

## Viscosity Lab

### Purpose:

The purpose of this activity is to investigate the relationship between viscosity, or the thickness of a liquid, and the speed at which a marble travels through the liquid.

### Procedure:

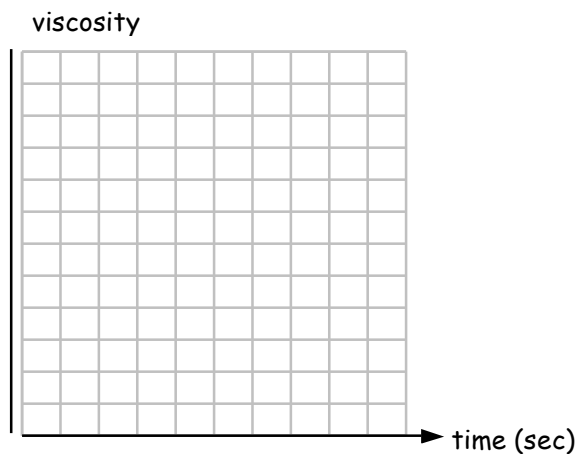
- Hold a bottle filled with one of the five substances below, so that the marble falls into the cap of the bottle.
- Elevate the neck of the bottle as demonstrated by your teacher.
- Using a stopwatch, record the length of time it takes for the marble to roll between the two lines marked on the side of the bottle.
- Repeat this procedure so that you take 5 trials of each substance.

### Data:

	Time (sec)						
	Viscosity	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5	Average (sec)
Water	1						
Oil	3						
Shampoo	60						
Corn Syrup	100						
Honey	1000						

### Analysis:

- Graph Viscosity vs. Time of Falling



### Post-Activity Questions:

1. Define viscosity.
2. What is the relationship between viscosity and the time it takes a marble to fall?
3. What flows more easily, a highly viscous fluid, or a fluid with a low viscosity?
4. What does this tell us about the shape of volcanoes?
5. How might the viscosity of lava from a volcanic eruption affect the outcome of an evacuation?