

Date: _____

Name: _____

Viscosity Race

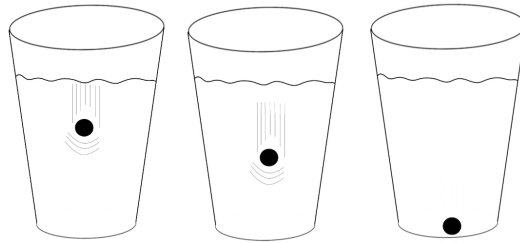
This activity was created by Victoria.

EXPERIMENT 1

See friction in action as a marble falls through different liquids.

MATERIALS

- As many liquids as you can think of. Eg. water, maple syrup, honey, oil, juice
- Cups that are the same size. You need one container per liquid
- One marble / stone for each liquid you have
- Phone to film (optional)
- Stopwatch (optional)



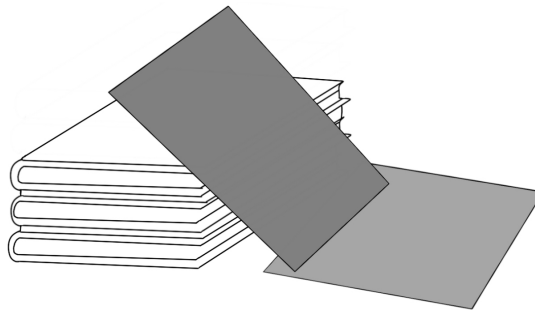
- 1 Fill each cup with the same amount of liquid.
- 2 If you are timing or filming the experiment, get your stopwatch/phone ready.
- 3 Drop the marbles in to the containers at and observe how fast the marble moves down the liquid. You can either drop them all at the same time, or time each one separately.

EXPERIMENT 2

See resistance in action as different fluids flow down an incline.

MATERIALS

- As many liquids as you can think of. Eg. water, maple syrup, honey, oil, juice
- Two trays
- Books or something to lay one of the trays in order to hold it up
- Stopwatch (optional)



- 1 Use your engineering powers to set up something like this image. The goal is to create a ramp for the liquids to flow and end in the second tray.
- 2 Measure approximately the same amount of liquids (feel free to eyeball it).
- 3 Pour the liquids down the ramp you have created and compare their viscosity based on how long it takes them to reach the bottom.

DEFINITIONS

VISCOSITY is the resistance of a fluid to flow or move. Viscosity happens because of the friction between the different molecules within the fluid. The higher the viscosity, the more energy and the more time is needed for the liquid to flow.

FRICTION is the force resisting a movement

FLUIDITY is the opposite of viscosity. It measures the ease of flow