

The Scientific Method

Problem: A problem is always phrased as a **question**.

Hypothesis: A hypothesis is always phrased as a **statement**. (It is hypothesized that...)

Independent Variable here is : temperature of the lollipop (you can control this)

A **control group** is necessary for: **comparison** to determine if variable being tested is having an effect.

The **experimental group receives the variable** being tested while the **control group does not**. All other factors remain the same.

Four **constants** here (stay the same in both groups) are: type of lollipop, way the lollipop should be eaten, how to determine if you reached the center, temperature of classroom.

The **dependent variable** is the time to dissolve (you can't control this)

Data to be collected should be **time to dissolve (in minutes)**

Room Temperature	Refrigerated
(time to dissolve in minutes for each participant)	(time to dissolve in minutes for each participant)

***take average at the end for each group and compare**

Data that would **support the hypothesis** is that the time to dissolve at room temperature is lower on average than that of the lollipops that were refrigerated.

Two ways to improve the experiment (increase validity) would be to repeat it, use more people, use the same flavor for all participants etc.