Hypothesis Worksheet

**Part I:** *Write a hypothesis for each of the following problem statements. Identify the dependent and independent variable for each.*

1. How does the amount of leaves on a tree affect how many birds will build nests in it?

Hypothesis: If \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, then \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. How does the acid level of a lake affect how many fish live there?

Hypothesis: If \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, then \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. How does the amount of milk you drink affect the strength of your bones?

Hypothesis: If \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, then \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Read the paragraphs describing an experiment. Then, answer the questions that follow.**

1. Ms. Wagner loves to eat tomatoes. She wants to plant a garden and is trying to figure out how to grow plants with more tomatoes. She plants three different pots of tomato plants and gives them different amounts of fertilizer. She keeps everything else the same (the amount of water, the amount of soil, amount of sun the plants get). For one month, she records how many tomatoes each plant produces.

Independent Variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Dependant Variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Constants: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hypothesis: If\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_,then\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |
| --- | --- |
| **Amount of Exercise** | **Amount of Sleep** |
| 2 hours | 4 hours |
| 4 hours | 5 hours |
| 6 hours | 6 hours |

1. A dog owner wants to test how exercise affects how his dog sleeps. His hypothesis was ***If my dog has more hours of exercise, then the number of hours he sleeps will increase because he used more energy exercising.*** He was careful to give his dog the same amount of food on the days he did the experiment. His results are in the table.

Independent Variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Dependant Variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Constants: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hypothesis: If\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_,then\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

|  |  |
| --- | --- |
| **Mass of Pumpkin** | **Height** |
| 5 kg | 10 meters |
| 10 kg | 5 meters |
| 15 kg | 1 meter |

1. Jacobie wanted to test the projectile motion of a pumpkin. His hypothesis was ***if the pumpkin had a larger mass, then the higher he could throw it, because the larger pumpkins would have more force***. He bought three orange pumpkins and tested them all on the same day. His results are shown below:

Independent Variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Dependant Variable: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Constants: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hypothesis: If\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_,then\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_