## Physical Science Study Guide: Chapter 1

- 1. What are the steps of the scientific method?
- 2. How are science and technology related?
- 3. Define hypothesis.
- 4. What is the difference between a dependent variable and an independent variable?
- 5. What is the difference between a constant and a control?
- 6. Define bias.
- 7. What is a theory?
- 8. What is scientific law?
- 9. What are the common SI units and symbols?
- 10. What are the common SI prefixes and what do they represent?
- 11. Know how to convert common SI units.
- 12. How do you measure the volume of a solid? (2 methods)
- 13. What is a volume of a solid that is 6cm high, 7cm wide and 15cm long?
- 14. What does 1ml also equal?
- 15. Know how to calculate the density, mass or volume of an object if given two of the three variables.
- 16. What are the three common types of graphs?
- 17. Which axis is the independent variable?
- 18. Which axis is the dependent variable?
- 19. What type of relationship does each graph represent?
- 20. How do scientists organize data?
- 21. A calculator measures 10 cm x 5 cm x 1 cm. It has a mass of 220 g. Find the density of the calculator.

22. What is the volume of the liquid in this graduated cylinder?



23. What is the mass of the triple beam?

6		100		200		300		400	)	500
0	10	20	30	40	50	60	70	80	<i>9</i> 0	100
0		 2	וויייו זייין זיי	 4		6	 7			10

24. How are derived units different from SI units?

- 25. In which step of the scientific method is information obtained through the senses?
- 26. Convert 8 centimeters into: meters \_\_\_\_\_, millimeters \_\_\_\_\_, kilometers \_\_\_\_\_,
- 27. What type of graph would be the best to use to compare the levels of lead contamination in six water wells?



In Figure 1-2, what is the responding variable?

- In Figure 1-2, what is the relationship between mass and volume?
- In Figure 1-2, what quantity does the slope represent?