

How to write a scientific hypothesis?

Use the guidelines and examples below when you write your hypotheses.

1. Your hypothesis is based on an **observation** or **problem** you are wondering about.
2. A hypothesis is not just a guess — it should be based on existing theories and knowledge.
3. Your hypothesis must be able to be **tested**. (*There must be a possibility to prove that the hypothesis is either true or false*)
4. Hypotheses propose a relationship between two or more variables. An **independent variable** is something the researcher changes or controls. A **dependent variable** is something the researcher observes and measures.
5. Your hypothesis should be an **IF – THEN – BECAUSE** statement. (See examples below)
6. Avoid using “I” or “we”.

EXAMPLES:

1. **If** you study more, **then** you will get a higher grade, **because** science has taught us that ‘practice makes perfect’
2. **If** you eat 10,000 Calories a day, **then** you will gain weight, **because** the daily recommended consumption is only 2000 Calories.
3. **If** you stare at the sun, **then** you will go blind, **because** the sun will burn and damage your retina.
4. **If** you eat more vegetables, **then** you will lose weight faster, **because** most vegetables are low in calories.
5. **If** you add fertilizer to my garden, **then** your plants will grow faster, **because** they will receive the nutrients they need to grow faster.
6. **If** you throw a rock up into the air, **then** it will fall back to the ground, **because** of the law of gravity.
7. **If** you brush my teeth twice every day, **then** you will not develop as many cavities, **because** brushing removes plaque and cavity-causing bacteria.
8. **If** you drink 10 large coffees every morning, **then** your heart will beat faster, **because** coffee is a stimulant.
9. **If** 50 mL of water are added to my plants each day and they grow, **then** adding 10,000 mL of water each day will make them grow even more, **because** plants like lots of water.
10. **If** you drink twice as much water as you normally do, **then** you will have to urinate more often, **because** your bladder will fill up faster.

Generally speaking, only one of these hypotheses is incorrect. Which one is it?