

# A STEM in the Park Take Home Activity

## STEM in the PARK

Science, Technology, Engineering, and Mathematics

### Sinking Clay and Floating Pennies



#### ***What You Need***

- A bowl or bucket of water
- At least an adult handful of clay, but more is better
- Some pennies (the more, the better)
- An orange
- A banana
- An empty bottle
- A bottle filled with pennies

#### ***What To Do***

1. Start by placing clay in the water and watch what happens.
2. Then change its shape, see if the clay float or sinks now.
3. Next, try to make a boat out of clay and see how many pennies it will hold.

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## **Observe...**

Predict which ones will float and which ones will sink. Watch what happens to your boat when you add pennies one at a time.

## **Learn...**

Buoyancy is the word to describe things that float. If some object is floating you can call it buoyant. But why do things float or sink? The reason the pennies sink in water is because of an idea called density. The pennies have more density than the water, and so the pennies sink. Anything with more density than water will sink in water, but other objects that have less density than water will float. The reason the clay floats in water is because it has less density than water. Archimedes in the fifth century was the first to explain this principle of buoyancy and use it.

## **Investigate...**

Now, try to guess what objects will float and sink in water, and then see if you were right. Place an orange in water and watch what happens. What about if you peel the orange? Do the same with the banana. Why do you think this happens? Finally, try an empty bottle and the same bottle filled with pennies. Find safe objects around the house to try as well.

If you want to test your knowledge with an online trivia game, here is a link.  
<http://www.surfnetkids.com/games/quiz/buoyancy/>

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