

The Superpower All Around Us: ENERGY!



It powers the stars, it moves the oceans, and it wakes you up in the morning.
You can't hold it in your hand, but it is everywhere.



Welcome to the investigation of the invisible force that makes everything work, move, and happen.



What Exactly Is Energy?

Energy is the ability to make things work, move, or happen.



Waiting...

We cannot always see energy itself, but we can see what it DOES.



Moving!

Energy is present in all matter, sound, light, and heat.

The Many Disguises of Energy

Energy is a shapeshifter. It wears many different costumes.

Here are the main 5:



Movement
Energy



Heat
Energy



Light
Energy



Sound
Energy

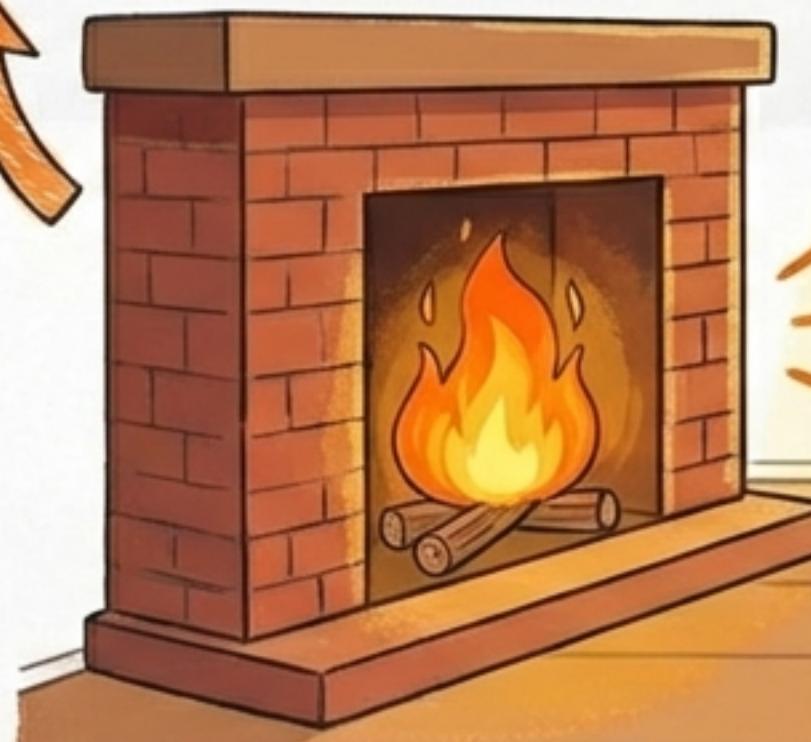


Electrical
Energy

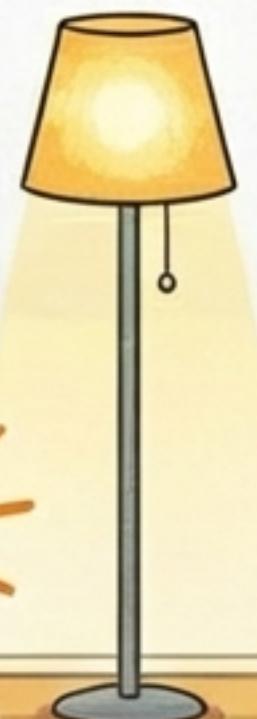


Spot the Energy in Action

Heat
Energy



Light
Energy



Movement
Energy



Sound
Energy



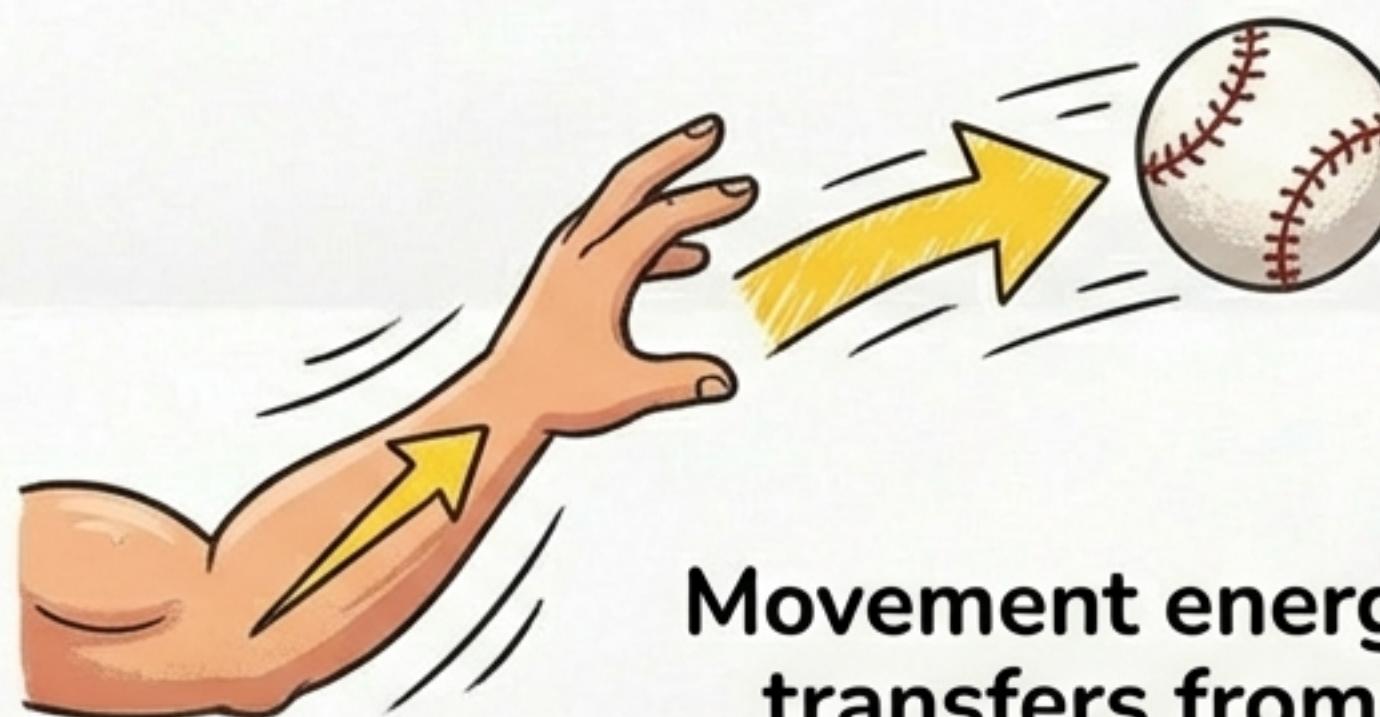
Electrical
Energy



Different forms often happen at the exact same time!

Energy Likes to Move House (Transfer)

Energy does not stay in one place. It travels from one object to another.



Movement energy transfers from hand to ball.

