Overview Sheet

**Essential Question**

How does one approach things in a scientific manner?

**Vocabulary**

<table>
<thead>
<tr>
<th>observation</th>
<th>subjective</th>
<th>objective</th>
<th>inference</th>
</tr>
</thead>
<tbody>
<tr>
<td>(observation)</td>
<td>(observation)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>hypothesis</th>
<th>control group</th>
<th>constants</th>
<th>variables</th>
</tr>
</thead>
</table>

| independent       | dependent     | quantitative data | qualitative data |
| (variable)        | (variable)    |                 |             |

**Learning Targets**

(Objectives)

1. List and describe the appropriate steps for solving a problem - The Scientific Method
2. Explain the relationship between observations and inferences
3. Effectively use a variety of resources to gather reliable information/research
4. Describe and compose an appropriate hypothesis
5. Describe and identify the terminology (control, constants, variables) used when performing the scientific method
6. Compare and contrast the two types of data
7. Identify the components of and create appropriate charts and graphs
8. Perform and apply the steps of the scientific method in order to solve a problem

**Helpful Websites**

- [http://forest.mtu.edu/kidscorner/face_nf.html](http://forest.mtu.edu/kidscorner/face_nf.html) (general overview)
- [http://www.sciencemadesimple.com/scientific_method.html](http://www.sciencemadesimple.com/scientific_method.html) (general overview)
- [http://www.pnpipes.net/edit6200/index.html](http://www.pnpipes.net/edit6200/index.html) (interactive + general overview)
- [http://www.isd77.k12.mn.us/resources/cf/SciProjInter.html](http://www.isd77.k12.mn.us/resources/cf/SciProjInter.html) (general overview)
- [http://www.studygs.net/scimethod.htm](http://www.studygs.net/scimethod.htm) (interactive + general overview)
- [http://biology.clc.uc.edu/courses/bio104/sci_meth.htm](http://biology.clc.uc.edu/courses/bio104/sci_meth.htm) (interactive + general overview)
- http://www.holah.karoo.net/experimental_method.htm (experiments)
- http://kids.nceas.ucsb.edu/DataandScience/datadomain.html (data)
- http://www.sciencebuddies.org/mentoring/project_data_analysis.shtml (data analysis + graphing)
- http://www.lhup.edu/sboland/independent_and_dependent_variab.htm (variables)
- http://www.biologycorner.com/worksheets/scientificmethodstories.html (ws)
- http://www.biologycorner.com/worksheets/controls.html (ws)