**Scientific Method versus Technical Design Work Sheet** **for Integrated Science III (8th Grade)**

**Standard:** 8Sa: The student will demonstrate an understanding of technological design and scientific inquiry, including process skills, mathematical thinking, controlled investigative design and analysis, and problem solving.

**Indicators 8Sa:**

1. Design a **controlled** scientific investigation.
2. Recognize the importance of a **systematic process** for safely and accurately conducting investigations.

**For this activity you will do the following:**

1. Research the steps included in the process of a controlled scientific investigation. Each person in your table group should find a different source for the steps in the scientific method. It is very likely that different sources will have different steps or perhaps the same steps but described in different words.
2. Research the steps included in the process of technical design. Each person in your table group should find a different source for the steps in technical design. It is very likely that different sources will have different steps or perhaps the same steps but described in different words.
3. Record the results of your research in your personal science journal.
4. Discuss and compare with your table partners, the steps in the methods that you find with the steps in the methods that your table group partners find.
5. One person in your table group should prepare to report orally the results of your discussion to determine the best definition of the steps in scientific investigation.
6. One person in your table group should prepare to report orally the results of your discussion to determine the best definition of the steps in technological design.
7. One person in your table group should prepare a written report to Mr. Graham giving the results of your discussion to determine the best definition of the steps in the scientific method.
8. One person in your table group should prepare a written report to Mr. Graham giving the results of your discussion to determine the best definition of the steps in technological design.
9. Each individual student will prepare a written report and/or an oral report to Mr. Graham comparing the steps that are different, and the steps that are alike, for the scientific method and technical design.
10. Be prepared to follow the steps you found to do a simple science investigation and a technical design.

Notes:

You may research any way you choose; such as an Internet search, reading a portion of a science textbook, reading a science reference book in the library, or any other way you believe will give you the best set of steps.

Definition of **SCIENTIFIC METHOD**: principles and procedures for the systematic pursuit of knowledge involving the recognition and formulation of a problem, the collection of data through observation and experiment, and the formulation and testing of hypotheses

Retrieved 8/28/2012 from <http://www.merriam-webster.com/dictionary/scientific+method>

**Technical design**

1 adj ***Technical*** means involving the sorts of machines, processes, and materials that are used in industry, transport, and communications

1 verb When someone ***designs*** a garment, building, machine, or other object, they plan it and make a detailed drawing of it from which it can be built or made.

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