

## Scientific Processes Test Review

Name \_\_\_\_\_

1. What is the number 1 rule as far as lab safety is concerned?
2. What does "be aware of your surroundings" mean in terms of lab safety?
3. What should you do if you aren't sure of something in lab or class?
4. What is the difference between a problem and a hypothesis?
5. Why is a control group a necessary part of an experiment?
6. What is a conclusion?
7. Describe the independent variable in an experiment. Hint: it is sometimes described as the manipulated variable
8. Describe the dependent variable in an experiment. Hint: it is sometimes described as the responding variable
9. Why do you use a graph to summarize your data from an experiment?
10. What are the base units for
  - a. Length \_\_\_\_\_
  - b. Mass \_\_\_\_\_
  - c. Volume \_\_\_\_\_
11. Why do we use the metric system in science?
12. Convert the following measurements using the metric ladder.
  - a. 7.4 km = \_\_\_\_\_ mm
  - b. 132 mm = \_\_\_\_\_ m
  - c. 13 cm = \_\_\_\_\_ km
  - d. 144 mg = \_\_\_\_\_ g
  - e. 0.34 kg = \_\_\_\_\_ mg
13. Decide if the first measurement is greater than (>), less than (<) or equal to (=) the second.
  - a. 7.4 km \_\_\_\_ 4000m
  - b. 132mm \_\_\_\_ 2m
  - c. 13 cm \_\_\_\_ 130 mm
  - d. 144 mg \_\_\_\_ 32 cg
  - e. 0.34 kg \_\_\_\_ 3.4 hg
14. Graduated cylinders are used to measure \_\_\_\_\_.
15. Meter sticks are used to measure \_\_\_\_\_.

16. A triple beam balance is used to measure \_\_\_\_\_.
17. Thermometers are used to measure \_\_\_\_\_.
18. How do you report your answer when reading lab instruments?
19. How do you read liquid volume using a graduated cylinder?
20. What is the first thing you should do to a balance before using it?
21. When making a graph, where do these go?
  - a. Independent variable
  - b. Dependent variable
  - c. Axis labels
22. Explain how you round an answer.
  - a. What would your answer be if you had to add  $4.5 \text{ g} + 3.146 \text{ g}$ ?
  - b. What would your answer be if you had to subtract  $56.65 \text{ cm} - 6.2 \text{ cm}$ ?