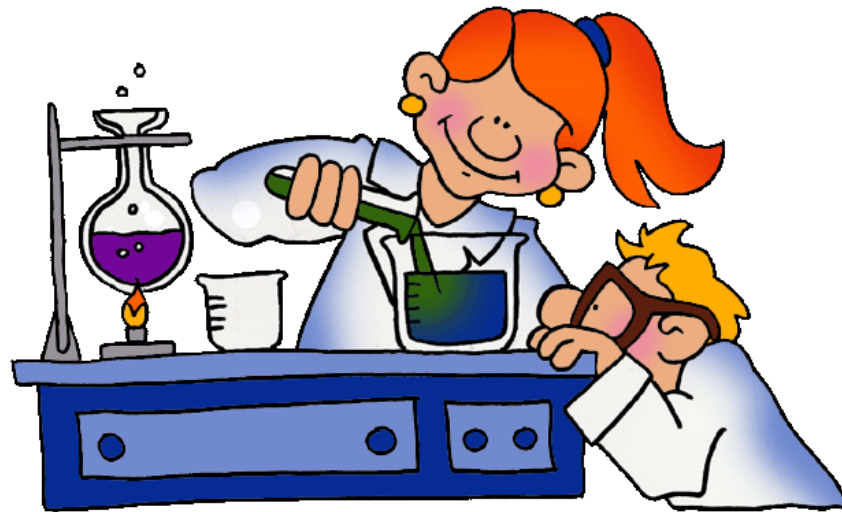


Variables



phillipmartin.info

What is a **variable**?

A variable is **something that can CHANGE.**

Testable Questions have two parts:

- An independent variable
- A dependent variable



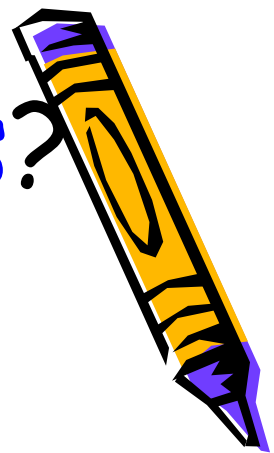
What is an Independent Variable?

- The variable that will be **changed by you - the scientist.**
- A good experiment has **only one independent variable!**
- **The x-axis**

What is a Dependent Variable?

- The variable that is being measured in your experiment
- The response to the change you make using the independent variable.
- The Y-axis

What are control groups?



- Comparison group which is not manipulated at all
- Placebo



What are constant variables?



- Variables that are kept the same for all experimental groups



Testable Question Formats

- Does changing ^{independent}
variable _____ affect ^{dependent}
variable _____?
- How does changing ^{independent}
variable _____ affect ^{dependent}
variable _____?
- If I change ^{independent}
variable _____ will it affect ^{dependent}
variable _____?

_____ depends on _____

A Testable Question

- Does changing the amount of light affect the growth rate of plants?

Identify the INDEPENDENT variable

Identify the DEPENDENT variable



Another Testable Question

- Does the temperature of water affect the time it takes a sugar cube to dissolve?

Identify the INDEPENDENT variable

Identify the DEPENDENT variable



Another Testable Question

- Farmer Amos wants to test a new fertilizer for his tomatoes to see if he can harvest more fruit.

Identify the INDEPENDENT variable
Identify the DEPENDENT variable
Identify the CONTROL group
What are some CONSTANTS

