LA COUNTY LIBRARY

Activity Idea

HOW MANY DROPS OF LIQUID CAN A COIN HOLD?

Recommended for Ages 8+

Water Tension and Surface Tension Experiment

The number of drops you can put on a coin without spilling varies. Water molecules attract each other and stick together. Surface tension prevents the water molecules from falling apart and spilling. You can keep adding water drops until the surface tension is no longer stronger than the gravity's pull on the water. Each type of liquid has a different shape and therefore different strength. Molecules in each liquid are attracted to each other in different degrees and the surface tension of each liquid is different.

Supplies Needed:

- Water
- Coins
- A dropper or pipette
- Other liquids: cooking oil, dish soap, etc. (optional)

Instructions:

The set up for this experiment is quick and easy. Set a coin on a flat surface. If you are concerned about spills, put the coin on a napkin or plate on a flat surface. Fill the dropper with water. Carefully put a drop of water in the center of the coin.

Keep adding water one drop at a time and keep count. The water will start to form a dome shape. Stop when water spills over the coin. How many drops till the water spilled?

Repeat the experiment using other types of liquids. Pay attention to the shape of the liquid dome and which spilled the fasted and slowest.