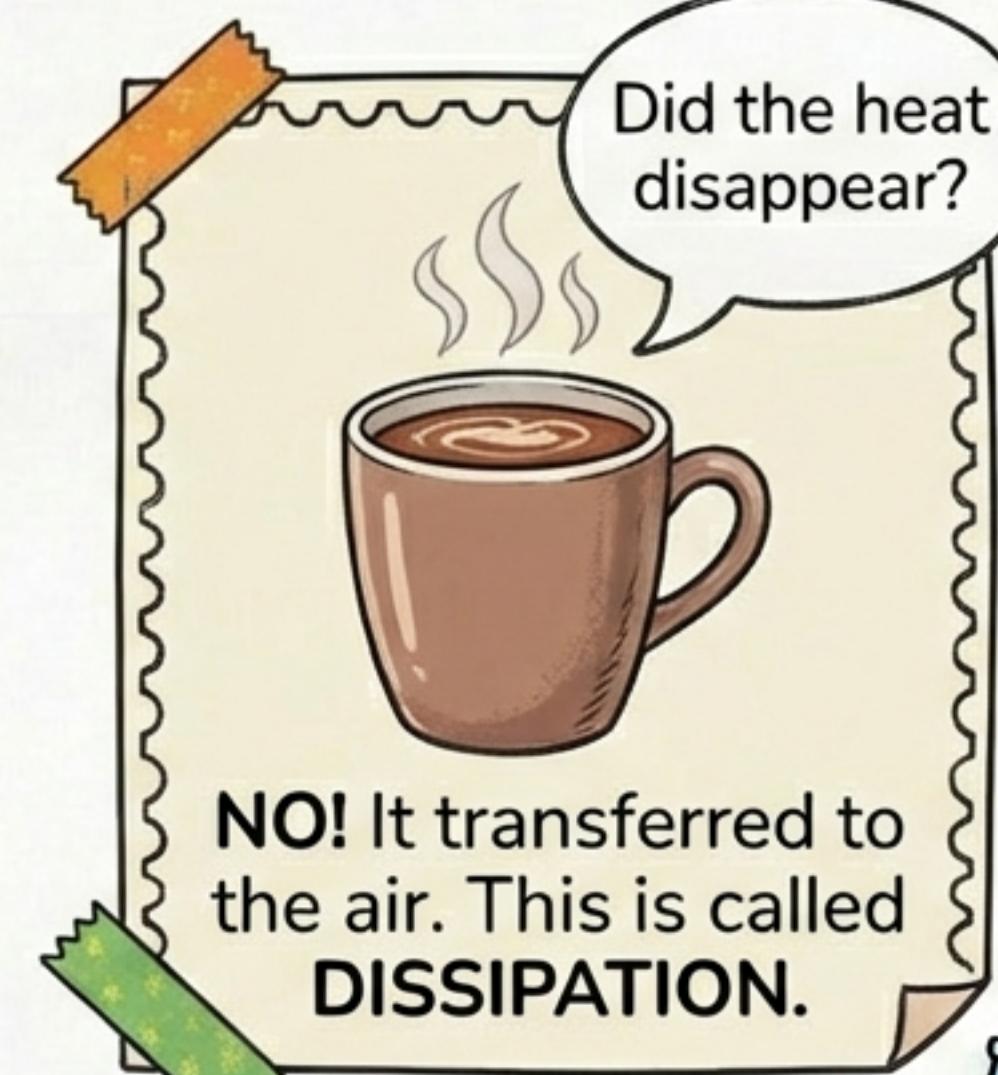


Heat energy transfers from hot tea to cool spoon.

The Heat Rule: Heat energy ALWAYS moves from a **HOT** object to a **COOLER** object.

The Golden Rule of Energy

Energy cannot be made, lost, used up, or destroyed.
It can only be transferred or changed.



The Shapeshift (Energy Changes)

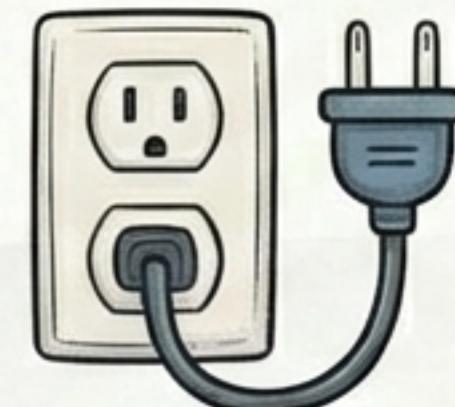
Energy can change from one form into a different form entirely.



Movement



Sound



Electrical



Light + Heat



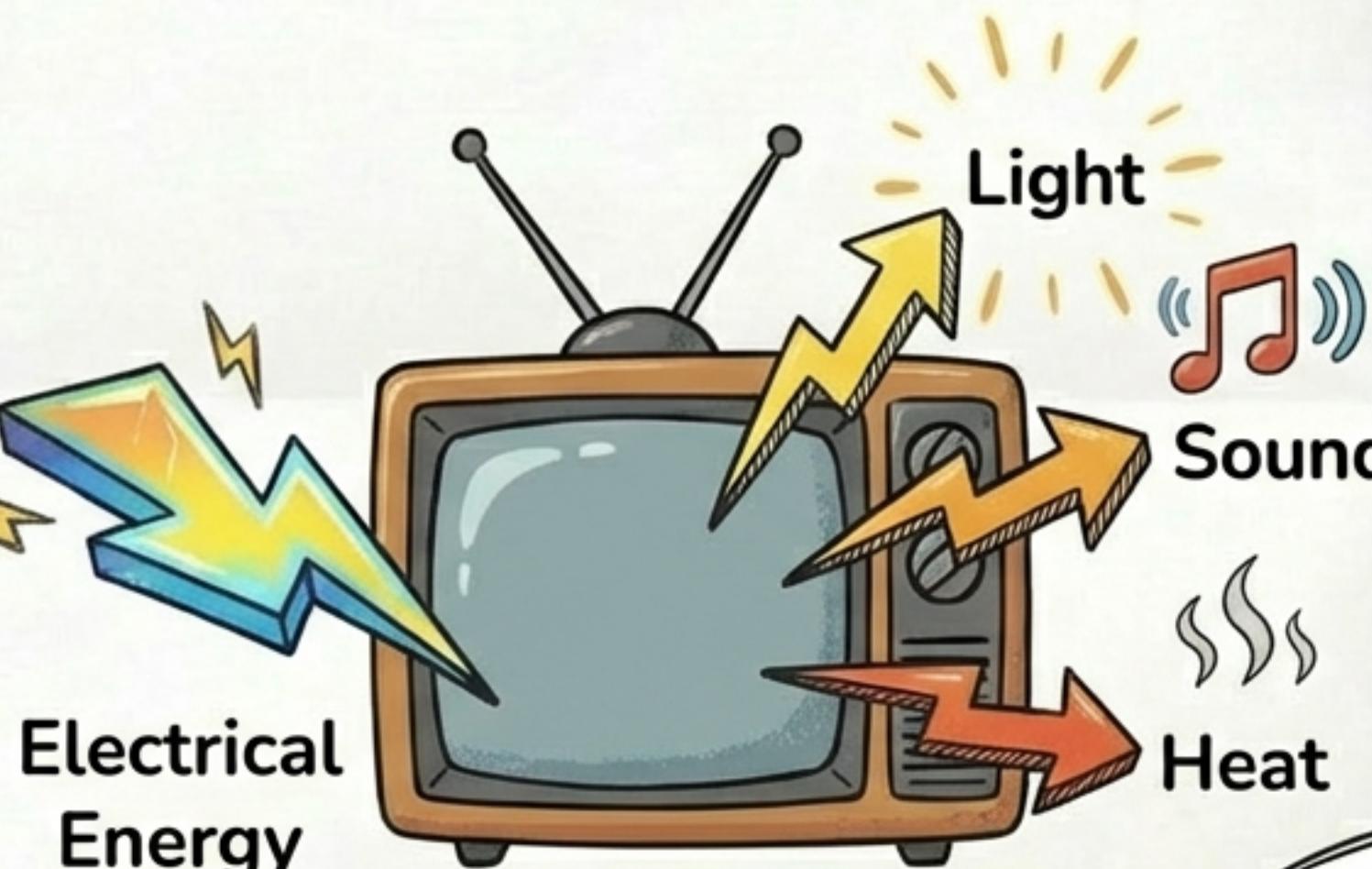
Stored Energy



Light



Machines and Humans: We Both Transform Energy



The Machine

That is why you get
hot when you run!
Your body is changing
energy forms.

Chemical
Energy
(Food)



The Human

Movement

Heat



Powering Life: The Ultimate Source

Light Energy

PRODUCERS

Plants are called Producers because they use Light Energy from the Sun to make their own food. Without this light, there would be no energy for life on Earth.

The Consumers: Getting Energy by Eating

Animals cannot make their own food. They are Consumers.



HERBIVORE
(Eats only plants).



CARNIVORE
(Eats only animals).

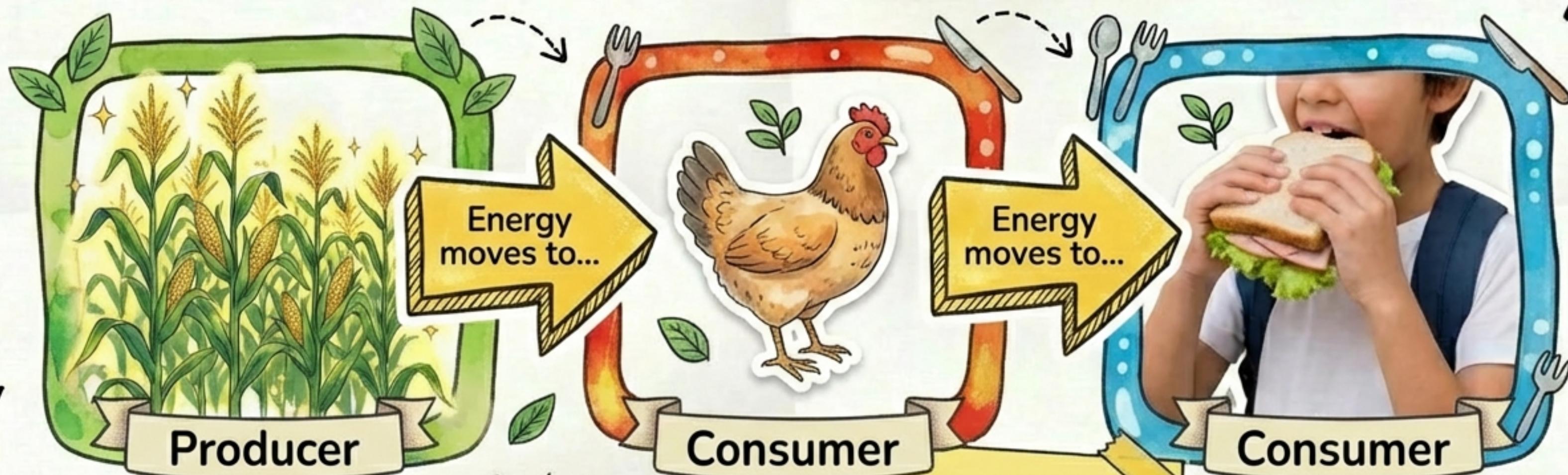


OMNIVORE
(Eats plants and animals).

Predators hunt. Prey is hunted.

The Chain of Energy

A food chain shows how energy is passed from one living thing to another.



The Golden Rule of Arrows

The arrows show the direction the ENERGY is moving (not just who eats who!).

Vocabulary Vault



ENERGY:

The ability to do work or cause change.



TRANSFER:

When energy moves from one object to another.



PRODUCER:

A plant that makes its own food using light.



CONSUMER:

An animal that eats plants or other animals.



PREDATOR:



An animal that hunts.



PREY:

An animal that is hunted.



Teacher's Challenge: Can You Solve It?

True or False?
Energy can be destroyed if we use it all up.

FALSE!

It only transfers or changes.

Heat energy always moves from a _____ object to a cooler object.

HOT.

What energy change happens in a battery torch?

Electrical

→ **Light.**

Final Mission: Build the Chain

Put these three in the correct order to make a food chain:
Tiger, Grass, Deer.



Did you point the arrows the right way?
They show where the energy goes!

The Never-Ending Story



Remember, the energy powering you right now started with the Sun. It traveled through space, into plants, into food, and finally to you.

“Energy never disappears. It just goes on a new adventure. Keep watching for it!”