

School Energy Audit



Supervisor and EcoKids Information

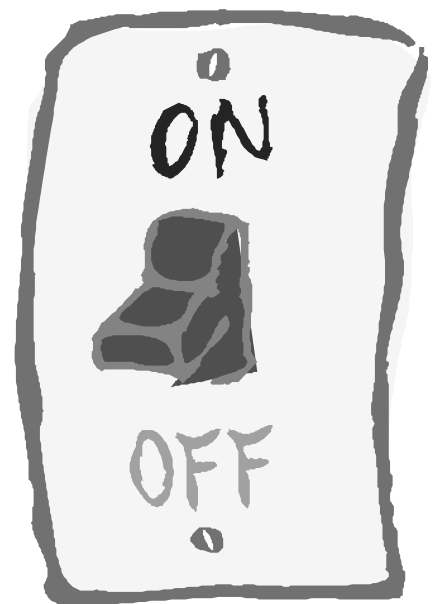
ELEMENTARY SCHOOLS

You don't have to audit your entire school to help your school become more energy conscious. If you are following the "More than 50 Ways to Reduce Energy" found in the autumn 2000 EcoKids E-PAK, you're already well on your way! Focus on one part of the school, like your classroom, and closely examine your lights, windows, doors, and walls for energy "deficiencies." Or investigate one type of energy use throughout the school, such as lighting or heating/cooling systems.

Auditing your school's energy use can require some very high tech skills. Energy audits are commonly performed by middle school and high school students who have acquired the math skills, science concepts, and investigative techniques needed to complete a comprehensive audit. We recommend that you partner up with a neighbouring high school class who could take the leading role. Look in the high school section below for resources.

Tips:

- ✓ Start a "Turn Off the Lights" campaign. Use the light switch covers found in your EcoKids autumn 2000 E-PAK as part of the work you do.
- ✓ Create an energy reduction brochure using the tips found in the autumn 2000 EcoKids E-PAK activity, "More than 50 Ways to Reduce Energy."
- ✓ Take photos before, during and after the energy audit.



MIDDLE SCHOOLS AND HIGH SCHOOLS

To audit your school's energy use, you need to know the right questions to ask and be able to understand the answers. With the right tools, a bit of energy education, and a bit of help from some energy experts, you can perform an energy audit that'll impress your school officials.

Think about partnering up with a local elementary school. You can buddy up with younger students to help teach them about energy conservation and use your skills to guide them through an energy audit of their school (or yours).

Tips:

- ✓ Don't hesitate to contact the utility company that provides your school with heat and electricity. Their staff can offer you invaluable advice and assistance.
- ✓ Take a field trip where you can see the different types of building materials and insulation used in construction and the different materials that affect energy efficiency and "R" values.
- ✓ Draw a floor plan of your school to help you track your audit's findings.
- ✓ Break up into teams. Have each team focus on one of the following: windows, lighting, electricity use, heating and cooling systems, doors, and so on.
- ✓ Make your school's custodial/engineering staff a key partner in your audit.



Tools:

We've researched FREE tools that will help you perform an energy audit.

Watt's Up? – produced by Co-NECT. This is a US-based school energy audit available for Grades 9-12. Go to www.co-nect.org/Schools/Energy/

Energy Audit – produced by the Alliance to Save Energy (US-based). This is an energy audit that can be used for a home or school. It has survey sheets for students and teacher information. Go to www.ase.org/educators/lessons/audit.htm

Student Power 2000 – produced by ComEd. This gives you a 31 week scheduled list of tasks that can take your students through a comprehensive audit of your school. The schedule was created for the members of the Student Power 2000 program but it can be applicable to almost anyone. Go to www.studentpower2000.com/where_you_should_be/energy_auditing.asp

High School Energy Audit – produced by Bonneville Power Administration (US). There are 9 chapters each of which focuses on a different part of the audit. Go to www.bpa.gov/Corporate/KR/ed/energyaudit/homepage.shtml

Many ways to make your school more energy efficient:

- turn off lights in empty hallways when not in use
- seal outer doors
- place lights on timers
- replace incandescent lights with fluorescent lights
- upgrade rooftops and insulation materials
- replace old, leaky windows
- apply for grants to finance energy conservation initiatives
- replace the heating system with an earth energy system, natural gas or other clean energy alternative
- install new thermostats
- place caulking and weatherstripping around doors and windows (make it a one day party)
- use the PA system to share energy tips
- tape student videos of "How To" perform basic energy conservation actions
- cover sun-facing windows with UV film
- put LED bulbs in exit signs
- install light sensors in bathrooms
- place light reflectors in hallways
- perform an energy education tour of your school to show other students where energy can be conserved and where it's being wasted
- implement a school-wide energy poster campaign
- plant trees to provide shade or wind barriers
- add insulation where there was none before
- use more natural light in classrooms
- change outdoor lights to be triggered by motion sensors
- seek funding programs that offer employment positions for students to undertake energy audits
- track the energy use and cost per hour of electrical equipment used in the school and post this information on the equipment
- buy solar water heaters
- install infrared sensors in closets and bathrooms
- keep classroom doors closed in winter to keep heat in
- place curtains over windows to keep heat in or sun out
- educate custodial staff about energy conservation issues
- initiate ticket program for people who forget to turn off lights
- construct inner doors by main entrances
- keep an up-to-date inventory of electrical equipment, lighting, and so on in the school

