

Hypotheses

1. Dr. Dab is concerned. Lately he has seen a large number of patients who complain of arm pain but they do not know why. He decides these patients must be sneezing uncontrollably because he observes them frequently bending their head down into their arm while another arm goes backwards. What could Dr. Dab's hypothesis be?



Dr. Cool disagrees and tells Dr. Dab that the patients are actually just dabbing. What could Dr. Cool's hypothesis be?

2. Stacy loves snapchat. She thinks that the new filter that turns you into a deer is the best one ever but Tracy disagrees and thinks that the best one is Face Swap. They decide to collect data on which one the students at their school use more but they first need to create hypotheses. What could Stacey's hypothesis be?

What could Tracy's hypothesis be?

Data

1. Savage Jones and his friends want to be able to do a double flip off the diving board at the pool party next weekend. They however can't seem to jump high enough to get two full flips. They heard that there is a new "Super Board" that can make you jump higher, so Savage Jones and his friends put their money together and buy the new "Super Board" diving board. They each jump off the regular board and then jump off the new "Super Board". They write down their results in the table below.

	Regular Board	Super Board
Savage Jones	2.8 ft	3 ft
Extreme Smith	1.5 ft	1.7 ft
Crazy Martin	2.2 ft	2.5 ft

Based on the data, did the Super Board work? Explain your answer.

Norm, Savage's rival, heard about the Super Board and thought about trying it himself. He got the board and invited his friends over to test it. Their results are in the table below.

	Regular Board	Super Board
Norm	1.2 ft	0.8 ft
Al	1.7 ft	1.5 ft
Steve	3.4 ft	2.9 ft

Based on both groups results, what can we now say about the Super board?

How could we improve the experiments?

2. Savage Jones and his friends want to see if eating a Snickers bar before a test helps them improve their scores on their science test. They decided to create an experiment to see if it was true. With Mr. Conn's help they took a test and then ate a Snickers and took a second test. They wrote down their test below.

	Before Snickers	After Snickers
Savage Jones	75%	81%
Extreme Smith	82%	91%
Crazy Martin	86%	87%

Based on the data, did the Snickers bar help? Explain your answer.

Norm, Savage's rival, heard about the Snickers bar experiment and wanted to test it with his friends. Their results are in the table below.

	Before Snickers	After Snickers
Norm	88%	85%
Al	55%	51%
Steve	98%	90%

Based on both groups results, what can we now say about the Snickers experiment?

How could we improve the experiments?

Experiments

1. Mr. Conn gets two pet frogs for the classroom. He decides to test if flies or store brand frog food makes the frog stronger. Write a hypothesis for Mr. Conn.

How could Mr. Conn test his hypothesis? Write out an experiment.

What is the control and the variable for his experiment?

2. Mr. Conn gets two bamboo plants for his house. He decides to test and see if bamboo plants live better in rocks or in dirt. Write a hypothesis for Mr. Conn to test.

How could Mr. Conn test his hypothesis? Write out an experiment.

What is the control and the variable for his experiment?

Open Ended

Johnny wants to see if caffeine has any effect on the squirrels he sees running around the school. Design a testable question, hypothesis, and procedure for him to use.

Johnny got in trouble for hanging from the ceiling testing his idea that Red Bull would let him hang on to the ceiling supports longer. Design an experiment and identify the control and variables.

Johnny found an ant in the cafeteria. He thinks that ants like pizza day more than chicken nugget day. What could Johnny's hypothesis be and how would he test it?

Johnny thinks that the Bounty paper towels are stronger than IGA brand. Write a hypothesis and design an experiment.

Johnny decides that his little sister (and all 5 year olds) would be smarter if she ate more carrots. Design an experiment and identify the control and variable.

Johnny wants to see if dogs can see purple. How could you design an experiment to test this?

Johnny found a penny on the sidewalk. He thinks that junior high boys drop more pennies than junior high girls. Write a testable question, hypothesis and procedure for him to use.

Johnny wants to know if regular light bulbs last longer than incandescent light bulbs at his house. He puts a brand new lightbulb in two lamps. He leaves the regular light bulb on all month in a dark room and puts the other in dark room but turns it on an off every hour. He decided that the incandescent was better because it lasted longer. What did Johnny do wrong? Design a new experiment for Johnny.

Johnny wants to glue his little brother's fingers together. So he decides to find the strongest glue. He thinks that Elmer's Glue is stronger than Walmart brand glue. So he uses each glue to glue things together. He put two Elmer's glue between two pieces of paper and Walmart glue between two paper towels. He thinks that the Walmart glue is stronger because it held the paper towels together longer than the Elmer's glue held the paper. What did Johnny do wrong? Design a new experiment for Johnny.