

Name: _____ Date: _____ Hour: _____

Integrated Science Unit 1 Study Guide

1. List the steps in order for the scientific method:

1. _____
2. _____
3. _____
4. _____
5. _____

2. Know the difference between quantitative observations and qualitative observations.

- a) Ex. of quantitative: _____
- b) Ex. of qualitative: _____

3. Know the difference between an inference and observation.

- a) Observation: _____
- b) Inference: _____
- c) You walk into the science classroom and observe that there are several laboratory materials out on the desks. What can you infer? _____

4. Be able to distinguish between independent variables and dependent variables. Look at the following experiments and list the independent variable (IV) and the dependent variable (DV) for each.

a) How does daily flossing affect the number of cavities that a person acquires?

IV: _____ DV: _____

b) How does the number of hours of sleep a student gets at night affect his/her performance in math class?

IV: _____ DV: _____

c) How does using technology in the classroom affect a student's participation in class?

IV: _____ DV: _____

5. You are testing which type of bouncy ball has the highest bounce. Name 3 things that should remain during your experiment. _____

6. Measurements should include a _____ and a _____.
7. The _____ is the metric unit for length. To measure length, you could use a _____.
8. The _____ is the metric unit for mass. To measure mass, you could use a _____ . Mass does NOT depend on _____.
9. Volume is a measure of _____ and units could include _____.
10. 3 ways that you could measure volume are:
- a) For a liquid: _____
- b) For a regularly shaped solid: _____
- c) Irregularly shaped solid: _____
11. Be able to distinguish between metric and customary (English) units. Look at the units below and circle the metric units:

inch	centimeter	quart	ounce	gram
milliliter	teaspoon	kilometer	pound	meter
mile	liter	gallon	foot	milligram

12. The metric system is based on the number _____.
13. Define hypothesis: _____
14. You want to conduct an experiment to determine how bringing your favorite science teacher chocolate ;) affects his mood. What would a good control for this experiment be? _____

Convert:

15. 173.6 kg = _____ g
16. 8.02 cm = _____ mm
17. 93.1 L = _____ mL
18. 100 mm _____ cm
19. 24.7 g = _____ mg

Write abbreviations for the following units:

21. milligrams: _____

24. grams: _____

22. centiliters: _____

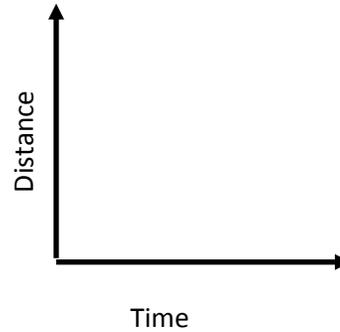
25. milliliters: _____

23. kilometers: _____

26. kilograms: _____

27. Label the graph using the following choices:

- Independent Variable
- Dependent Variable
- x-axis
- y-axis



Measure the following lines and record the lengths in centimeters, millimeters, and meters.

32.



_____ cm

_____ mm

_____ m

33.



_____ cm

_____ mm

_____ m