

What are the Independent and Dependent Variables in the following statements?

1. Chocolate may cause pimples

Independent variable: Chocolate Dependent variable: Pimples

2. Salt in soil may affect plant growth.

Independent variable: Salt Dependent variable: Plant Grow

3. Plant growth may be affected by the color of the light.

Independent variable: color of light Dependent variable: Plant Grow

Write this one out as a formal hypothesis (if / than) statement:

If the color of the light changes
than the plant won't grow

Scientific Method - Controls and Variables



Krusty Krabs Breath Mints

Mr. Krabs created a secret ingredient for a breath mint that he thinks will "cure" the bad breath people get from eating crabby patties at the Krusty Krab. He asked 100 customers with a history of bad breath to try his new breath mint. He had fifty customers (Group A) eat a breath mint after they finished eating a crabby patty. The other fifty (Group B) also received a breath mint after they finished the sandwich, however, it was just a regular breath mint and did not have the secret ingredient. Both groups were told that they were getting the breath mint that would cure their bad breath. Two hours after eating the crabby patties, thirty customers in Group A and ten customers in Group B reported having better breath than they normally had after eating crabby patties.

1. Which people are in the control group?

Group B

2. What is the independent variable?

Special Mint

3. What is the dependent variable?

Breath

4. What should Mr. Krabs' conclusion be?

New mint works better

5. Why do you think 10 people in group B reported fresher breath?

Placebo Effect: mind over matter