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| **Developing a Good Hypothesis** |

A **hypothesis** is an educated guess about the outcome of a scientific investigation, or how changing one variable will change or affect another variable (ex. The more water I give a plant, the taller it grows). Like all guesses, hypotheses are based on a person’s previous knowledge or experience, their adjacent possible.

In science, hypotheses must be testable. That means that researchers should be able to carry out an investigation and obtain evidence that shows whether the hypothesis is true or false. The way hypotheses are written is in the form:

If…(say what you are going to do to the independent variable)…then…(say what you think will happen to the dependent variable)…because (explain why you think the variables are related)

**Examples: Decide whether or not each is a properly worded hypothesis. If not, rewrite it.**

Example 1: If you give my plants fertilizer, then they will grow as big as my neighbour’s plants because fertilizer will help the plants grow.

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Example 2: If my plants grow faster, then it will be because of the sunshine.

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Example 3: My plants aren’t flowering because I don’t water them enough.

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Example 4: If I sing to my plants, then I wait, because I want to watch them sprout more leaves.

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**Tips**

1. Make sure your hypothesis can be tested through observations or measuring something
2. Make sure your hypothesis has a prediction, what you think will happen.
3. If…then…because….

**Try it out for the following questions**

1. When dropping an egg off a roof, how does the surface it lands on affect what happens?

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1. How does an earthquake affect the kind of food a panda will eat afterwards?

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1. How far can a plane fly without a tail?

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1. How does the weather affect how many people go out running?

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1. What effect does throwing paper airplanes in Mr. Toni’s class affect how loud he talks?

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1. What effect will driving in a bike lane have on the number of cyclists who yell at me?

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1. How does the amount of pop I drink affect how high I can jump?

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1. Does playing different kind of music over the p.a. system at a Bomber game affect how many passes they catch during practice?

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