

WATCH OUT FOR VAMPIRES

- Grade Level: K-3
- Subjects: Science, Social Studies
- Suggested Time: 1 hour



Students learn about vampire load and how to reduce it.

Materials

Chalkboard and chalk, paper and pencils and/or crayons.

National Standards

Science:

- Science as inquiry.
- Properties of objects and materials.
- Characteristics of organisms.
- Organisms and their environments.
- Types of resources.
- Light, heat, electricity, and magnetism.
- Changes in environments.

Social Studies:

- Roles of the citizen.
- Scarcity.
- Environment and society.

Ohio 2010 Standards

Science:

- Science inquiry and application. (K-3)
- Objects and materials can be sorted and described by their properties. (K)
- Living things have basic needs, which are met by obtaining materials from the physical environment. (1)
- Living things cause changes on Earth. (2)
- Earth's resources can be used for energy. (3)
- Some of Earth's resources are limited. (3)
- Heat, electricity, light and sound are forms of energy. (3)

Social Studies:

- Individuals have shared responsibilities toward the achievement of common goals in homes, schools and communities. (K)
- Families interact with the physical environment differently in different times and places. (1)
- Human activities alter the physical environment, both positively and negatively. (2)
- Individuals make the community a better place by solving problems in a way that promotes the common good. (3)

Objectives

The student will be able to:

- Define plug load item and vampire load.
- Identify plug load electrical devices in the classroom and in homes.
- Explain how and why to reduce vampire load to save energy.

Teacher Preparation

Variation: For kindergarten use pictures instead of words as needed. Adapt vocabulary and concepts as appropriate for students.

Introduction

- Ask students what someone should do if a faucet is dripping (fix it). Ask why (to stop wasting water & money).
- Tell students that there are “leaky faucets” in the classroom. Allow students to guess what this means. They probably won’t guess, but don’t give the answer.
- Ask students what electricity is. Tell them it is a kind of energy that we use to turn on lights and things we plug in. In the US most electricity comes from burning coal, a resource found in the earth which will one day run out. Burning coal causes pollution. Tell students they will learn a new way to save energy and protect the earth.

Activities

- Write “plug load item” and definition on the board: something that you plug into an electrical outlet (point to one). Ask students for an example.
- Draw or post a picture of a vampire on the board. Write “vampire load” and the definition on the board: the electricity used by plug load items when they are plugged in but not being used.
- Give an example from the classroom. Ask students for more examples. Then ask students why they think this is called vampire load.
 - Optional: write “phantom load” and “stand-by load” on the board and tell them these are synonyms (remind them of the definition of synonym if needed).
- Explain that the small amount of energy used by vampire load adds up over a year to waste a large amount of energy and money, like a dripping faucet.

- Ask students why it is important not to waste energy. Review where energy comes from and how it affects the earth.
 - Ask students why we should get rid of the “vampires” if it is only a small amount of energy. What would happen if everyone did their part to reduce vampire load?
- Explain that students will find the “vampires” in the classroom.
- Break students into small groups. Give each group a piece of blank paper and ask them to draw or write the name of every plug load item (or “vampire”) they can find in the room. Remind students not to touch these items or the outlets.
 - Some possible items are computers, printers, scanners, copiers, coffee pots, microwaves, CD or DVD players, clocks, lamps, fans, televisions, electric pencil sharpeners, chargers, space heaters, etc.
- As a class, make a list of all the “vampires” students found.
 - Point out that “vampires” that display a light, time, or message use the most electricity even when turned off. If possible show an example (printer, coffee pot, microwave, pencil sharpener, etc.).
- Ask students how they could get rid of the “vampires.” (Unplug “vampires” when they are not being used.) Remind them never to touch a power strip or outlet, but to ask an adult for help.
 - Possible discussion point: it is not possible for all plug load things to be unplugged. We can live with minimal vampire load, especially if we reduce it where we can.
- In groups, as a class, or individually, students should write a school announcement explaining what vampire load is and how to reduce it. Have students or staff read the announcements over the PA. (For kindergarten have students dictate announcement as a class for teacher to record).

Extensions

Students may write an explanation of vampire load and how to reduce it and read it to their families.

Closing

After reviewing the lesson, ask students what “vampires” may be in their homes. Encourage students to ask an adult to unplug at least one “vampire” when it’s not being used.