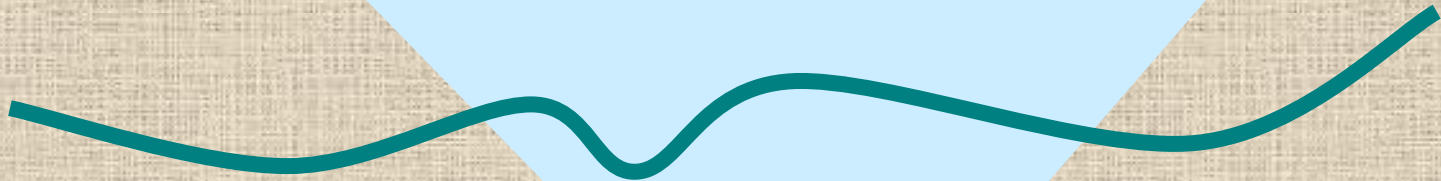


The Scientific Method

A Way to
Solve a Problem



What is the Scientific Method?



- It is the steps someone takes to identify a question, develop a hypothesis, design and carry out steps or procedures to test the hypothesis, and document observations and findings to share with someone else.
- In other words... it's a way to solve a problem.



Scientists have to take the time to think logically when they are investigating a question or problem.



- They break things down into many steps that make sense.



The steps of the Scientific Method are:

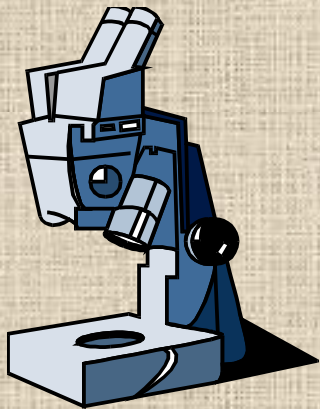
1. State/Develop the Question
2. Gather Information
3. Hypothesis
4. Experiment
5. Make Observations
6. Record and Organize Data
7. Draw a Conclusion



Scientists first develop a question to investigate. Then they gather information about the question in order to form a hypothesis (or educated guess).

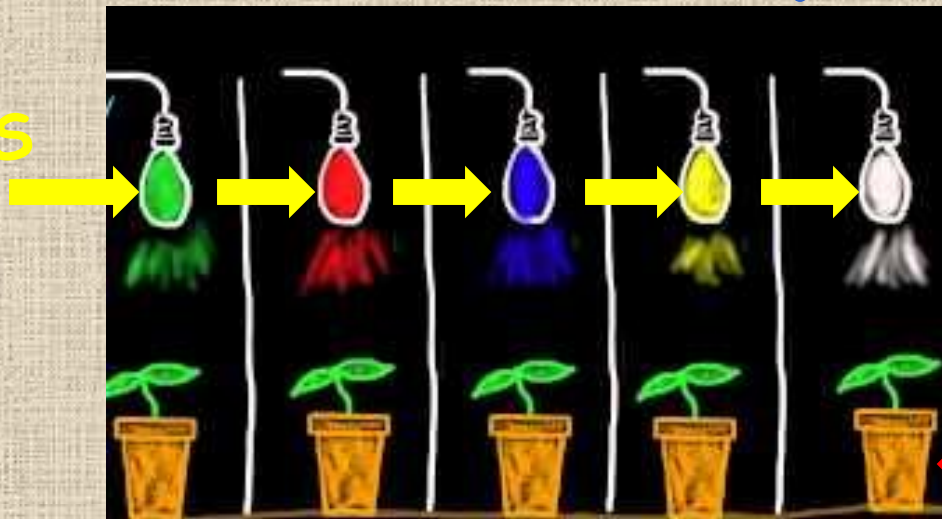


Next, scientists create a materials list and procedure. Then they conduct an experiment to test their hypothesis.



It is very important for scientists to include a control and a few variables in the experiment. The control is not tested and used to compare the results of the variables in the experiment.

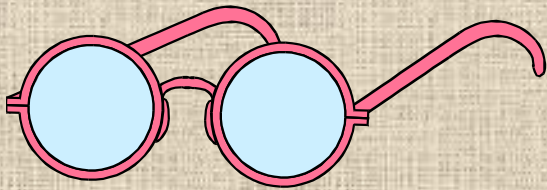
VARIABLES



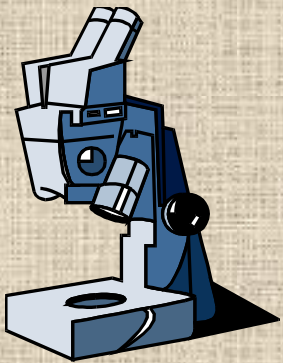
CONTROL

The key to experiments is observing what happens and writing it down!!!

- It is really important to gather information or data and write it so it is legible and makes sense to others!!!



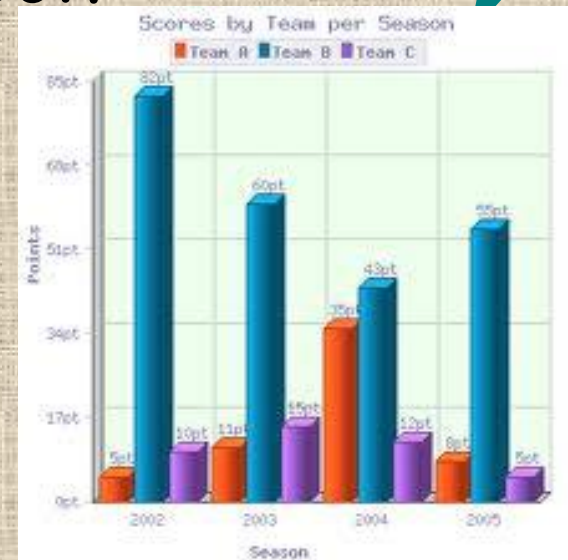
Once a scientist completes the experiment, they repeat it several times to see if they get the same findings and results.



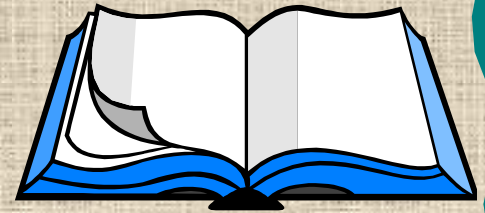
- This is called **verification**, or checking things out to make sure everything was valid and will happen again and again.

After all the testing is complete, a scientist then organizes the data into a chart or graph.

- This is done so the information can easily be seen and interpreted. Pictures are usually displayed with the data they represent. This is known as analyzing the data.



Scientists finally make conclusions and share their experiments and findings with others.



- Because they share their findings, scientists can learn from each other and often use someone else's experiences to help them with what they are studying or doing.

Use this to help you remember
the order of the steps.

Quiet and Giant Hippopotamus
Eat Orange and Red Candy.

- State the Question
- Gather Information
- Hypothesis
- Experiment
- Make Observations
- Record and Organize Data
- Draw a Conclusion

