

## The Experiment:

What makes a good science fair experiment? Use scientific inquiry.

The **Scientific Method** is an organized way of figuring something out. There are usually six parts to it:

1. **Purpose:** What do you want to learn? An example would be, “Do plants grow better under different colored lights?” or “Do girls have faster reflexes than boys?”
2. **Research:** Find out as much as you can. Look for information in books, on the Internet, and by talking with teachers to get the most information you can before you start experimenting
3. **Hypothesis:** After doing your research, try to predict the answer to the problem. Another term for hypothesis is “educated guess”. This is usually stated like “If I ...(do something), then...(this will occur)”.
4. **Experiment:** The fun part! Design a test or procedure to confirm or disprove your hypothesis. In our example, you would set up a plant under a green light bulb and a plant under a red light and observe them for a couple of weeks. This is your variable. Also set up a plant under regular white light to compare the other to. This is your control. You should write down what you did for your experiment step by step.
5. **Analysis:** Record what happened during the experiment. Also known as data.
6. **Conclusion:** Review the data and check to see if your hypothesis was correct. If the plant grew better, you proved your hypothesis, if not, your hypothesis was wrong. It is not bad if your hypothesis was wrong, because you still learned something. That is the fun part of doing an experiment—you never know what might happen!

## HOW TO DISPLAY YOUR SCIENCE FAIR EXPERIMENT:

1. Display board with your **name, grade,** and a **Title**.
2. **Hypothesis and Conclusion clearly stated** on display board.
3. **Results, data, or observations neatly presented** in a chart or a graph if possible.
4. **Procedures,** and how you carried out the experiment, clearly stated.
5. **References,** such as book titles, where you found information, neatly listed.