



ELEMENTARY CLASSROOM ACTIVITY

Power Down

OBJECTIVE

After identifying how energy is used in their school building, students will develop recommendations on how to reduce energy consumption.

OVERARCHING QUESTION

How can we conserve energy in our school?

WHAT'S THE PROBLEM?

- In 2018, the United States used more energy than ever before.¹
- This energy can be divided into two main categories:
 - **Nonrenewable energy** is created from sources that will eventually run out, like coal, gas, and oil. When these sources are burned to create energy, they cause air pollution.
 - **Renewable energy** is created from sources that won't run out, like the sun and wind. This kind of energy causes much less air pollution.
- Although the United States is trying to use more renewable energy, most of the energy that we use for power still comes from nonrenewable sources.²

While students may not get to choose whether their schools or homes are powered by renewable or nonrenewable energy, *everyone* can play a role in helping protect the environment from air pollution. When we choose to use or *consume* less energy, less energy needs to be produced. When less energy is produced, there is less pollution!

COLLABORATE AND BRAINSTORM

Walk around the school building with a few of your peers and think about where and how energy is used. Keep in mind that energy is needed:

- To heat or cool your school
- To power lights
- To heat water
- To power electric and electronic devices, which draw power whenever they are plugged into an outlet (even if they are not turned on)

Then choose one room or school area where you think energy use could be reduced. **Brainstorm:** What change(s) could be made to help this room or area use less energy?

DESIGN AND CREATE

Work with your group to create signs on the Energy Alert sheet that will teach others how to use less energy in your selected room or area. Each sign should have a single focus—the light switch, the outlets, the laptop cart, etc. You can create many signs to place around the room.

Every Energy Alert sign should include:

- A creative header that will catch people's attention
- A short description of what people should do
- A short description of why this action is important
- A visual

MAKE IT BETTER

Pair with another group and visit the school areas that both groups focused on. As you do, share your signs and explain where you would place each one. Then give each other recommendations on how to make the signs more convincing *or* where additional reminders could be helpful. Try to incorporate at least one suggestion into your designs.

KEEP IT GOING

Create similar reminders to place around your home. Try to get each family member involved in creating signs for a different room.

K-2 CONSIDERATIONS

Begin with your own classroom and work together to identify where energy is used and how this energy use could be reduced. Then divide students into focus areas (lights, computers, etc.) and encourage groups to collaborate to create Energy Alerts for these sections of the classroom.

STANDARDS

Next Generation Science Standards

ETS1.B: Developing Possible Solutions

- Research on a problem should be carried out before beginning to design a solution. Testing a solution involves investigating how well it performs under a range of likely conditions.

Sources

1. "In 2018, the United States consumed more energy than ever before." U.S. Energy Information Administration. eia.gov/todayinenergy/detail.php?id=39092.
2. "Frequently Asked Questions." U.S. Energy Information Administration. eia.gov/tools/faqs/faq.php?id=427&t=3.

