

Energy Choices Count

Read closely to trace energy sources, conservation actions, and useful technology.

5.9 "The student will investigate and understand that the conservation of energy resources is important. Key ideas include some sources of energy are considered renewable and others are not..."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB In paragraph 1, circle the six energy sources and write R by renewable sources and N by nonrenewable sources. In paragraph 3, number only solar panels (1), power lines (2), and LED bulbs (3) to identify technologies that transform or transfer energy.

A Town Uses Energy Wisely

- ① Energy helps a town run buses, cook meals, and light homes. Sunlight, wind, and moving water are renewable energy sources because nature replaces them in a fairly short time. Coal, oil, and natural gas are nonrenewable sources. They formed from ancient living things over millions of years, so people can use them much faster than Earth can replace them.
- ② At the town library, workers lower the thermostat when the building is empty and switch off unused computers. These actions conserve energy by reducing electricity or fuel use. The library also collects paper for recycling and uses washable cups at events. Recycling paper saves materials, while washable cups reduce the number of new cups that must be made and thrown away. Conserving matter means using materials carefully so less is wasted.
- ③ Technology can help people transfer and transform energy. In this town, solar panels, power lines, LED bulbs, and smart power strips are technologies. Solar panels transform sunlight into electrical energy. Power lines transfer electrical energy from a power plant to the library. LED bulbs transform electrical energy into light with less wasted heat than many older bulbs. A smart power strip can stop power from reaching devices that are turned off.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 Why is sunlight renewable, but coal is nonrenewable?

2 What are two actions library workers take to conserve energy?

3 How do recycling paper and using washable cups conserve matter?

4 How do solar panels and power lines handle energy differently?

3 YOUR TURN _____ Your own words

Write a five-sentence energy and materials plan for a school event. Include one renewable source, one nonrenewable source to use less, one action that conserves matter, and one technology that transfers or transforms energy.

PART 1 • READ AND MARK

In paragraph 1, circle the six energy sources and write R by renewable sources and N by nonrenewable sources. In paragraph 3, number only solar panels (1), power lines (2), and LED bulbs (3) to identify technologies that transform or transfer energy. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	Why is sunlight renewable, but coal is nonrenewable?	Sunlight is replaced by nature in a fairly short time. Coal took millions of years to form, so people use it faster than Earth can replace it.
2	What are two actions library workers take to conserve energy?	They lower the thermostat when the building is empty and switch off unused computers.
3	How do recycling paper and using washable cups conserve matter?	Recycling paper saves materials. Washable cups reduce the number of new cups that must be made and thrown away.
4	How do solar panels and power lines handle energy differently?	Solar panels transform sunlight into electrical energy. Power lines transfer electrical energy from a power plant to the library.

PART 3 • YOUR TURN (SAMPLE ANSWER)

Our school fair will use solar panels to change sunlight into electrical energy. Sunlight is renewable. We will use less gasoline in the generator because gasoline comes from nonrenewable oil. Guests will use reusable plates, and volunteers will sort paper for recycling to conserve matter. Extension cords will transfer electrical energy from a charged battery to the stage lights.

Accept plans that accurately include all four required ideas and contain five sentences. Students may use different renewable or nonrenewable sources, conservation actions, and technologies if their energy descriptions are accurate.