Name: Date: Pd:

Unit 3: Volcanoes & Mountains

Piles of Fire

Purpose:

The purpose of this activity is to investigate how particle size affects the angle of the volcano's slope.

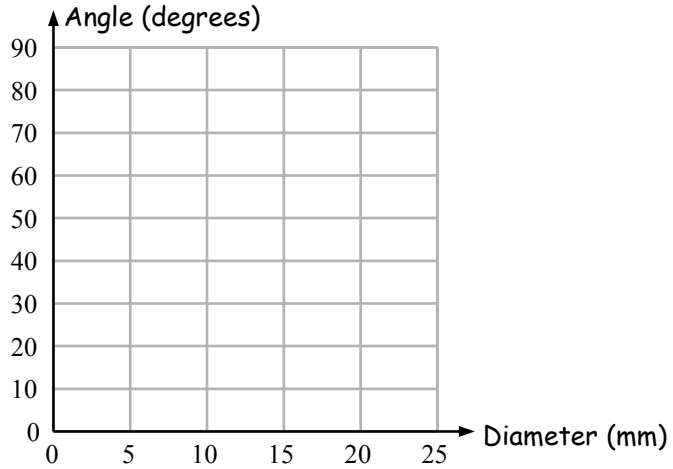
To Do:

- At each of the lab stations, make a steep cone using the particles (pearl barley, white or pinto beans) given.
- Lay a note card against the side of the cone and measure the angle of repose at the top of the cone. Record in the data table below. Repeat 4 more times.
- Measure the diameters of five of the particles you used at each station. Record in the data table below and calculate the average diameter.

	Angle of Repose at the Top (degrees)					
	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5	Average (degrees)
Pearl Barley						
White Beans						
Pinto Beans						

	Diameter of Particles (mm)					
	Particle 1	Particle 2	Particle 3	Particle 4	Particle 5	Average (mm)
Pearl Barley						
White Beans						
Pinto Beans						

- Graph the Angle of Repose vs. Average Diameter



Post-Activity Questions:

1. What does the size of the particles tell us about the steepness of a volcano?

2. If a volcano erupts more than one size of particle, where would you expect to find the smallest particles?