

Name: _____ Date: _____ Period: _____

Exploring Density

Learning Goal: Student will be able to use tables, graphs, equations, and slope to represent and compare relationships.

1. **Explore** the Density simulation for a few minutes, looking at the mass, volume, and density of whatever objects you choose. Write 1-3 observations you have about density.

2. **Choose one material:** wood, ice, Styrofoam, aluminum or brick. (Highlight your selected material). **Complete** the table below.

Mass	1	2			
Volume			10		

3. Determine if there is a **proportional relationship**. How do you know?

4. If possible, write an equation to determine the mass of a material if given its volume for the **wood, ice, Styrofoam, aluminum or brick**. (Highlight your selected material). _____

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Your group should be prepared to share your findings

5. During group presentations, **write the density equation of each material**. Order the materials from **least dense to most dense**.

6. **Graph** the lines for each equation using **Geogebra**. Use a **different color** for each material. Insert your **screenshot** below. (The table will help you create and organize your graphs). (Can also be graphed on graph paper, if necessary).

Material	Equation	Line color
Wood		
Ice		
Styrofoam		
Aluminum		
Brick		

7. How does the **steepness** of the lines relate to the **density** of each object?