

Skateboard Energy Trail

Trace how energy changes during a ride.

5.2.c "energy can be transformed; and"

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Underline every energy form named in the passage. Number the energy forms in each change from first to last so you can trace where the energy goes.

Maya Rides the Ramp

- ① At a skate park, Maya stands at the top of a ramp with her skateboard. She and the board have gravitational potential energy because they are high above the ground. As she rolls down, that stored energy changes into kinetic energy, the energy of motion. Her speed increases as the board moves toward the bottom.
- ② At the bottom, Maya presses one foot lightly on the ground to slow down. Friction between her shoe and the ground changes some kinetic energy into thermal energy. The surfaces become a little warmer, even though Maya may not notice it. Friction also makes sound energy, such as the scraping noise of her shoe on pavement.
- ③ Energy does not disappear when Maya slows down. It is transformed, or changed from one form to another. Her motion energy becomes mostly thermal energy and a small amount of sound energy. If Maya pushes herself back up the ramp, chemical energy stored in her body changes into kinetic energy, and then into gravitational potential energy as she rises.

2 ANSWER WITH EVIDENCE _____ Use the passage

1 What energy transformation happens as Maya rolls from the top of the ramp to the bottom?

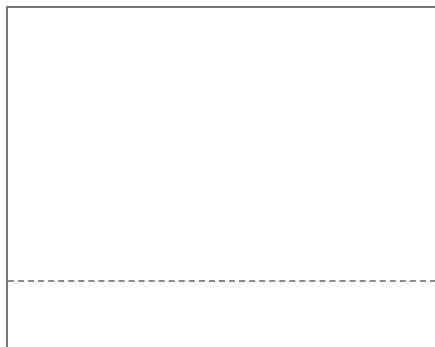
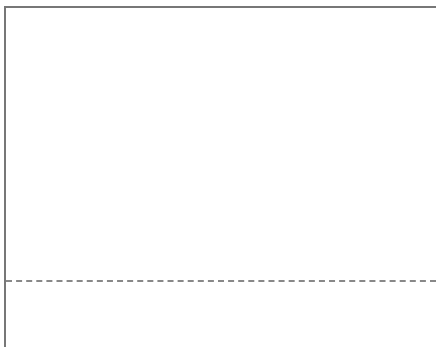
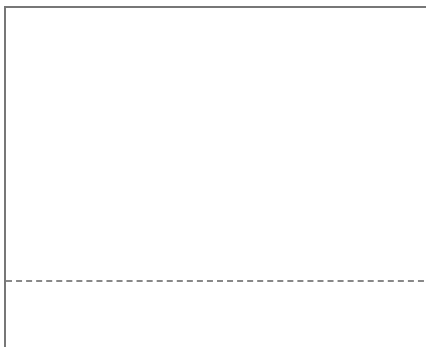
2 When Maya slows down with her foot, what energy form changes, and what two energy forms result?

3 What evidence in the passage shows that thermal energy is made by friction?

4 List the energy changes that happen when Maya pushes herself back up the ramp.

3 YOUR TURN _____ Your own words

Choose a different everyday event, not a skateboard ride. Draw three panels to show energy changing form. Label the energy form in each panel, then write one sentence that tells how the energy changes.

		
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PART 1 • READ AND MARK

Underline every energy form named in the passage. Number the energy forms in each change from first to last so you can trace where the energy goes. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	What energy transformation happens as Maya rolls from the top of the ramp to the bottom?	Gravitational potential energy changes into kinetic energy.
2	When Maya slows down with her foot, what energy form changes, and what two energy forms result?	Kinetic energy changes into thermal energy and sound energy.
3	What evidence in the passage shows that thermal energy is made by friction?	Maya's shoe and the ground become a little warmer.
4	List the energy changes that happen when Maya pushes herself back up the ramp.	Chemical energy changes into kinetic energy, then into gravitational potential energy.

PART 3 • YOUR TURN (SAMPLE ANSWER)

Panel 1: Moving wind has kinetic energy. Panel 2: The wind turns a generator, changing kinetic energy into electrical energy. Panel 3: A lamp changes electrical energy into light energy and thermal energy. Sentence: Energy changes form as wind helps power the lamp.

Accept accurate equivalent terms, such as stored gravitational energy for gravitational potential energy and motion energy for kinetic energy. For the open task, accept any realistic event that shows a correct sequence of energy transformations with labels.