

Energy – Exam
Questions

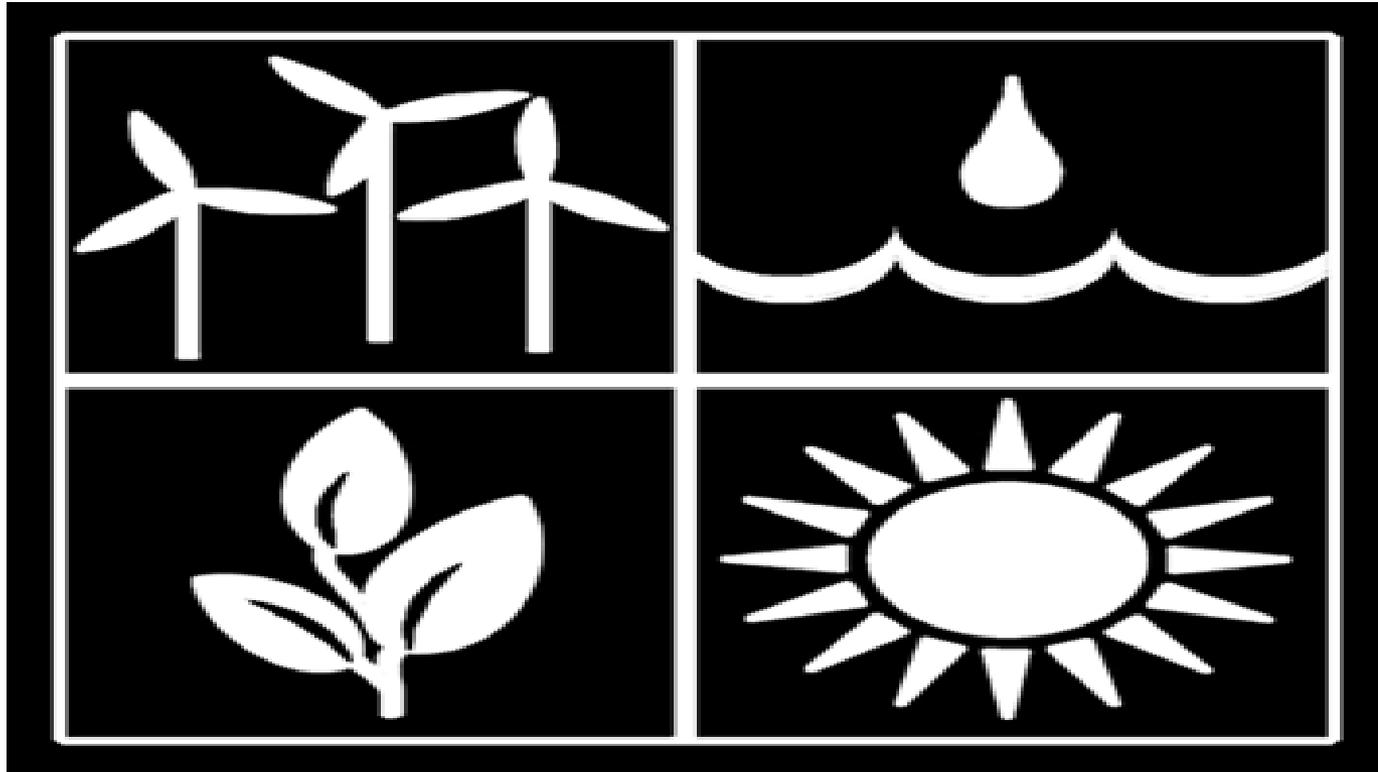
2012 - Higher

- The conversions of chemical energy to kinetic energy to potential energy occurs when you walk up a stairs. Give two more everyday examples of energy conversions and the contexts in which they occur.

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- Pick any two of the energies shown in the picture and name your selection.
 - Give one advantage associated with each energy you've selected. Two **different** reasons must be given.
 - Give one disadvantage associated with each energy you've selected. Two **different** reasons must be given.

Wind

**Hydro / Tidal
/ Wave**



Biomass

Solar

2012 - Ordinary

- What is meant by **renewable** energy?
- In the table write the letter **R** below the example of a **renewable** energy source.

 A photograph of dark, jagged coal pieces with the word "COAL" written in bold black letters across the center.	 A black silhouette of a three-bladed wind turbine against a white background.

- The diagram shows a battery-powered torch.
- **Complete** the two main energy conversions which take place when the torch is in use.
- **1** _____ energy **to** electrical energy
- **2** Electrical energy **to** _____ energy.



2011 - Higher

- Give **two** examples showing that the sun is our primary source of energy.

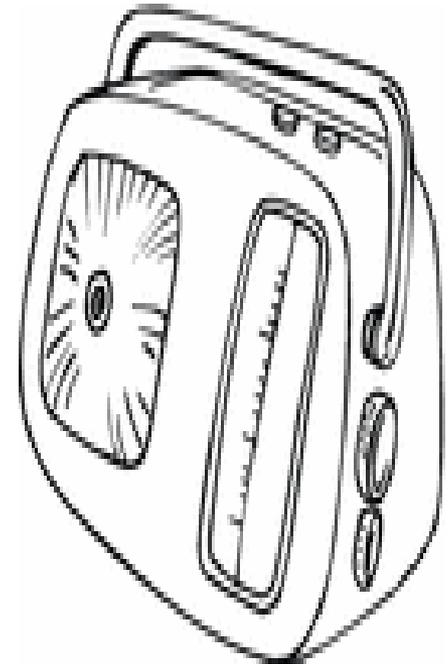
2011 - Ordinary

- In the table write the letter **R** beside **two** forms of **renewable energy**.

