**Scientific Method**

Matching - Match word with the definition.

_____ 1. Looking through books, web sites, or newspapers for information on a topic.  
   A. Problem  
   B. Research  
   C. Materials  
   D. Data  
   E. Procedure  
   F. Variable  
   G. Hypothesis

_____ 2. The experiment.

_____ 3. A list of things needed for the experiment.

_____ 4. Observations recorded and put into charts or graphs.

_____ 5. Always asked as a question.

_____ 6. Your best solution or answer to the question or problem.

_____ 7. A factory that is changed during an experiment to see what will happen.

8. In the following experiment, which variable is being manipulated (changed)?

   Brands A, B, and C of hamburger meat are tested for the amount of fat in each. Each brand will be cooked for exactly 7 minutes. The same pan will be used for each test. The brands will each be drained for exactly 2 minutes by using a strainer and a measuring cup to determine the amount of fat that is drained.

   - The cooking time
   - The brands being tested
   - The pan
   - The straining of the meat after cooking

When you perform activities and experiments, you make observations with your five senses; therefore, an observation is something you can see, feel, smell, hear, or taste. There are times when you make judgments or decisions based on logical observations. These judgments or decisions are called inferences. Inferences are logical conclusions based on your observations.

Look at the picture below. Read the statements. Based on what you observe in the cartoon, decide whether each statement is an observation or an inference. Write your choices on the lines.
1. Three children are holding a brush.
2. The biggest dog is smiling.
3. One girl has a bow in her hair.
4. All the dogs have ears.
5. The dogs are going to be brushed.
6. The dogs are all friends.

Make up four inferences or observations of your own (to the right of 7-10). Write the word observation or inference on the lines to the left to describe each.

7. ________________________________________________
8. ________________________________________________
9. ________________________________________________
10. ________________________________________________
Scientific Method Vocabulary

Data - Observations recorded and put into charts or graphs.

Hypothesis - Your best solution or answer to the question or problem.

Inference (Infer) - Come to a conclusion based on experience and observation. You see a food tray on a desk and you infer that some ate lunch at the desk even though you didn’t see them actual eat the lunch.

Materials - Supplies needed to complete the experiment.

Observation - Come to a conclusion by actually seeing something.

Problem - Always asked as a question; what it is you answer.

Procedure - Step-by-step instructions on how to do an experiment.

Research - Looking through books, web sites, or newspapers for information on a topic.

Variable - Something that is changed during an experiment to see what will happen.

Key Vocabulary Words

Analyze
Classify
Conclude
Data
Evidence
Experiment
Complete the puzzle using the clues shown below.

**Across**
3. Arrange or organize according to class or category.
7. Observations recorded and put into charts or graphs.
8. Something that can be shown to be true.
10. Always asked as a question; what it is you answer.
12. Outcomes of an experiment.
15. The process of investigating a question, problem, or hypothesis.
16. Reach a decision or form an opinion about.
17. Come to a conclusion based on experience and observation.
18. Looking through books, web sites, or newspapers for information on a topic.
19. What is done to test the hypothesis.

**Down**
1. An examination or inquiry into something.
2. Your best solution or answer to the question or problem.
4. Come to a conclusion by actually seeing something.
5. Supplies needed to complete the experiment.
6. What is used to form a conclusion or judgment.
9. Examine something to understand it better or discover more about it.
11. Something that is changed during an experiment to see what will happen.
14. A simple version of something used to analyze, solve problems, or make predictions.
Scientific Method Double Puzzle
Unscramble each word. Then use the marked letters to solve the second puzzle.

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