Name _____ Date _____ Hour _____

Pill Bug Inquiry: Packet One **_____/17 points**

Through this investigation you will practice using scientific inquiry. We will be using pill bugs as our test subjects. (Other names for pillbugs are sow bugs, wood lice, potato bugs, and rolly-pollies.) Many people think pill bugs are insects, but in fact they are crustaceans just like lobsters, shrimp, and crabs. Both insects and crustaceans are classified in a larger group known as the arthropods. Arthropods are animals with exoskeletons and jointed appendages.

To be able to design an experiment that further explores pill bugs we must first learn a little bit about them through research and observation.

Exploration

Materials: Research articles, Pill bugs, rough surface (carpet scrap/sand paper etc.), water in a cup, plastic spoon, stopwatch

Research

1. Conduct an internet search about pill bugs (scientific name: *Armadillidium vulgare*), **print the information/article, and bring it to class for a grade**. Your purpose in researching is to learn some background information about the pill bug. Knowing something about a pill bug will help you later develop a hypothesis (claim) and experiment. Please record the article name and URL below, and staple your printed information to this lab. You will share what you have learned with your group during class before we begin our experiment.

   Article/Information Name: _____

   Article/Information URL: _____

   Teacher Initial: _____

Observe a Pill Bug:

2. Using a spoon, retrieve a pill bug from the teacher.

3. Let the pill bug walk around while you carefully observe it. Let it crawl on your hand.
   a. Where are its eyes?

   b. How many legs does it have?

   c. If you touch it, what does it do?

   d. Is it a Roller (balls up when disturbed) or Hiker (moves faster when disturbed)

Can pill bugs turn over? (Find a Roller and a Hiker):

4. Some pill bugs can't turn over. Turn a few Rollers and a few Hikers gently on their backs **on top of your smooth table top**. Watch them for a couple of minutes. Record your observations in the data table below.

5. Now gently turn them on their backs **on something rough like a piece of rug or sandpaper** and see whether they can turn over. Record those observations in the data table below.

Pill Bug Observations			
Smooth Surface Observations		**Rough Surface Observations**	
Hikers	Rollers	Hikers	Rollers

What do pill bugs do if they get wet? ***Prediction***_____

6. Watch a dry pill bug on your table for fifteen seconds. Record your observations in the data table below. Dunk the same pill bug underwater in the beaker of water at your table, for two or three seconds, then take it out and put it on a piece of paper towel at your table. Watch the wet pill bug for fifteen seconds and record your observations in the data table below.
7. ***Compare what you observed and answer the question below.***
    a. Why do you think the wet one behaves as it does?

Dry Pill Bug Observations	**Wet Pill Bug Observations**

What do pill bugs do if they come to the edge?

8. Have one person on your team hold a piece of paper flat and a couple of centimeters above the table.

9. Someone else on the team should now carefully pick up a pillbug with a spoon and put it on the paper. If it needs help getting on its feet, help it.

10. Watch the pillbug carefully when it walks to the edge of the paper. If the pillbugs falls off, pick it up and put it back on the paper.
    a. Is the pillbug a Roller or a Hiker?

    b. Describe what it does when it gets to the edge.