

Name: _____

Period: _____

INTRODUCTION TO ENERGY

Part 1 - The two types of energy

Directions: Determine the best match between basic types of energy and the description provided. Put the correct letter in the blank. Answers may be used more than once.

- ____ 1. A skier at the top of the mountain (KE) Kinetic Energy
- ____ 2. Gasoline in a storage tank (PE) Potential Energy
- ____ 3. A race car traveling at its maximum speed (B) Both types of Energy
- ____ 4. Water flowing from a waterfall before it hits the pond below
- ____ 5. A spring in a pinball machine before it is released
- ____ 6. Burning a match
- ____ 7. A running refrigerator motor
- ____ 8. Rays of the sun hitting your face
- ____ 9. Listening to music with your iPod/MP3 player
- ____ 10. Listening to your teacher tell you great things about science

Part 2 - Forms of Energy.

Directions: Determine the type of energy for each form (Kinetic, Potential, or Both) and give an example.

Form	Definition	Type (KE, PE)	Example
Chemical energy	Stored in bonds of atoms and molecules		
Mechanical energy	An object's change in position creates energy		
Nuclear energy	Stored in the nucleus of an atom; released when nucleus splits or combines		
Gravitational energy	Energy of position or height		
Electrical energy	Movement of electrons		
Radiant energy	Electromagnetic waves		
Thermal energy	The vibration and movement of molecules		
Motion energy	Movement of an object creates energy		
Sound energy	Vibration of waves through material		

Part 3 - Forms of Energy Continued

Directions: Match the energy form(s) to the description provided. A few questions may have more than one answer.

- | | |
|------------------------------------------------------|-------------------|
| _____ 1. Falling rocks from the top of a mountain | (A) Chemical |
| _____ 2. Release of energy from the Sun | (B) Mechanical |
| _____ 3. Energy released from food after it is eaten | (C) Nuclear |
| _____ 4. Batteries | (D) Gravitational |
| _____ 5. The energy that runs a refrigerator | (E) Electrical |
| _____ 6. Fission reactors | (F) Radiant |
| _____ 7. The rumble of thunder from a storm | (G) Thermal |
| _____ 8. Rubbing your hands together | (H) Motion |
| _____ 9. Gasoline | (I) Sound |
| _____ 10. Food before it is eaten | |
| _____ 11. Lightening | |

Part 4 - Transformation of Energy

Directions: Use the forms of energy to fill in the table below. The first one has been done for you.

	ORIGINAL ENERGY FORM	FINAL ENERGY FORM
Electric motor	electrical	motion
A battery that runs a moving toy		
A solar panel on the roof of a house		
A person lifting a chair		
A nuclear power plant		
A toaster		
A church bell		
Gasoline powering a car		
A light bulb		
Photosynthesis		

Part 5 – Types and Forms of Energy

Directions: Use the list of words to complete the following sentences. You may use words more than once.

radiant
electrical
gravitational
mechanical

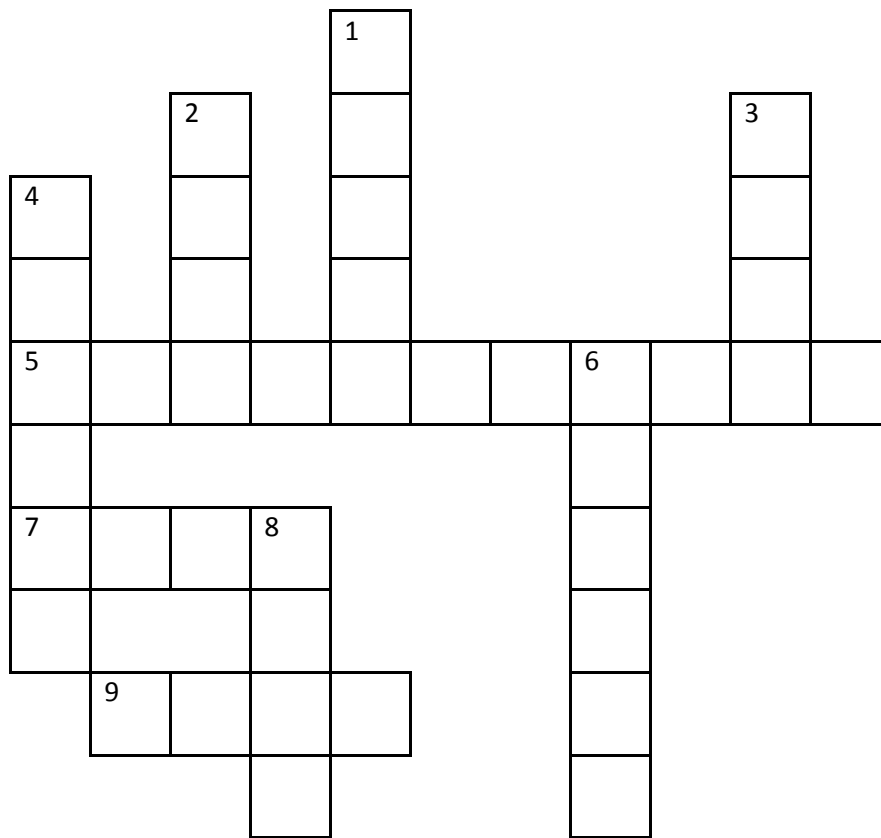
chemical
kinetic
thermal
potential

nuclear
sound
motion

1. Energy that is stored within an object is called _____ energy.
2. Compressed springs and stretched rubber bands store _____ energy.
3. The vibration and movements of the atoms and molecules within substances is called heat or _____ energy.
4. The energy stored in the center of atoms is called _____ energy.
5. The movement of energy through substances in longitudinal waves is _____.
6. The energy of position, such as a rock on a hill, is _____ energy.
7. The movement of objects and substance from place to place is _____ energy.
8. Electromagnetic energy traveling in transverse waves is _____ energy.
9. Energy stored in bonds of atoms and molecules is _____ energy.
10. The movements of atoms, molecules, waves and electrons is _____ energy.
11. The movement of electrons is _____ energy.
12. The energy in petroleum and coal is stored as _____ energy.
13. X-rays are an example of _____ energy.
14. Fission and fusion are examples of _____ energy.
15. A hydropower reservoir is example of _____ energy.
16. Wind is an example of the energy of _____.

Part 6 – Types and Forms of Energy Crossword

Directions: Fill in the crossword puzzle using words that relate to types and forms of energy.



ACROSS

5. The energy we use to run many machines.
7. Sugar gives us energy to _____.
9. Energy doesn't disappear; it changes to another _____.

DOWN

1. We use ____ energy to see.
2. We use energy to _____ from place to place.
3. Energy gives us _____ to keep us warm.
4. ____ is the ability to do work.
6. A machine allows us to _____ energy from one form to another.
8. Energy is the ability to do _____.