## **DENSITY**

- 1. Write the equation for density.
- 2. What are the units for density?
- If a rock has a mass of 75 g and a volume of 15  $cm^3$ , what is its density? 3.
- 4. If the same rock is cut exactly into thirds, what is the density of each piece?
- 5. If the rock is "glued" together with another piece of the same material that is exactly the same as the first, what is the new density?
- The original rock (75 g mass, and 15  $cm^3$  volume) is heated and it expands to a 6. larger volume, what will happen to the density of the heated rock?
- Liquid water has a density of  $1g/cm^3$ . Which of the following is a possible 7. density for ice?

0 g/cm<sup>3</sup> .95 g/cm<sup>3</sup> 1.5 g/cm<sup>3</sup> 0°C .95°C

Most materials will expand when heated and contract when cooled. Draw a 8. graph of a typical material showing its temperature on the x-axis (horizontal) and density on the y-axis.





9. What is the rate of temperature change, in  $^{\circ}C/km$ , between 0 km and 4 km high?

- 10. What is the rate of temperature change, in  $^{\circ}C/km$ , between 4 km and 6 km high?
- 11. What is the rate of temperature change, in °C/km, between 8 km and 10 km high?