Type of energy	Description	Example
Electrical		
	From the sun and light bulbs	
		Speakers
Nuclear		
	From hot objects	
Gravitational potential		
	In stretched springs	Bungee jump
Chemical		
	Things that are moving	

Conservation of energy means that energy **<u>can/can't</u>** be created or destroyed. You **<u>can /can't</u>** only change energy from one type to another.

What are the energy transfers?

TV Electrical energy → sound energy+ light energy

Wind up toy _____ _____ → _____ _____

Electric kettle _____ _____ → _____ _____

Battery powered torch _____ _____ → _____ _____

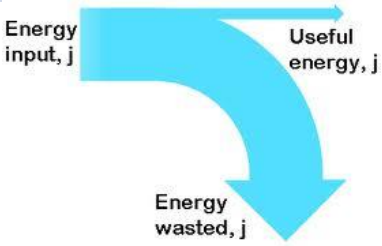
<u>True or false?</u>

- Sound energy can be transferred from one place to another. _____
- Sound energy doesn't need particles to travel. _____
- Sound energy is transferred by convection. _____
- Sound waves are caused by vibrations. _____

Heat energy is transferred from one place to another when there is a difference in temperature. **Match the types of heat transfer with descriptions**

Conduction	• When particles in solids pass on energy to the particles next to them.
Convection	• Heat is given out as infra red radiation. Objects can emit and absorb this.
Radiation	• When particles in liquids and gases move from a hot place to a cooler one.

Energy & Efficiency



What does this diagram show?

What is it called?

$$\text{Efficiency} = \frac{\textit{useful energy transferred by the appliance}}{\textit{total energy supplied to the appliance}} \quad (\times 100\%)$$

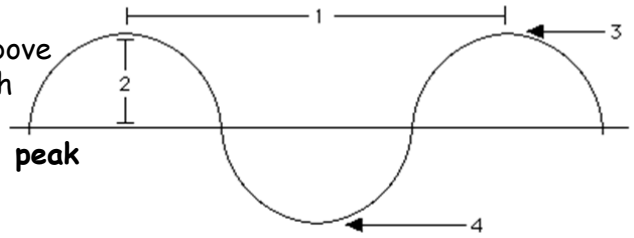
Does efficiency have a unit?

In a light bulb, for 25 joules of energy that are supplied to the bulb, 5 joules area usefully transferred into light energy. What is the efficiency of the bulb?

Electromagnetic spectrum	Radio Waves	M_____	I_____	V_____ L_____	U_____- V_____	X-_____	G_____ R_____
Uses Draw a picture or write the uses in	TV and radio signals  						
Dangers	[redacted]			[redacted]			

	Renewable	Non Renewable
Pros ☺		
Cons ☹		

Label the above diagram with **Amplitude, wavelength, peak and trough.**



Add more examples of each

Coal

Non-Renewable Energy sources

Wind power

Renewable Energy sources

Match the statements with on of the numbers in the picture.

____ Water is heated by burning fossil fuels.

____ Steam turns the turbine.

____ The turbine turns the generator which generates electricity.