

Garden Energy Trail

Trace energy as it changes form in familiar places.

SC.5.P.10.1 "Investigate and describe some basic forms of energy, including light, heat, sound, electrical, chemical, and mechanical."

NAME _____

DATE _____

1 READ AND MARK _____ Read it twice

YOUR JOB Circle each name of an energy form, then number the sentences that tell how energy changes from one form to another so you can trace energy through the garden.

Energy Around the School Garden

- ① On a sunny morning, Maya visits the school garden. Sunlight carries light energy, which helps plants make food. The food stores chemical energy. Maya eats an apple from the garden before helping. Her body can use the apple's chemical energy to move muscles, giving her mechanical energy for digging and lifting with a small shovel.
- ② Near the garden shed, a small solar panel changes some light energy into electrical energy. Wires carry the electrical energy to a water pump. The pump uses electrical energy to make its parts move. This mechanical energy pushes water through a hose and sprays the vegetable beds while Maya watches the wet soil darken slowly.
- ③ At lunchtime, a metal bell vibrates when it is struck. The vibrations travel through the air as sound energy, and students hear the bell. In the cafeteria, an electric oven changes electrical energy into heat energy. Heat energy warms the food. Even after energy changes form, the total amount of energy is conserved in the system.

2

ANSWER WITH EVIDENCE

Use the passage

1

How does chemical energy from Maya's apple become mechanical energy?

2

Describe the energy changes from the solar panel to the moving water pump.

3

What makes sound energy at lunchtime, and how does the sound reach students?

4

What energy change happens in the electric oven?

3

YOUR TURN

Your own words

Choose an everyday event that is different from the garden examples. Fill in the table to trace at least three forms of energy in order, showing what happens at each step.

ENERGY FORM	EVIDENCE OR ACTION	WHAT HAPPENS NEXT?

PART 1 • READ AND MARK

Circle each name of an energy form, then number the sentences that tell how energy changes from one form to another so you can trace energy through the garden. Accept any marking that follows this job and points at the right text.

PART 2 • ANSWERS

#	QUESTION	ANSWER
1	How does chemical energy from Maya's apple become mechanical energy?	Maya's body uses the apple's chemical energy to move her muscles for digging and lifting.
2	Describe the energy changes from the solar panel to the moving water pump.	The solar panel changes light energy into electrical energy. The pump uses electrical energy to move its parts, creating mechanical energy.
3	What makes sound energy at lunchtime, and how does the sound reach students?	The struck bell vibrates. Its vibrations travel through the air as sound energy.
4	What energy change happens in the electric oven?	The electric oven changes electrical energy into heat energy, which warms the food.

PART 3 • YOUR TURN (SAMPLE ANSWER)

ENERGY FORM	EVIDENCE OR ACTION	WHAT HAPPENS NEXT?
Chemical energy	Lunch fuels a rider's muscles.	The rider pedals a bicycle.
Mechanical energy	Pedals turn a small generator.	The generator produces electrical energy.
Electrical energy	Electricity travels through a wire to a lamp.	The lamp lights up.
Light energy	The lamp gives off light.	The rider can see the path.

Accept any accurate everyday event that traces at least three energy forms in a logical order. Students may use different valid examples of light, heat, sound, electrical, chemical, or mechanical energy.