

How to Write a hypothesis

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- A hypothesis is an educated guess about how things work.
- It almost like making a bet... I bet this.. will happen because...
- Most of the time a hypothesis is written like this: "If _____ [I do this] _____, then _____ [this] _____ will happen because"

(Fill in the blanks with the appropriate information from your own experiment.)

Your hypothesis should be something that you can actually test, what's called a testable hypothesis. In other words, you need to be able to measure both "what you do" and "what will happen." After you run your experiment, you will see if the hypothesis is true or not.

Hypotheses Tips

- The question comes first. Before you make a hypothesis, you have to clearly identify the question you are interested in studying.
- A hypothesis is a statement, not a question. Your hypothesis is not the scientific question in your project. The hypothesis is an educated, testable prediction about what will happen.
- Make it clear. A good hypothesis is written in clear and simple language. Reading your hypothesis should tell a teacher exactly what you thought was going to happen when you started your experiment.
- Keep the variables in mind. A good hypothesis defines the variables in easy-to-measure terms
- Make sure your hypothesis is "testable." To prove or disprove your hypothesis, you need to be able to do an experiment and take measurements or make observations to see how two things (your variables) are related. You should also be able to repeat your experiment over and over again, if necessary.

To create a "testable" hypothesis make sure you have done all of these things:

Example Hypotheses

- "If a plant receives fertilizer [having fertilizer is the independent variable], then it will grow to be bigger than a plant that does not receive fertilizer [plant size is the dependent variable] because plants use the fertilizer like food."
- "If I test to see which basketball sneaker, Nike or Addias, will let me jump higher, then the Nike sneaker will because I think the Nike sneaker it is lighter than the Addias sneaker."
- If I get 8 hours of sleep the night before a test THEN I will get a better grade on the test then if I sleep less than 8 hours BECAUSE research shows that your mind is sharper when you get enough sleep.

Not every question can be answered by the scientific method. The hypothesis is the key. If you can state your question as a testable hypothesis, then you can use the scientific method to obtain an answer.

Is it OK to Disprove Your Hypothesis?

YES, it is ok to disprove your hypothesis. You still answered the question and you still learned something so don't worry about it!