



Critical Thinking Skills



Reducing Your School's Carbon Footprint

Skills for Critical Thinking		Reading						Hands-on Activities	
		Your School and Climate Change	How Your School Uses Energy	Cars, Buses, Bicycles, and Feet	Footprints in Your Lunch	We Recycle Cans, Trees Recycle Carbon	Study Green		Reduce What You Can and Offset the Rest
LEVEL 1 Remembering	<ul style="list-style-type: none"> List Details/Facts Recall Information Match Vocabulary to Definition Define Vocabulary Sequence 	✓	✓	✓	✓	✓	✓	✓	✓
LEVEL 2 Understanding	<ul style="list-style-type: none"> Demonstrate Understanding Describe Classify 	✓	✓	✓	✓	✓	✓	✓	✓
LEVEL 3 Applying	<ul style="list-style-type: none"> Application to Own Life Organize and Classify Facts Infer Outcomes Utilize Alternative Research Tools 	✓	✓	✓	✓	✓	✓	✓	✓
LEVEL 4 Analysing	<ul style="list-style-type: none"> Distinguish Meanings Make Inferences Draw Conclusions Identify Cause and Effect Identify Supporting Evidence 	✓	✓	✓	✓	✓	✓	✓	✓
LEVEL 5 Evaluating	<ul style="list-style-type: none"> State and Defend an Opinion Make Recommendations Influence Community 		✓				✓	✓	✓
LEVEL 6 Creating	<ul style="list-style-type: none"> Compile Research Information Design and Application Create and Construct Imagine Alternatives 			✓	✓	✓	✓	✓	✓

Based on Bloom's Taxonomy



How Your School Uses Energy

1. **Circle** the word **TRUE** if the statement is TRUE or **Circle** the word **FALSE** if it is FALSE.

a) All school buildings are designed to be energy efficient.

TRUE **FALSE**

b) Most electricity is generated by burning fossil fuels.

TRUE **FALSE**

c) Heating uses energy, and air conditioning saves energy.

TRUE **FALSE**

d) Sunlight can be used to heat water.

TRUE **FALSE**

e) Sunlight can be used to generate electricity.

TRUE **FALSE**

2. Put a check mark (✓) next to the answer that is most correct.

a) The letters EPA stand for

- A Earth Positive Association.
- B Evergreen Planting Activity.
- C Environmental Protection Agency.
- D Ecological Practices Advancement.

b) Which energy source is used to generate most of the electricity in the United States?

- A oil
- B coal
- C nuclear
- D hydroelectric

c) What is the main advantage of double pane windows?

- A They are stronger.
- B They do not fog over.
- C They reduce heat loss.
- D They are easier to clean.

SAMPLE



How Your School Uses Energy

Experts believe that one-fourth of the six *billion* dollars American taxpayers spend on school energy use is wasted. In this chapter we will look at some ways to reduce this waste by improving the efficiency of the ways energy is used in schools, including heating, cooling, and lighting.

Anything that burns fossil fuel or uses electricity at your school contributes to global climate change. You

might think that electricity releases no CO₂, but remember that most electricity is produced by burning fossil fuels. Now we will look at ways that schools use energy.

Most schools have a heating system for cold days and a **ventilation** system to move air around and keep it fresh. Many schools also have an **air conditioning** system for hot days. These three systems work together in what is called the heating, ventilating, and air conditioning system or **HVAC**. Some HVAC systems are much more energy efficient than others. If an HVAC system meets a certain standard of efficiency, it is given an **Energy Star** rating by the **Environmental Protection Agency (EPA)** and marked with the symbol shown above.



Learn more about this symbol at:
<http://www.energystar.gov/index.cfm?c=home.index>



Explain how using electric lights increases CO₂ emissions into the atmosphere.

Try to find out which things in your school have an Energy Star rating. In addition to the HVAC system, look for the ratings on computers,



How Your School Uses Energy



3. Answer the questions in complete sentences.

a) Describe two ways to save energy used for school lighting.

b) Describe two ways to save energy used to power a school's HVAC system.

Extensions & Applications

In each square of the right-hand column of the graphic organizer below, describe a way to reduce energy use for the energy need listed in the square to the left.

School Energy Need	How to Reduce Energy Use
Heating	
Air conditioning	
Hot water	
Lighting	

See page 40 for Final Version Worksheet.