



Unit 1, Video 2: Observations and Variables

1. Label the following as a quantitative or qualitative observation: The temperature increased by 4.8 degrees Celsius.
2. Label the following as a quantitative or qualitative observation: The solution changed from clear to pink.
3. True or False: Another name for the dependent variable is the manipulated variable.
4. What do the letters mean in the acronym DRY MIX?
D _____
R _____
Y _____
M _____
I _____
X _____
5. True or False: There can only be one controlled variable in an experiment.
6. In the scenarios below, underline the dependent variable, circle the independent variable, and draw a square around any controlled variables.

Scenario 1: A scientist adds a catalyst to a chemical reaction to determine if the speed of the reaction changes. The temperature and initial concentrations of the solutions remain constant.

Scenario 2: A student is trying to determine the effect that temperature has on the density of water. He designs an experiment where the density of a sample of water is measured over a range of temperatures. The same glassware and scale are used for each density measurement.