



Drexel-SDP GK-12 ACTIVITY

Subject Areas: Physical Science, Variables, Chemical Science, Technology and Society, Food Science

Lesson Title: Where do Engineers go to Research?

Grade Level: 5 (5–8)

Time Required: 10 weeks, 2 classes/week & 1hr per class

Group Size: 4-5 students

Expendable Cost per Group: \$1.00 USD

Summary:

Science is conducted in many disciplines all over the world. Scientist and engineers do research in labs; but, where do Engineers go when they need tools? Engineers go to the field, big laboratory facilities and the laboratory. The goal is to introduce students to where engineers do research.

Vocabulary

Objectives:

- Learn about where scientists perform research.

Keywords: Food, Engineering, Candy

Educational Standards:

3.1.7a, 3.1.7b, 3.1.7c

Materials List (include safety equipment if applicable)

- Worksheets from www.nist.gov/public_affairs/kids/morenist.htm
- a number two pencil
- Science Journal

Procedure:

- **Methods and Procedure:**
Students know that scientists do research in laboratories. However, where do engineers do research and work? They work in labs, the field and big laboratory facilities. To introduce where engineers work, I showed some pictures of engineers working and the things they worked on. One picture was a man working on a building, another was a man on a dam, engineers in the laboratory mixing chemicals, scientists at large facilities and scientists at nuclear power plants. As part of the exercise, work sheets from NIST were given out to be completed by the students. They also read the worksheets about NIST and we discussed what researchers at NIST do and the type of facility.

Investigative Work

What evidence do students collect?

How do students present evidence?

What conclusions are drawn from the evidence?

Include example of data sheets

Assessment: Science Notebook

Activity Extensions: None

Other:

FOSS Solar Energy Unit

<http://lhsfoss.org/scope/5-6.html>

References & Web Sites: www.nist.gov/public_affairs/kids/morenist.htm

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Owner: Drexel University GK-12 program, *Engineering as a Contextual Vehicle for Science and Mathematics Education*, supported in part by National Science Foundation Award No. DGE-0538476

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