Power from Earth

Read how a town gets electricity from natural resources.

E.3.10 "Students will demonstrate an understanding that all materials, energy, and fuels that humans use are derived from natural sources. Identify some of Earth's resources that are used in everyday life such as water, wind, soil, forests, oil..."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline each named Earth resource in the passage. Write R above it if it is renewable or N if it is nonrenewable.

Power for Maya's Town

1. On a windy day, Maya sees a wind turbine turning near her town. Moving air spins its blades to make electricity for homes. Wind is a renewable resource because nature keeps making more moving air. The turbine's metal parts come from minerals dug out of the ground. Minerals are nonrenewable because they form so slowly that people cannot replace them in a lifetime.

2. At night, the town also gets electricity from a power plant that burns natural gas. Workers drill wells to bring this fuel up from deep underground. Natural gas is nonrenewable because it takes millions of years to form. Burning it can add gases to the air that warm Earth. The town can use less gas by turning off lights in empty rooms.

3. Digging for minerals can disturb nearby land and wildlife. People can reuse metal from old machines, so fewer new minerals need to be dug up. Wind turbines do not burn fuel while making electricity, but they can harm birds if placed in poor spots. Before building, workers study where birds fly and choose safer spots for the turbines.

2 ANSWER WITH EVIDENCE

Use the passage

1. Which resource in the passage is renewable? Which two are nonrenewable?

2. How do workers get natural gas, and how does the town use it?

3. How can reusing metal help protect the land near a mine?

4. What problem can a wind turbine cause for birds? What do workers do to help prevent it?

3 YOUR TURN

Your own words

A flood leaves muddy water and litter across a schoolyard. Write a plan to keep the dirty water out of a nearby stream and clean the schoolyard. Tell how you would test your plan and what you would change if it did not work.

ANSWER KEY

Power from Earth

GRADE 3 · E.3.10

PART 1 · READ AND MARK

Underline each named Earth resource in the passage. Write R above it if it is renewable or N if it is nonrenewable. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Which resource in the passage is renewable? Which two are nonrenewable?	**Wind is renewable. Minerals and natural gas are nonrenewable.**
2	How do workers get natural gas, and how does the town use it?	**Workers drill wells to bring natural gas up from underground. The power plant burns it to make electricity.**
3	How can reusing metal help protect the land near a mine?	**Reusing metal means fewer new minerals need to be dug up, so less land and wildlife may be disturbed.**
4	What problem can a wind turbine cause for birds? What do workers do to help prevent it?	**A turbine in a poor spot can harm birds. Workers study where birds fly and choose a safer spot.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

I would place sandbags along the schoolyard edge to keep muddy water from reaching the stream. I would pick up the litter with gloves and put it in a trash bag. I would pour water onto a small model of my barrier to see if it holds. If water slips through, I would add another row of sandbags.

For the marking job, accept R for wind and N for minerals and natural gas. For Your Turn, accept other safe plans that include containment, cleanup, a test, and a change based on the test.