

Unit 3 Handout 102

Lesson 12: Investigating Viscosity and Volcano Type

Purpose: Design an experiment to identify and compare how three different liquids flow, how liquids flow when mixed with a solid, and how their flow changes when heated.

Guiding Questions:

- How does the viscosity of a liquid affect its movement?
- How is the viscosity of lava related to the type of volcano formed?

1. Look at the three liquids for this activity: corn syrup (brown), shampoo (green), and water. What general observations can you make about each liquid? Then, answer questions A-C. A good answer to A-C will include an explanation.

Corn Syrup	Shampoo	Water

- a. How do you think each liquid will flow at room temperature?

- b. How do you think the room-temperature liquids would flow if you added sand to them?

- c. How do you think the liquids would flow if they were heated?

2. See page 161 in the XPT book for a list of materials you will have available to use for this experiment (see "Sample Substances"). Keep this in mind as we complete the back of this sheet.

3. As a class, we will read through and answer questions A-E on page 163 of the XPT book. We will record our answers on the back of this sheet.

Investigation Planning

Question(s) we will try to answer (this is found in your plastic box):

What we think will happen (hypothesis):

What we will keep the same when testing each liquid:

Procedure we will use to answer the question:

Things we will measure and how we will measure each one (dependent variables):

- Amount of liquid:
- Height of the slope:
- Time of flow:
- Distance of flow:
- How many trials we will conduct:

Name

Period

Date
