







The Scientific Method

Step of the Scientific Method	Description
1. Purpose/Question	The reason we are doing the experiment. 
2. Background Information	The information that we already know . 
3. Hypothesis	A prediction about what will happen. 
4. Experiment	A test of the hypothesis. 
5. Data/analysis	An evaluation of the results of the experiment.

	
<p>6. Conclusion</p>	<p>A presentation of the findings and restatement of the hypothesis.</p> 

Control variable = the factors that remain **constant** so they will not affect the outcomes

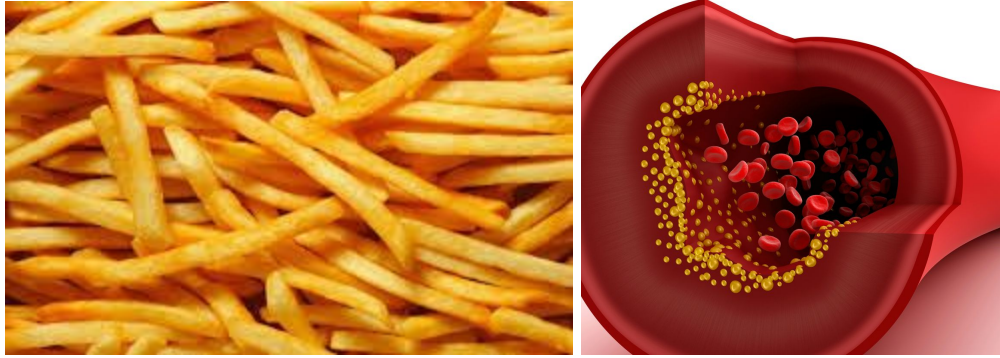
-The **control group** is what we use for comparison to what is “normal”. No changes are made in this group.

Independent variable = the factor being changed

Dependent variable = the factor being measured or tested

-In the **experimental group**, changes are made. Outcomes are compared to the **control group**.

EXAMPLE: We want to know whether eating french fries increases cholesterol in the blood. This is the **PURPOSE/QUESTION**. We already know that french fries are high in cholesterol. This is our **BACKGROUND INFORMATION**. We predict that eating french fries will increase cholesterol. This is our **HYPOTHESIS**.



To test our hypothesis, we find a large group of volunteers. We split these volunteers into three groups. One group will continue their normal diet- we make sure that they these volunteers do not eat french fries every day. This is our **CONTROL GROUP**. The second group eats one large order of McDonalds french fries every day for 3 months. The third groups eats two large orders of McDonalds french friends every day for 3 months. These are our **EXPERIMENTAL GROUPS**. We measure their blood cholesterol levels before and after. This is our **EXPERIMENT**.

Our **INDEPENDENT VARIABLE** is the quantity of french fries eaten every day. Our **DEPENDENT VARIABLE** is blood cholesterol.

We use the measurements of blood cholesterol to analyze any changes in cholesterol among the groups, as well as differences in cholesterol between the groups. This is our **DATA ANALYSIS**. We see significant changes in cholesterol in the group that ate french fries two times per day.

We conclude that eating large quantities of fries (two times/day) increases cholesterol in the blood. This is our **CONCLUSION**.