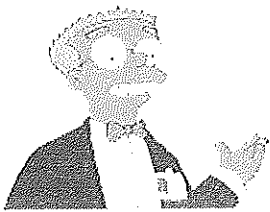

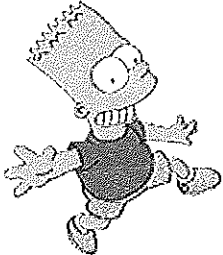


Identify the Controls and Variables

 <p>Smithers thinks that a special juice will increase the productivity of workers. He creates two groups of 50 workers each and assigns each group the same task (in this case, they're supposed to staple a set of papers). Group A is given the special juice to drink while they work. Group B is not given the special juice. After an hour, Smithers counts how many stacks of papers each group has made. Group A made 1,587 stacks, Group B made 2,113 stacks.</p>	<p>Identify the:</p> <ol style="list-style-type: none"> 1. Control Group 2. Independent Variable 3. Dependent Variable 4. What should Smithers' conclusion be? 5. How could this experiment be improved?
 <p>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 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.</p>	<p>6. What was the initial observation?</p> <p>Identify the-</p> <ol style="list-style-type: none"> 7. Control Group 8. Independent Variable 9. Dependent Variable 10. What should Homer's conclusion be?
<p>Bart believes that mice exposed to radiowaves will become extra strong (maybe he's been reading too much Radioactive Man). He decides to perform this experiment by placing 10 mice near a radio for 5 hours. He compared these 10 mice to another 10 mice that had not been</p> 	<p>Identify the-</p> <ol style="list-style-type: none"> 11. Control Group 12. Independent Variable 13. Dependent Variable 14. What should Bart's conclusion be?

<p>exposed. His test consisted of a heavy block of wood that blocked the mouse food. he found that 8 out of 10 of the radiowaved mice were able to push the block away. 7 out of 10 of the other mice were able to do the same.</p>	<p>15. How could Bart's experiment be improved?</p>
<div> </div> <p>Krusty was told that a certain itching powder was the newest best thing on the market, it even 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, and another test subject (B) was sprinkled with the Experimental itching powder. Subject A reported having itches for 30 minutes. Subject B reported to have itches for 45 minutes.</p>	<p>Identify the-</p> <p>16. Control Group</p> <p>17. Independent Variable</p> <p>18. Dependent Variable</p> <p>19. Explain whether the data supports the advertisements claims about its product.</p>
<p>Lisa is working on a science project. Her task is to answer the question: "Does Rogooti (which is a commercial hair product) affect the speed of hair growth". Her family is willing to volunteer for the experiment.</p>	<div> </div> <p>20. Describe how Lisa would perform this experiment. Identify the control group, and the independent and dependent variables in your description.</p>

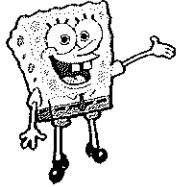
Name: _____

Date: _____

Life Science

Period: _____

Scientific Method: *Controls and Variables*



spongebob and his bikini bottom pals have been busy doing a little research. read the description for each experiment and answer the questions.

1. patty power

Mr. Krabbs wants to make Bikini Bottoms a nicer place to live. He has created a new sauce that he thinks will reduce the production of body gas associated with eating crabby patties from the Krusty Krab. He recruits 100 customers with a history of gas problems. He has 50 of them (Group A) eat crabby patties with the new sauce. The other 50 (Group B) eat crabby patties with sauce that looks just like new sauce but is really just mixture of mayonnaise and food coloring. Both groups were told that they were getting the sauce that would reduce gas production. Two hours after eating the crabby patties, 30 customers in group A reported having fewer gas problems and 8 customers in group B reported having fewer gas problems.

a. Which people are in the control group? _____

b. What is the variable? _____

c. What should Mr. Krabbs' conclusion be? _____

2. slimotosis

Sponge Bob notices that his pal Gary is suffering from slimotosis, which occurs when the shell develops a nasty slime and gives off a horrible odor. His friend Patrick tells him that rubbing seaweed on the shell is the perfect cure, while Sandy says that drinking Dr. Kelp will be a better cure. Sponge Bob decides to test this cure by rubbing Gary with seaweed for 1 week and having him drink Dr. Kelp. After a week of treatment, the slime is gone and Gary's shell smells better.

a. What was the initial observation? _____

b. What is the variable? _____

c. What should SpongeBob's conclusion be? _____



3. marshmallow muscles

Larry was told that a certain muscle cream was the newest best thing on the market and claims to double a person's muscle power when used as part of a muscle-building workout. Interested in this product, he buys the special muscle cream and recruits Patrick and SpongeBob to help him with an experiment. Larry develops a special marshmallow weight-lifting program for Patrick and SpongeBob. He meets with them once every day for a period of 2 weeks and keeps track of their results. Before each session Patrick's arms and back are lathered in the muscle cream, while Sponge Bob's arms and back are lathered with the regular lotion.

- a. Which person is in the control group?

- b. What is the variable?

Time	Patrick	SpongeBob
Initial Amount	18	5
After 1 week	24	9
After 2 weeks	33	17

- c. What should Larry's conclusion be?

