



NSF GK-12 Graduate Fellows Program  
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*University of North Carolina at Wilmington*

# Magma Lab

## Activity Instructions

by  
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# Magma Lab

Purpose: To observe the effect of silica and heat on lava flow.

Materials: Warm water, sand, spoon, clock, tray, molasses, honey, cooking oil, and shampoo.

Procedure:

1. From the cups of sticky liquid given to you, choose the thinnest of the liquids.
2. Hold the cup about 10cm above the plate and gently pour the liquid onto the plate.
3. Time how long it takes for the liquid to reach the edge of the plate.
4. Repeat steps 2 and 3 with the other sticky liquids.
5. Now, choose the thickest and the thinnest liquid. Sprinkle the tops of the liquids with sand. The liquids will be heated for you. Repeat 2 and 3.

Conclusion:

1. Before adding the sand or heat, which liquid flowed the fastest? Which flowed the slowest?
2. What happened when you heated the liquids?
3. What effect did the sand have on the flow rates?
4. Sand is composed of silicon and oxygen, the same elements that make up silica. Can you draw any comparisons between what you observed in this experiment and the flow rates of different types of magma?

