

The Great Viscosity Race

- **Test:** speed of Corn Syrup, Ketchup, and Vegetable Oil as they flow down a paper plate.
- **Prediction – Which will flow fastest?**

Your predictions:

Winner: _____ 2. _____ 3. _____

Test each liquid

	Corn Syrup	Ketchup	Vegetable Oil
Time Trial 1			
Time Trial 2			
Time Trial 3			

Actual results:

Winner: _____ 2. _____ 3. _____

1. How do you think temperature might affect the viscosity of a liquid?
2. If you could do this experiment again, what three liquids might you test?
3. What is one way you could slow the viscosity of a liquid?
4. How does this experiment relate to different lava flows?
5. Based on your data, how does the viscosity of the liquid influence how fast or slow the liquid flows?
6. The volcano, Nyiragongo, is said to have lava that flows "like water." Describe the viscosity of the lava produced by Nyiragongo.
7. How might lava flows with a high viscosity effect people and the environment?
8. How might lava flows with a low viscosity effect people and the environment?
9. In your own words compare the difference between high viscosity flows versus low viscosity flows.

Volcano Construction

Using the Volcano Worksheet, construct each of the three types of volcanoes, using the darker color Play Dough for the cinder and the brighter color Play Dough for the lava.

Summary Questions: (Pages 148-154 will help)

1. What is the difference between lava and magma?
2. How far can lava flow before it cools and hardens? (pg. 48)
3. What do nonexplosive eruptions mostly produce?
4. What do explosive eruptions mostly produce?
5. What is pyroclastic material?
6. What is pillow lava?
7. How fast did the volcanic gases and ash speed downhill during the 1991 eruption of Mount Pinatub?
8. Which type of eruption forms cinder cone volcanoes? (explosive or nonexplosive?)
9. Which type of eruption forms shield volcanoes?
10. Which type of eruption forms composite volcanoes?