

Energy on the Move

Read how moving water and air can push, turn, and carry things.

SC.4.P.10.4 "Describe how moving water and air are sources of energy and can be used to move things."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline words that name moving water or air, and circle the thing each one moves or turns. Number each example where moving water or air is used to move something.

Pushes From Nature

- ① Water can carry energy when it moves downhill. At a hydroelectric dam, water stored high behind the dam flows through a pipe. The rushing water pushes curved blades in a turbine. The turbine spins, and its spinning helps a generator make electricity. That electricity can travel through power lines to homes, schools, and stores nearby.
- ② Air also carries energy when it moves as wind. A sailboat uses a tall cloth sail to catch wind. Wind pushes on the sail, so the boat moves across the water. A wind turbine has blades shaped to catch moving air. Wind turns the blades, and the spinning turbine can help a generator produce electricity.
- ③ Moving water and air can move things without using fuel at the place where they work. Water can turn a waterwheel that lifts a bucket or grinds grain. Wind can spin the rotor of a windmill, which can pump water from a well. In each case, the moving water or air pushes a part, and that part transfers motion to something else.

2 ANSWER WITH EVIDENCE Use the passage

1 How does moving water at a hydroelectric dam help make electricity?

2 How does wind move a sailboat?

3 What can a waterwheel do when moving water turns it?

4 What do a dam turbine and a wind turbine have in common?

3 YOUR TURN Your own words

Draw two panels. In the first panel, show moving water making something move. In the second panel, show moving air making something move. Add arrows to show the motion, then write one sentence under each panel explaining what is pushed or turned.



PART 1 • READ AND MARK

Underline words that name moving water or air, and circle the thing each one moves or turns. Number each example where moving water or air is used to move something. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	How does moving water at a hydroelectric dam help make electricity?	Water flows through a pipe and pushes turbine blades. The spinning turbine helps a generator make electricity.
2	How does wind move a sailboat?	Wind pushes on the sail, causing the boat to move across the water.
3	What can a waterwheel do when moving water turns it?	It can lift a bucket or grind grain.
4	What do a dam turbine and a wind turbine have in common?	Both are turned by moving water or air, and both can help a generator make electricity.

PART 3 • YOUR TURN (SAMPLE ANSWER)

Panel 1: A stream pushes a waterwheel. Arrows show moving water to the wheel, then the wheel to a bucket. The turning waterwheel lifts the bucket. Panel 2: Wind pushes a sail. Arrows show moving air to the sail, then the sail moving the boat. The wind pushes the sail and moves the boat.

Accept any accurate example in which moving water or air pushes or turns an object. Arrows and sentences should clearly show the moving water or air, the object it affects, and the resulting motion.