Determining your Results

Tips
Students will need to incorporate or complete the following steps when conducting tests (doing experiments):

1. Use instruments that measure: scales, thermometers, stopwatches, meter sticks, gauges, or any instrument appropriate for the experiment.

2. Decide which controls and variables should be used.

3. Determine the length of the experiment.

4. Use trial and error.
   A true scientist believes that all experimental errors are important.

5. Incorporate replication (you repeating someone else’s work) and repetition (you repeating your own work). The results must be repeatable if they are to be trusted.

6. Be a good observer. If a researcher fails to pay attention to the entire experiment, something important may be missed.

7. Measure exactly. Too much or too little could change all the results and make them inaccurate. **All measurement should be made in metric units.**
Students are to record daily observations and the date and times they are made. They should write down problems as they occur. Two types of observations can be recorded:

- Empirical observations (those that are done using the senses)
- Observations using measurements and instruments

Written records of observations, measurements, etc., saves data from being forgotten or lost.
Determine the Results/Analysis of Data

- Compile or average your data to determine if the data supports or fails to support the hypothesis.
- This should be written in discussion form.
- Notation, graphs, charts, pictures, and power points may be used to illustrate and supplement data.
- Usually, information is organized first into a chart or table.
- Then a graph is made so that data can be seen in a different way.
- Making a graph is especially helpful when attempting to show how two or more things compare.
### Helpful Links: Charts / Graphs

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