Name _____ Date _____ Period _____

Developing a Good Hypothesis

A **hypothesis** (plural: *hypotheses*) is a prediction about the outcome of a scientific investigation. Like all predictions, hypotheses are based on a person's observations and previous knowledge or experience.

In science, hypotheses must be testable. That means that researchers should be able to carry out an investigation and obtain evidence that shows whether the hypothesis is true or false. The way hypotheses are written is in the form of an ***If . . . then . . . because . . .*** statement.

Read the following three examples. Notice which of these predictions are testable. Notice which are properly worded hypotheses.

Example 1: If you give my plants fertilizer, then they will grow as big as my neighbor's plants because all living things require certain nutrients in order to grow. (testable and properly worded)

Example 2: If I get lucky, then my plants will grow bigger. (not testable, because you can't control "getting lucky")

Example 3: My plants aren't growing bigger because I don't water them enough. (not worded properly)

Tips for Developing Good Hypotheses

1. First, develop ideas for a hypothesis, write down several questions about the topic. Try to narrow the questions to one that can be investigated scientifically. Then write the hypothesis.
2. Make sure the hypothesis is a prediction.
3. Make sure the hypothesis can be tested through observations.
4. Check the way you worded the hypothesis. A properly worded hypothesis should take the form of an ***If . . . then . . . because . . .*** statement.

Directions:

1. Copy or rewrite if necessary each of your scientific questions you wrote for statements 1-10 on "Asking Good Questions" assignment.
2. Then, write a properly worded hypothesis for each of those scientific questions.
3. Also, answer question 8 on the back of this sheet

Writing Good Questions and Hypotheses:

1. **Good Question:** _____

   Hypothesis: _____

   _____

2. **Good Question:** _____

   Hypothesis: _____

   _____

3. **Good Question:** _____

   Hypothesis: _____

   _____

4. **Good Question:** _____

   Hypothesis: _____

   _____

5. **Good Question:** _____

   Hypothesis: _____

   _____

6. **Good Question:** _____

   Hypothesis: _____

   _____

7. **Good Question:** _____

   Hypothesis: _____

   _____

Think About It

8. Choose one of the hypotheses you wrote above. Write a brief description below of how you would test it. Mention any equipment you would need.

_____

_____

_____

_____

_____