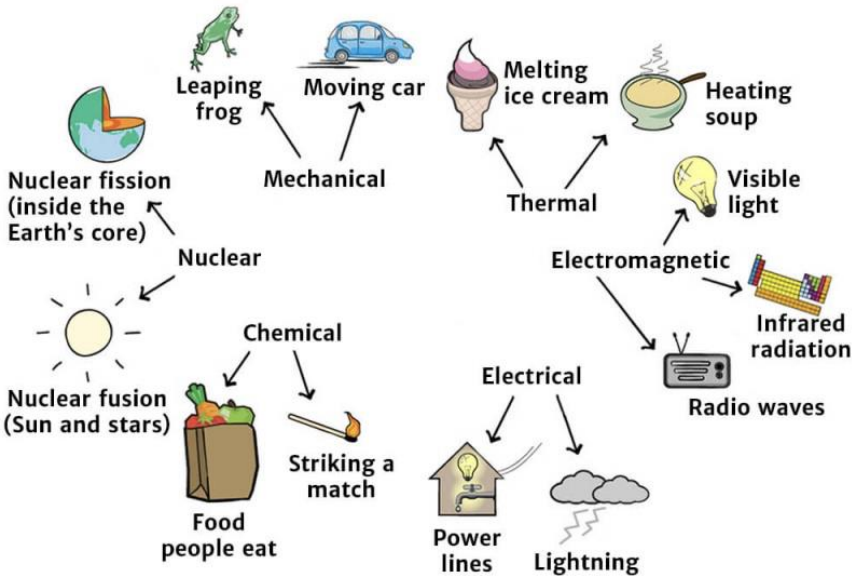
N. R. G.

Engage

What To Do:

1. Look at all the pictures below.



2. What do these pictures have in common?

_____

3. List three of these things have potential energy.

_____

4. List three of these things have kinetic energy.

_____

Explore

Teacher Demonstration or Station activities

Materials: wind up car, ice cubes and clear bowl or petri dish, baking soda, vinegar, plastic bag, spoon, computer or phone, tuning fork, bowl of water, diffraction glasses or slides,

What to Do:

Mechanical Energy

1. Wind up a toy car.
2. Release the car and observe.

Chemical Energy

1. Place 3 spoonfuls of vinegar in a resealable bag.
2. Place 1 spoonful of baking soda in the bag.
3. Seal the bag and observe.

Nuclear Energy

1. Watch the video from pbs.org "Nuclear Energy – Fission vs. Fusion https://www.pbs.org/video/nuclear-energy-fission-vs-fusion-6r1soj/
2. Be sure to pay attention to where we find nuclear energy.

Electrical Energy

1. Find three items that are plugged into a wall in your classroom.

Sound Energy

1. Strike a tuning fork on a rubber stopper.
2. Place the fork end into a bowl of water and observe.

Thermal (Heat) Energy

1. Place an ice cube in a petri dish or clear bowl.
2. Observe it for 3 minutes.

Radiant Energy

1. Look through a pair of diffraction glasses or slide.
2. Be sure to look at the lights. DO NOT look at the Sun.

Questions:

1. What did you observe the car do after being released?

_____

2. What occurred in the bag with the vinegar and baking soda?

_____

3. What are the two places we find nuclear energy?

_____

4. What are three items that are plugged into the wall?

_____

5. What happened in the water when the tuning fork was place it in?

_____

6. What happened to the ice cube?

_____

7. What did you observe through the diffraction glasses or slide?

_____

Explain

Did you know that you can easily memorize the different types of energy by remembering the letters that make up the words MRS. CHEN?

Mechanical	Chemical
Radiant	Heat
Sound	Electrical
	Nuclear

Do Not Glue until teacher says

Write the name of the energy on the flap and draw an example under it.

M	*Explain*
R	
S	
C	
H	
E	
N	

Elaborate

Energy Match

Materials: pictures of energy types, scissors, glue

What To Do:

1. In the chart on the next pages all of the types of energy are defined.
2. Match them with the pictures on the next page.
3. Cut out the pictures and arrange them in the Picture Column.
4. Some of the pictures can be classified in more than one category. Find the place that fits for all the pictures then glue them down.
5. In the "What else can it be?" column list other types of energy shown in the pictures.

Type of Energy	Picture	What else can it be?
Mechanical Energy Anything that has motion or can move		
Radiant Energy Anything that is giving off light or electromagnetic radiation (sun, magnet)		
Sound Energy Anything that makes noise		

Type of Energy	Picture	What else can it be?
Chemical Energy Anything with stored energy that is released by a chemical reaction		
Heat Energy Also called Thermal Energy - anything that gives off heat		
Electrical Energy Anything that involves electricity		
Nuclear Energy Anything that involves an atomic reaction		

Evaluate

Name _____ period _____

EXIT TICKET

NRG

Unscramble the types of energy below. Use the numbered boxes to fill in the words below the puzzle.

CAHCIENAML

RITNADA

NOSDU

MCHICELA

EATH

LRCATLECIE

LURENCA

1									

					7	

3				

					4		

5			

						2			

					6	

			.				
1	2	3		4	5	6	7

Conclusion: (heat, work, radiant, mechanical)

Energy is the ability to do _____. The type of energy that comes from the sun is known as _____ energy. The type of energy that involves motion is known as _____ energy. The type of energy that can also be called thermal is _____ energy.