

Energy on the Move

Read how energy moves through objects, water, and sound.

4.8.A "investigate and identify the transfer of energy by objects in motion, waves in water, and sound;"

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline each sentence that tells where energy moves. Circle each object, water, air, or body part that receives energy.

Maya's Recess Discoveries

- ① At recess, Maya kicked a soccer ball across the blacktop. Her moving foot transferred energy to the ball, so the ball rolled forward. The rolling ball bumped a plastic cup. Energy moved from the ball to the cup, making the cup slide. When the ball and cup slowed down, some energy also changed into heat and sound.
- ② Later, Maya dropped a pebble into a calm pond. The pebble's motion transferred energy to the water. A set of waves spread outward from where it landed. Each wave carried energy across the surface. A floating leaf bobbed when the waves reached it. The water mostly moved up and down while the wave energy traveled outward.
- ③ Near the pond, Maya struck a metal triangle with a small stick. The triangle vibrated and transferred energy to the air. The moving air made nearby air vibrate too. This traveling pattern of vibrations is a sound wave. When the sound wave reached Maya's ear, it transferred energy to her eardrum, making it vibrate. She heard a clear ring.

2

ANSWER WITH EVIDENCE

Use the passage

1

What object received energy from Maya's moving foot, and what did it do?

2

How did energy move when the soccer ball bumped the plastic cup?

3

What shows that wave energy reached the floating leaf?

4

Trace the sound energy from the metal triangle to Maya's ear.

3

YOUR TURN

Your own words

Make three new energy-transfer examples. Complete one row for an object in motion, one row for waves in water, and one row for sound.

TYPE OF ENERGY TRANSFER	ENERGY MOVES FROM	ENERGY MOVES TO	WHAT HAPPENS AS EVIDENCE?

PART 1 • READ AND MARK

Underline each sentence that tells where energy moves. Circle each object, water, air, or body part that receives energy. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What object received energy from Maya's moving foot, and what did it do?	The soccer ball received energy from Maya's foot, and it rolled forward.
2	How did energy move when the soccer ball bumped the plastic cup?	Energy moved from the rolling soccer ball to the plastic cup, making the cup slide.
3	What shows that wave energy reached the floating leaf?	The leaf bobbed when the waves reached it.
4	Trace the sound energy from the metal triangle to Maya's ear.	The vibrating triangle transferred energy to the air. Vibrations traveled through the air as a sound wave, then transferred energy to Maya's eardrum.

PART 3 • YOUR TURN (SAMPLE ANSWER)

TYPE OF ENERGY TRANSFER	ENERGY MOVES FROM	ENERGY MOVES TO	WHAT HAPPENS AS EVIDENCE?
Object in motion	a rolling bowling ball	bowling pins	The pins fall over.
Waves in water	a paddle moving in a tub	a toy boat	The boat bobs when waves reach it.
Sound	a vibrating guitar string	air, then an ear	The ear hears the guitar sound.

Accept answers that correctly identify energy moving from a source to a receiver and give an accurate effect. For the table, students may use different realistic examples as long as they include all three required types of transfer.