

Whose plant do you think will grow more? Why? I predict that...

Because...

What were the results?

What is wrong with the experimental design?

What would you do to change the experimental design?

#### Independent Variable:

- Definition:
- The independent variable in the above experiment is:

## **Dependent Variable:**

- Definition
- The dependent variable in the above experiment is:

### Consider this scenario:

You have two fish – one goldfish and one Siamese fighting fish. You give them the same amount of food each day at the same time. One of the fish is in fresh water and the other is in saltwater. The objective of the experiment is to find out which type of fish consumes more food.

- Is this a controlled experiment? Why or why not?
- How would you redesign this experiment to make it controlled?
- Identify the independent and dependent variable in your redesigned experiment: • Independent:
  - Dependent:

# Practice 1:

You want to find out in which season plants grow faster. You take a cactus and measure its growth during one month in spring. In the autumn, you measure a fern's growth for one month and compare the results.

- Is this a controlled experiment? Why or why not?
- How would you redesign this experiment to make it controlled?
- Identify the independent and dependent variable in your redesigned experiment:
  - $\circ$  Independent:
  - Dependent:

## Practice 2:

On a cloudy Monday you have vanilla ice cream and it melts in 5 minutes. On a sunny Tuesday, you have frozen yogurt and it melts in 3 minutes. You conclude that frozen yogurt melts faster than ice cream.

- Is this a controlled experiment? Why or why not?
- How would you redesign this experiment to make it controlled?
- Identify the independent and dependent variable in your redesigned experiment:
  - Independent:
  - Dependent: