

Climate Solutions for Our Homes and Schools

Opening Activity: Clean Energy Vocabulary Quiz

Notes:

The Big Question

How can climate technologies help homes and schools become part of the climate solution?

My Climate Goals

When you complete this lesson, you'll be able to

1. Explain how solutions such as weatherization, heat pumps, solar energy, efficient appliances, and battery storage make homes and schools climate solutions
2. Discuss how your own home, school, and community can be part of the climate solution.

Notes:

Energy Audit and Solutions for Our School

Instructions

Work with your group to complete an energy audit of your school. Use the steps and examples below to assess current energy use and identify three to five ways to make the school more energy efficient. Be prepared to share your findings and solutions with the class.

Step 1: Observing Energy Use

1. Lighting:

- Are the lights energy efficient (e.g., LED bulbs)?
- Are the lights turned off in unused rooms?
- Are there opportunities to use natural light instead of artificial lighting?

2. Heating and Cooling

- Are the doors and windows closed when heating or air conditioning is on?
- Are there drafts or areas where air is escaping?
- Are the thermostats set to appropriate temperatures?

3. Appliances and Equipment

- Are the computers, projectors, and other electronics turned off when not in use?
- Are there energy-saving settings on devices?
- Are vending machines or kitchen equipment energy efficient?

4. Water Use

- Are the faucets and toilets operating efficiently?
- Are there signs of leaks or water waste?

5. Other Observations

- Are there any areas where energy is being wasted?
- Are renewable energy systems (e.g., solar panels) already in place?
- Does the school provide recycling, composting, electric vehicle charging, or bike storage services?

What do you notice?

Step 2: Identifying Energy-Efficient Solutions

With your group, brainstorm ways for your school to improve energy efficiency. Here are some ideas to get you started:

- Switch to LED lighting or install motion sensors to turn lights off automatically.
- Add weather stripping or insulation to windows and doors to prevent heat loss.
- Use energy-efficient appliances or unplug devices when not in use.
- Install low-flow toilets to reduce water waste.
- Start an awareness campaign to encourage energy-saving habits among students and staff.

What three to five changes would you suggest to make the school more energy efficient?

How will these changes save energy, reduce costs, or improve the school environment?

What actions can your group take to help implement these solutions?

Lesson Key Points

- Any building or space can adopt clean energy technologies such as weatherization, heat pumps, efficient appliances, and battery storage.
- Several careers work to improve energy efficiency.
- Climate solutions require creativity more than complexity.

Additional key points:

Closing Activity

Identify one action you can take to increase your understanding or involvement in these solutions:

Copy your next step on a sticky note and place it somewhere visible, such as on the front of your notebook or inside your locker.

Are there any careers of interest that you heard about in this lesson?