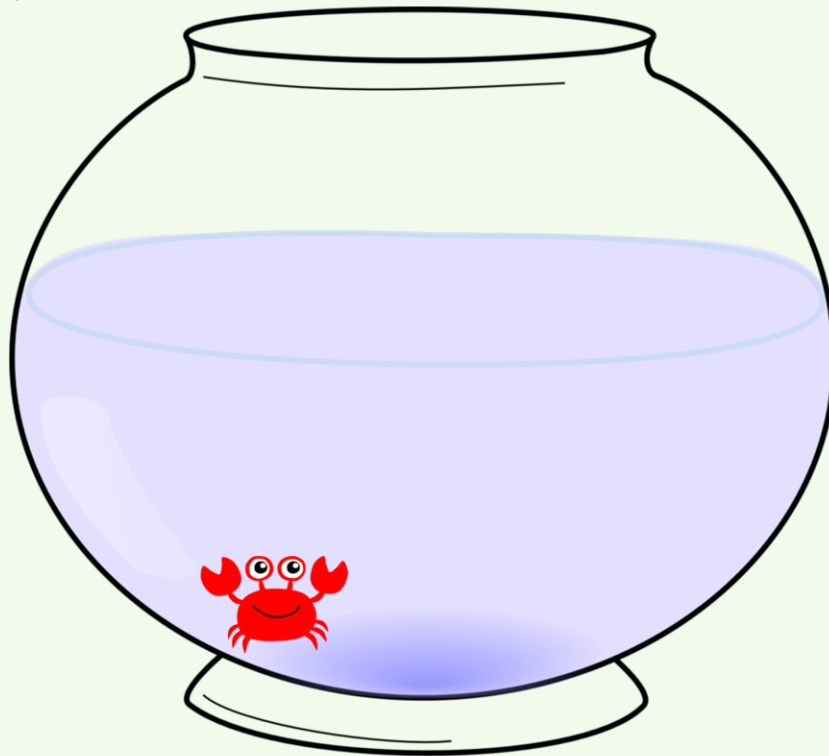
rubber band

pencil

straw

spoon

SINK?



FLOAT?

