




## Identify the Parts of an Experimental Design

*Please answer the following questions on a separate sheet of paper.*

	<p>Smithers thinks that a special juice will help make his workers go faster. He creates two groups of 10 workers each and asks each group to do 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 150 stacks, Group B made 200 stacks.</p>	<p><b>Identify:</b></p> <ol style="list-style-type: none"> <li>1. The Control Group</li> <li>2. The Variable that was changed</li> <li>3. What was measured</li> <li>4. What should Smithers' conclusion be?</li> <li>5. How could this experiment be improved?</li> </ol>
	<p>Homer notices that his shower is covered in a strange green slime. His friend Barney tells him that coconut juice will make the green slime go away. Homer decides to test this by spraying half of the shower with coconut juice. He sprays the other half of the shower with water. After 3 days of spraying, there is no change in the green slime on either side of the shower.</p>	<p>6. What was the first observation?</p> <p><b>Identify:</b></p> <ol style="list-style-type: none"> <li>7. Control Group</li> <li>8. Variable that was changed</li> <li>9. What was measured</li> <li>10. What should Homer's conclusion be?</li> </ol>
	<p>Bart believes that mice put in microwaves will become extra strong. He decides to test this claim by putting 10 mice in a microwave for 10 seconds. He compared these 10 mice to another 10 mice that had not been put in the microwave. He tested the mice's strength by using a heavy block of wood that blocked the mouse food. He found that 8 out of 10 of the microwaved mice were able to push the block away. 7 out of 10 of the mice who were not microwaved were able to push the block.</p>	<p><b>Identify:</b></p> <ol style="list-style-type: none"> <li>11. The Control Group</li> <li>12. The variable that was changed</li> <li>13. What was measured</li> <li>14. What should Bart's conclusion be?</li> <li>15. How could Bart's experiment be improved?</li> </ol>



Krusty was told that an itching powder was the newest best thing on the market; it even claimed to cause 50% longer lasting itches. Krusty buys the itching powder and compares it to his usual product. One test subject (A) is sprinkled with the old itching powder, and another test subject (B) was sprinkled with the new itching powder. Subject A said they had itches for 30 minutes.

Subject B said they had itches for 45 minutes.

**Identify:**

16. The Control Group
17. The Variable that was changed
18. What was measured
19. Explain whether the data proves that the itching powder is the best thing on the market.



Lisa is working on a science project. Her task is to answer the question: "Does Rogooti (a hair product) makes hair grow faster?" Her family is willing to volunteer for the experiment.

20. Describe how Lisa would test the claims for this product. Identify the control group, and the variable that was changed and what should be measured in your description.