

Simpsons Variables Worksheet

Name:

Period:

Date:



Smithers thinks that a special juice will increase the productivity of workers. He creates three groups of 50 workers each and assigns each group the same task, to staple sets of papers.

Group 1 drinks 100mL of the special juice while they work.
Group 2 drinks 50mL of the special juice while they work.
Group 3 is not given the special juice while they work.

After an hour, Smithers counts how many sets of papers each group stapled. He made the data table below.

	Number of sets of paper stapled
Group 1	1,030
Group 2	1,700
Group 3	2,113

Identify the:

1. Independent Variable:
2. Dependent Variable:
3. Controlled variable:
4. What should Smithers' conclusion be? How did the juice affect the number of papers each group stapled? Use data (numbers) to support your answer.



Homer notices that his shower is covered in a strange green slime. His friend Barney tells him that coconut juice will get rid of the green slime. Homer decides to check this out by spraying half of the shower with coconut juice. He sprays the other half of the shower with water. After 3 days

of "treatment" there is no change in the appearance of the green slime on either side of the shower.

Identify the:

1. Independent Variable:
2. Dependent Variable:
3. What is a hypothesis Homer can write about his observation?

If
then
because



Krusty was told that a new itching powder claims to cause 50% longer lasting itches. Interested in this product, he buys the itching powder and compares it to his usual product.

One test subject (A) is sprinkled with the original itching powder.

Another test subject (B) was sprinkled with the new experimental itching powder. His results are below.

	Number of minutes itched
Subject A	30 minutes
Subject B	45 minutes

Identify the:

1. Independent Variable:
2. Dependent Variable:
3. What should Krusty's conclusion be? Use data (numbers) to support your answer.

5. How could Krusty improve his experiment?



Bart believes that mice exposed to microwaves will become extra strong (maybe he's been reading too much Radioactive Man). He decides to perform this experiment.

He places 10 mice in a microwave for 10 seconds. He places another 10 mice in a microwave for 5 seconds. Lastly, he

has 10 mice that have not been put in the microwave. For his test he placed a heavy block of wood in front of the mouse food. He counted how many mice could move the block of wood away from the food. Below is a chart with his findings.

Time in microwave	Number of mice that pushed the block away
10 seconds	8
5 seconds	7
0 seconds	7

Identify the:

1. Independent Variable:

2. Dependent Variable:

3. What should Bart's conclusion be?

5. How could Bart improve his experiment?



Lisa is working on a science project. Her task is to answer the question: "Does Rogooti (a hair cream sold on TV) affect the speed of hair growth (in length)". Her family is willing to volunteer for the experiment.

Identify the:

1. Independent Variable:

2. Dependent Variable:

3. Write a possible hypothesis Lisa could write for this experiment.

If
then
because

4. Write a procedure (list of steps) Lisa could follow to complete this experiment. You should have at least 3 steps.