1. Which of the following is an OBJECTIVE observation?
   1. Chocolate ice cream is the best.
   2. I think dogs are the most obedient pets.
   3. The new iPhone app opens in less than a second.
   4. That house they are building is so pretty.
2. Which is NOT a step of the scientific method?
   1. Develop a hypothesis c. Ask a question
   2. Solve a problem d. Communicate results
3. How do you read the volume of a graduated cylinder?
   1. Below the meniscus c. Without the meniscus
   2. Above the meniscus d. You don’t measure volume in a cylinder
4. What is the first thing you should you do if you have an accident in the lab?
   1. Clean it up c. Notify your teacher
   2. See the nurse d. Don’t tell anyone
5. Which of the following is an example of an inference about the plant pictured?
   1. The plant has six leaves c. The plant has one stem
   2. The plant has flowers d. The plant has roots
6. Which is an observation about the plant pictured?
   1. The plant is in acidic soil c. The plant’s flowers are used for reproduction
   2. The plant is photosynthesizing d. The plant’s flowers attract hummingbirds
7. 0.34 kilograms = grams
   1. 34 grams c. 340 grams
   2. 0.0034 grams d. 3400 grams
8. 123 ml = L
   1. 0.123 L c. 0.0123 L
   2. 12,300 L d. 1.23 L
9. 0.554 kg = \_ mg
   1. 554 mg c. 0.00554 mg
   2. 554,000 mg d. 5.54 mg
10. Length is measured in \_\_\_\_, Mass is measured in \_\_\_\_, and Volume is measured in \_\_\_.
    1. Liters, Meters, Grams c. Grams, Liters, Meters
    2. Meters, Grams, Liters d. Meters, Liters, Grams
11. A Quantitative observation involves \_\_\_ while a Qualitative observation looks at \_\_\_.
    1. Measuring; Characteristics c. Characteristics; Measuring
    2. Linguistics; Quarries d. Quarries; Linguistics
12. Which sentence best describes Theories and Laws?
    1. A Theory is ALWAYS true while a Law can be changed.
    2. A Law can only change if the Theory is tested numerous times.
    3. A Law is ALWAYS true while a Theory can change.
    4. A Theory is used to support a Hypothesis while a Law does not use a Hypothesis.

Two jars are placed on a counter with a McDonald’s French fry inside. One has a lid, the other does not. They are left alone to see which one decays faster. After two days, the fry in the closed jar looks fresher. Answer the questions that follow

1. What is the independent variable?
   1. The type of French fries c. The freshness of the French fries
   2. Whether or not the jar has a lid d. The type of jars used
2. What is the dependent variable?
   1. The type of French fries c. The type of jars used
   2. Whether or not the jar has a lid d. The freshness of the French fries
3. What are the controls?

a. How long the fries are in the jar c. The freshness of the French fries

b. Whether or not the jar has a lid d. The type of jars, type of fries, when the fries were made

1. What type of graph is shown on the right?
   1. Line graph c. Pie chart/ circle graph
   2. Double bar graph d. Bar graph
2. What type of graph would best show changes over time?
   1. Line graph c. Pie chart/ circle graph
   2. Double bar graph d. Bar graph
3. You wonder why your bike feels so slow when you’re out for a ride. You think that if you increase the air pressure in your tires, then your speed will increase. What is your **next step**? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Why does my back ache after sleeping all night on my new fluffy mattress? What step in the scientific method have I **just performed**? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Look at the picture to your right. Label the following as an observation (A), Inference (B) or Prediction (C)

\_\_\_\_ 20. The people in the pool are a family.

\_\_\_\_ 21. There are four people in the pool.

\_\_\_\_ 22. The water is warm.

\_\_\_\_ 23. They will use towels to dry off.

\_\_\_\_ 24. The boy is wearing a scuba mask.

\_\_\_\_ 25. It is a sunny day.

\_\_\_\_ 26. The girl is getting splashed with water.

\_\_\_\_ 27. The swimming pool is made of plastic.

\_\_\_\_ 28. They are in their back yard.

\_\_\_\_ 29. The kids will be sunburned.

\_\_\_\_ 30. The boy is wearing swim trunks.