Power for Pine Bend

Compare clean energy choices using evidence

E.4.10.2 "Use technology or informational text to investigate, evaluate, and communicate various forms of clean energy generation."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB As you read, underline one benefit and circle one limit for each of the three energy sources. Use your marks to compare the choices.

A Power Plan for the Library

1 The town of Pine Bend wants cleaner electricity for its library. Today, the library gets power from a grid that uses several kinds of energy, including fuels that release gases when burned. Town workers are studying three local choices: sunlight, wind, and moving water. Each can make electricity without burning fuel while it runs. Still, the workers must ask when each source is available and how it could affect the area.

2 The library has a wide roof that gets strong sunlight for much of the day. Solar panels could turn that light into electricity, but they would make little or none at night. A windy ridge stands outside town. A wind turbine there could make electricity when wind turns its blades, even after sunset. Yet on calm days, its blades would not produce electricity. Workers would need to study how a turbine might affect birds.

3 A fast stream runs beside Pine Bend. Flowing water could turn a small turbine to make electricity. But a dam or other changes to the stream could block fish, and the stream slows during dry months. The workers think roof panels may be the best first step for the library because the roof is sunny and already built. They could also study wind for power when sunlight is gone, while checking bird safety.

2 ANSWER WITH EVIDENCE

Use the passage

1. Which energy source could use the library itself? Give two details that support this choice.

2. Which source could make electricity after sunset? What condition would stop it?

3. Why should workers study the stream before choosing water power? Give two reasons.

4. Would solar panels alone meet the library's needs at all times? Use evidence from the text to explain.

3 YOUR TURN

Your own words

A community garden wants electricity for evening lights. Write three or four sentences recommending one energy source to investigate first. Give one reason from the passage, then name two facts you would gather at the garden and explain how they would help you decide.

ANSWER KEY

Power for Pine Bend

GRADE 4 · E.4.10.2

PART 1 · READ AND MARK

As you read, underline one benefit and circle one limit for each of the three energy sources. Use your marks to compare the choices. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Which energy source could use the library itself? Give two details that support this choice.	**Solar panels could use the library's roof. The roof is wide, gets strong sunlight for much of the day, and is already built.**
2	Which source could make electricity after sunset? What condition would stop it?	**Wind could make electricity after sunset. A turbine would not produce electricity on calm days.**
3	Why should workers study the stream before choosing water power? Give two reasons.	**Changes to the stream could block fish, and the stream slows during dry months.**
4	Would solar panels alone meet the library's needs at all times? Use evidence from the text to explain.	**No. Solar panels would make little or no electricity at night.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

I would investigate wind power first because a turbine can make electricity after sunset. I would measure how often wind blows near the garden at night. Calm nights would make wind power less useful for the lights. I would also check where birds fly to see whether a turbine might affect them.

Accept any source supported by accurate passage evidence. For Part 3, the two facts to gather should be relevant to the garden and connected to the student's decision.