



Phantom Energy Patrol

Action: Learning how to conserve energy in your school through identifying and eliminating devices that use phantom power

Materials:

- Something to identify the energy patrol team e.g. arm band, hat, vest or badge
- Have students create their own uniforms or identifying features. The most successful patrols are those that are clearly identified throughout the school.

Best time of year for project:

- Any time of the year is suitable to begin a phantom energy patrol, however starting earlier in the school year is better. This allows for the collection of baseline data before the patrol begins, allows time for targeted campaigns throughout the year, as well as time to do a final analysis to determine the level of success.

Time commitment:

- Planning: Two to three meetings
- Creation of media and materials for patrol: One to two sessions
- Baseline data collection: Three to four sessions
- Implementation of changes to energy conservation in your school: One week of lunches to educate other students/classes
- Maintenance/monitoring: Two to three sessions

Background:

- A large portion of the energy we use at school and at home comes from non-renewable energy sources such as coal, oil, and natural gas. Burning these fuels creates a lot of air pollution which causes health problems for humans and animals, destroys habitat and contributes to climate change.
- The objective of this project is to form a Phantom Energy Patrol in your school that will inspect the school for wasted energy and identify places where energy can be better used/conserved.
- Phantom energy is the energy that is used by an appliance or electronic device that is turned off but still remains plugged into the wall socket. Devices that use phantom energy include: TVs, computers, video games, DVD players, microwaves, chargers and stereos.
- These devices often have small lights that stay on even if the device is turned off, and sometimes have clocks, remote controls and internal batteries that continue to charge when turned off.



This project will give students the opportunity to:

- Explore the concept of energy
- Understand the various forms of energy (renewable vs. non-renewable)
- Examine the ways in which phantom energy contributes to their energy consumption
- Participate in energy saving actions
- Lead other students to reduce energy usage

Fast facts:

- Phantom energy is also referred to as vampire power, phantom power, idle current, phantom load, wall wart.
- Devices that have 'standby modes' are major contributors to phantom energy. Standby mode simply allows a device to turn on more quickly. Devices without standby mode only require a few more seconds warm up.
- A CRT TV (the big, bulky kind that is not flat enough to hang on a wall!) left plugged in uses 70 watts of phantom energy over a 10-hour period. That is enough power to play video games for about 3.5 hours!
- New technology is helping us to reduce the amount of energy wasted from phantom energy users. Special power bars have been designed to shut off energy to devices that are plugged in but turned off.

Getting started:

- Discuss with students what energy is, where it comes from and why it is important to conserve and use renewable sources.
- Discuss with students what phantom energy is, what types of devices use it and how much energy is wasted.
- Sit down with your energy patrol and list all of the devices in your school that use phantom power.
- Design an energy map of your school to see what areas use the most phantom energy. This will likely involve the students exploring the school as a group over a few days or weeks.
- Discuss what an energy meter is, who pays for energy and how students impact the amount of energy used (and money spent).
- Learn how to read energy meters at school and track how the phantom energy patrol changes the overall consumption (this will likely require the help of the custodian.)
- Create an energy patrol warning slip to issue or a reminder poster for classrooms that are leaving appliances and electronic devices plugged in.
- Create an inspection schedule to be done at regular intervals throughout the school year and have students sign up. Make sure one student (or the phantom



energy patrol) is in charge of teaching and reminding other students why energy conservation is important.

Maintaining interest in the project:

- Have patrol members participate in the school newsletter by providing updates on areas of improvement and tips for energy conservation at home.
- Create and read phantom energy patrol updates and successes (not failures!) on the school announcements in the morning.
- Create energy conservation labels to place in classrooms (over light switches, computer monitors, etc.).
- Reward classrooms who consistently remember to unplug TVs, computers and stereos (i.e. public recognition, class of the week award, etc.).
- Have classrooms compete against each other. For example, have the patrol record the number of devices that are left plugged in at the end of the day. The class that has the fewest number of days on record gets a reward!

Helpful hints:

- Ensure the entire school is aware of the purpose of the patrol and how they can participate.
- Targeted campaigns throughout the year are a great way to ensure visibility. Try linking the energy conservation campaigns in the school to larger regional, national and international events.
- Ensure the energy patrol understands why they are doing the campaign. Provide a brief handout (be sure to reuse or use recycled paper!) that patrol members can give to other teachers, students or parents when asked.