NAME _____ Formulating a ... sis

WHAT'S YOUR PROBLEM?

In order for the scientific method to help you solve a problem, the problem must be a specific one. For example, if you want to learn more about water conservation, you need to focus on a particular problem, such as "Does washing dishes by hand use less water than a dishwasher?"

Once your problem has been defined, you can then gather information in order to state your hypothesis. A hypothesis for the above problem might be: "Washing dishes by hand uses less water than a dishwasher."

Write a specific problem you would like to find an answer to for each topic listed below. Then formulate a hypothesis for each. An example has been provided to help you. For more fun, choose one of your problems to find an answer to using the scientific method.

TOPIC	PROBLEM	HYPOTHESIS
1. Plants	Do plants need water to grow?	If a plant gets water, then it will grow.
2. Heart		
3. Soap		
4. Water Conservation		
5. Paper Towels		
6. Batteries		
7. Flowers		
8. Food		

Name: _____

Hour: _____

TESTABLE QUESTION & HYPOTHESIS WORKSHEET

(3pts each) Write a hypothesis for each of the following research problems. Identify the dependent and independent variable for each.

1. What effect does high temperature have on radish germination?
   Independent variable:
   Dependent variable:
   Hypothesis:

2. What effect does studying with music have on student test scores?
   Independent variable:
   Dependent variable:
   Hypothesis:

3. What effect does food color have on the amount of food fish eat?
   Independent variable:
   Dependent variable:
   Hypothesis:

4. What effect does light have on plant growth?
   Independent variable:
   Dependent variable:
   Hypothesis:

5. What effect does smiling have on teacher giving no homework?
   Independent variable:
   Dependent variable:
   Hypothesis:

(3pts each) Write a testable question for each of the following hypotheses. Identify the dependent and independent variable for each.

6. If plants are watered, then growth height will increase.
   Independent variable:
   Dependent variable:
   Testable Question:

7. If chocolate is given to teachers, then amount of homework will decrease.
   Independent variable:
   Dependent variable:
   Testable Question:

8. If trees have leaves, then bird nests will increase.
   Independent variable:
   Dependent variable:
   Testable Question:

9. If acid rain is in water, then fish population will increase.
   Independent variable:
   Dependent variable:
   Testable Question:

10. If calcium is given, then bone strength will increase.
    Independent variable:
    Dependent variable:
    Testable Question: