Scientific Processes

Overview Sheet

Essential Question

How does one approach things in a scientific manner?

Vocabulary

observation	subjective *(observation)*	objective *(observation)*	inference
hypothesis	control group	constants	variables
independent *(variable)*	dependent *(variable)*	quantitative data	qualitative data

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://www.sciencebuddies.org/mentoring/scientific-method.shtml?gclid=CJecv-uTmo8CFQspFQodq2xueg (general overview)
- http://www.biology4kids.com/files/studies_scimethod.html (general overview)
- http://forest.mtu.edu/kidscorner/face_nf.html (general overview)
- http://www.sciencemadesimple.com/scientific_method.html (general overview)
- http://www.panpipes.net/edit6200/index.html (interactive + general overview)
- http://school.discovery.com/sciencefaircentral/scifairstudio/handbook/scientificmethod.html (general overview)
- http://www.isd77.k12.mn.us/resources/cf/SciProjInter.html (general overview)
- http://www.studygs.net/scimethod.htm (interactive + general overview)
- http://biology.clc.uc.edu/courses/bio104/sci_meth.htm (interactive + general overview)
- http://aspire.cosmic-ray.org/labs/scientific_method/sci_method_selector.swf (interactive + general overview)

More on back ➡

- 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://nces.ed.gov/nceskids/createagraph/default.aspx (interactive + graphing)
- http://www.tv411.org/lessons/cfm/reading.cfm?str=reading&num=10&act=1 (interactive + graphing)
- http://sciencereviewgames.com/srg/subjects/games.php?id=36 (observation + inference +review games)
- http://www.lhup.edu/sboland/independent_and_dependent_variab.htm (variables)
- http://www.biologycorner.com/worksheets/scientific_method_plant_exp.html (interactive + science experiment)
- http://www.lyricallearning.com/vol1.html (song)
- http://www.biologycorner.com/worksheets/scientificmethodstories.html (ws)
- http://www.biologycorner.com/worksheets/controls.html (ws)
- http://school.discoveryeducation.com/quizzes15/biolessonscom/BasicsQuiz.html (interactive quiz)
- http://www.quia.com/custom/457main.html (interactive quiz)