Name & Surname: _____ Class: _____ Date: _____

# Energy on the Move

Sound, light, heat, and electric current carry energy.

About 40 minutes Level ★★★☆☆

## Energy Can Travel

Energy **transfer** is the movement of energy from one place to another. You know it happened when you observe a **change** at the end.

- **Sound** moves energy by shaking air and can make tissue shake.
- **Light** travels from a lamp to a wall and makes a bright spot.
- **Heat** moves from a warmer object to a cooler object.
- **Electric** current flows through wires from a battery to a bulb.



## Task A

**Give an example, then another, then one nobody else will think of. Explain how you know it fits.**

Give an example of energy transfer by light

**An example**

.....

**Now another**

.....

**Now one nobody else will think of!**

.....

**How do you know they all fit?**

.....

.....



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# Pair Up Energy

Match each mover with what it does.

**Key words**

**sound:** shaking in air you hear

**heat:** warmth moving to cooler places

**energy transfer:** power moving from place to place

**light:** brightness that travels far

**electric current:** power flowing through wires

**evidence:** what you observe to prove it

**Task B**

**Cut out the cards. Turn them over and match each energy word to its meaning.**

Cut out the cards.

| | | | |
|---|---|---|---|
| **evidence** |  **sound** | power flowing through wires | **energy transfer** |
| warmth moving to cooler object | **electric current** |  **light** | observation that proves it happened |
| power moving from place to place | shaking air that you hear | brightness that makes a spot |  **heat** |



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# Rank the Transfers

Rank which arrivals are easiest to observe.

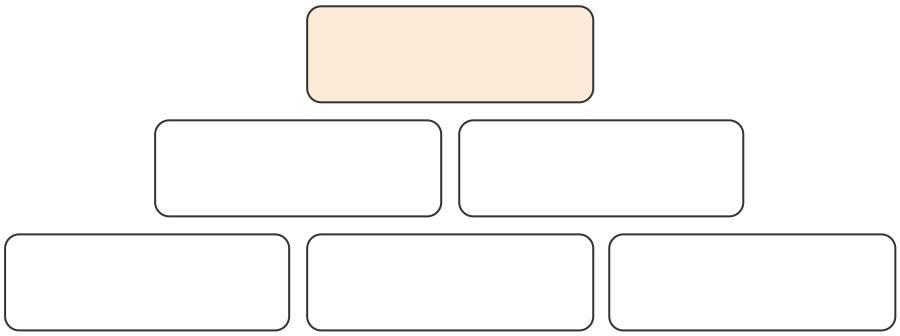
## Task C

**Rank these examples from easiest to observe at the top to hardest at the bottom. Tell why your top pick is easiest.**

rank energy arrivals from easiest to hardest to observe

flashlight makes bright spot on wall | drum makes tissue shake | battery lights a bulb | warm water warms a spoon | sun warms your skin | doorbell rings across the room

Most important



**Why is your top choice the most important?**

.....

.....

# Fix and Climb

Spot mistakes, then climb from easy to hard.

## Task D

/2

**Find the mistake in each claim. Write the correct fact.**



Student A

Light cannot travel without air, just like sound needs air.

**What mistake did Student A make? Write the correct fact.**



Student B

When the drum sound stops, that energy is gone forever.

**What mistake did Student B make? Write the correct fact.**



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# Energy on the Move

## Task E

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**Climb the ladder. Answer from easy remember to hard create.**

**Remember** What **four** movers can transfer energy from place to place?

**Remember** Compare metal and wood spoons in warm water. Which handle feels **warmer** and why?

**Understand** Why is a bright spot **evidence** that light moved energy?

**Apply** You tap a drum 3 feet from tissue. What **change** will you observe?

**Evaluate** A bulb stays dark with one wire open. Is the **circuit** working? Fix it.

**Create** Draw a test that shows **blocking** stops transfer. What will happen?



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# Show What You Know

Explain your proof and match each term.

## Task F

/3

**Use observations to prove energy moved. Write short answers.**

1. What did you **observe** when sound moved energy to tissue?
   I saw... so energy moved by...

2. How does **heat** move from warm water to a cool spoon?
   Heat moves... because...

3. Why does opening a wire make the **bulb** go out?
   The bulb goes out because...

## Task G

Example done for you

/3

**Match each word to its meaning by writing the number in the circle.**

| | |
|---|---|
| 1 sound | ◯ brightness that makes a spot on a wall |
| 2 light | ◯ warmth moving from warm to cool |
| 3 heat | (1) shaking air that makes things vibrate |
| 4 electric current | ◯ flow of power through wires to a bulb |

## How did I do?

Circle a face for each line.

| | |
|---|---|
| I can trace energy from start to end. | ☹ 😐 ☺ |
| I can use observations as evidence. | ☹ 😐 ☺ |
| I can sort examples by sound, light, heat, or electric current. | ☹ 😐 ☺ |



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# Answer sheet: Energy on the Move

**Task A**

Answers will vary, e.g. Flashlight to wall makes a bright spot; Lamp to book helps you read; Sunlight through window warms floor - I know it fits because I can see or feel the change where the light arrives

**Task B**

sound = shaking air that you hear
light = brightness that makes a spot
heat = warmth moving to cooler object
electric current = power flowing through wires
energy transfer = power moving from place to place
evidence = observation that proves it happened

**Task C**

Answers will vary.

**Task D**

1. Student A: Mistake: light does not need air. Light can travel through empty space, but sound travels through air or water.
2. Student B: Mistake: energy does not disappear. It moved elsewhere to shake air and tissue; total energy stays the same.

**Task E**

1. sound, light, heat, and electric current
2. Metal feels warmer faster because heat moves through it more easily by contact.
3. The spot appears only when light shines and goes away when blocked.
4. The tissue will shake because sound energy reached it.
5. No. The open wire stops electric current. Close the loop so energy reaches the bulb.
6. Block flashlight with cardboard; bright spot disappears, proving light carried energy.

**Task F**

1. I saw tissue shake, so energy moved by sound from drum to tissue.
2. Heat moves from warmer water to cooler spoon by direct contact.
3. The loop is open so electric current cannot carry energy from battery to bulb.

**Task G**

1. sound → shaking air that makes things vibrate
2. light → brightness that makes a spot on a wall
3. heat → warmth moving from warm to cool
4. electric current → flow of power through wires to a bulb

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