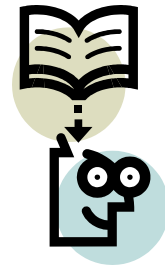




THE SCIENCE FAIR WITH AN ENERGY EFFICIENCY FLAIR



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Overview: To get the Energy Conservation message out to our entire community by organizing a school-wide Science Fair with an emphasis on Energy Efficiency, and Environmental Education.

Objectives: The objectives are to promote conserving energy to community, integrate energy conservation into an education curriculum, and allow local residents to recognize students' progress.

Subjects: Science, specifically Energy Efficiency/Conservation

Suggested Grade Level: 3rd, 4th, and 5th grades

California Standards Addressed:

- 3rd Grade:
 - Science: Investigation and Experimentation 5.c. Students use numerical data in describing and comparing objects, events, and measurements.
 - Science: Investigation and Experimentation 5.e. Students collect data in an investigation and analyze those data to develop a logical conclusion.
- 4th Grade:
 - Science: Investigation and Experimentation 6.a. Students differentiate observation from inference (interpretation) and know scientists' explanations come partly from what they observe and partly from how they interpret their observations.
 - Science: Investigation and Experimentation 6.f. Students follow a set of written instructions for a scientific investigation.
- 5th Grade:

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- Science: Investigation and Experimentation 6.h. Students draw conclusions from scientific evidence and indicate whether further information is needed to support a specific conclusion.
- Science: Investigation and Experimentation 6.c. Plan and conduct a simple investigation based on a student-developed question and write instructions others can follow to carry out the procedure.
- Science: Investigation and Experimentation 6.b. Develop a testable question.
- Language Arts: Listening and Speaking 1.0. Students deliver focused, coherent presentations that convey ideas clearly and relate to the background and the interests of the audience. They evaluate the content of oral communication.

Time: Weeks; the length of a science fair curriculum

Materials:

1. Meter-Comparator
2. Brochures and fact sheets

PREPARATION AND BACKGROUND: Most schools put engage upper elementary aged children in science fairs as a part of the science curriculum, in order to expose them to the scientific method. The goal here would be to integrate an environmental education flair of energy conservation and efficiency into a school-wide science fair. By doing so, the concept of conserving energy will be delivered to our whole community.

Procedure/Activities:

1. Invite all classes to participate by doing projects to display on their class tables
2. Invite local environmental organizations to have a display, borrow artifacts from scientific groups to display
3. Develop Energy Facts sheet to hand out
4. Students plan energy presentations and displays
 - a. Obtain energy audit and energy saving tips brochure to hand out
 - b. Practice song "A Little Bulb Went Off" for presentation



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- c. Sell compact fluorescent bulbs as a community service and display our energy efficient and non-energy efficient classroom models
5. Students help younger students to set up their projects

For Discussion:

1. Hold a brainstorming session with class on the types of activities to have at the Science Fair that will help attendees understand why saving energy is important.

Extensions/Evaluations: Develop a follow-up evaluation and hand them out.

Resources:

1. Meter- comparator to demonstrate energy consumption use of incandescent light bulbs as compared to compact fluorescent
2. Brochures from US Department of Energy, Alliance to Save Energy, and Pacific Gas and Electric



ALLIANCE TO SAVE ENERGY'S
Green Schools Program
Empowering Schools through Energy Efficiency