	Tidal
	Coal
	Solar
	Oil

2011 - Ordinary

- The diagram shows a **battery-powered radio**.
- Complete the table below by writing the letter **R** beside the **three main energy-changes** that take place when the radio is in use.



	Electrical to heat
	Chemical to electrical
	Chemical to heat
	Electrical to sound
	Potential to kinetic

2010 - Higher

- Name **two *renewable energy sources***, excluding sunlight, that are available in Ireland.

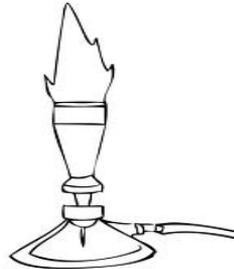
- Give **two benefits** that Ireland would get from increasing the use of renewable energy sources to meet our energy requirements.

2010 - Ordinary

- When each of the appliances below is used energy conversions take place.



Electric kettle



Bunsen burner



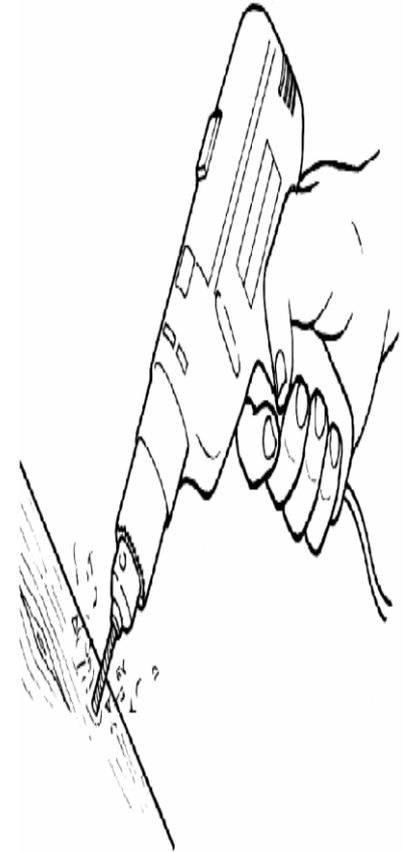
Battery powered radio

- Correctly match an appliance with an energy conversion that takes place when it is used. [Note: An appliance may be used more than once.]

Electrical to heat	
Electrical to sound	
Chemical to electrical	
Chemical to heat	

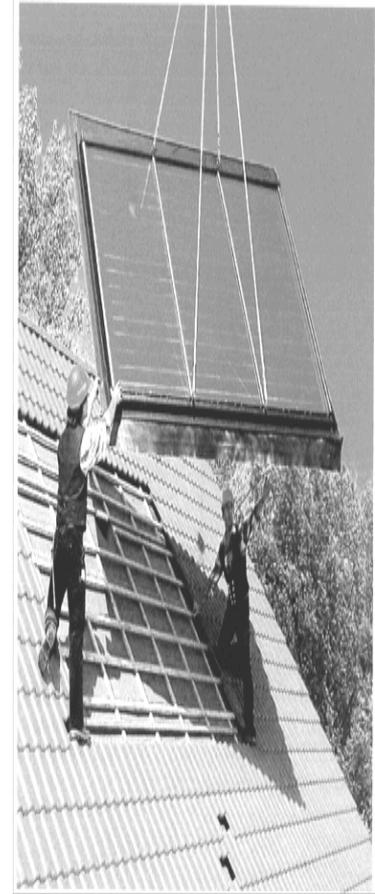
2009 - Higher

- Give **two useful energy conversions** that occur when the drill shown in the diagram is being used.



2009 - Higher

- The photograph shows a solar panel being installed. Water passing through the panel is heated by the sun.
- How does **heat** from the **sun travel**, through the **vacuum of space**, to the earth?
- Give **one advantage** or **one disadvantage** of fitting solar panels to your home?



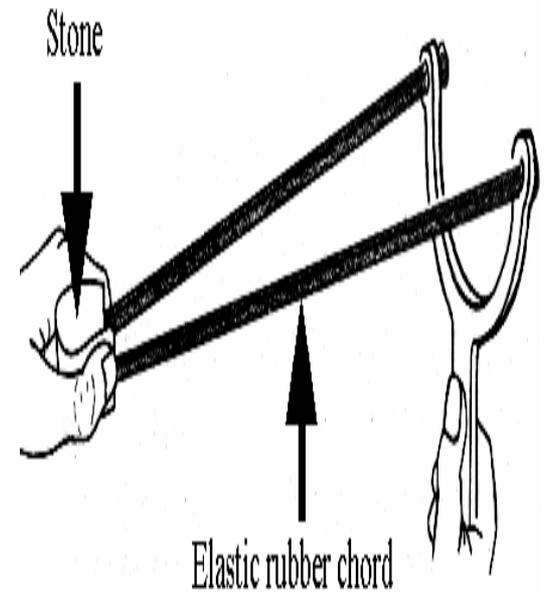
2009 - Ordinary

- In the table write the letter **N** beside **two** forms of **non-renewable energy**

	Coal
	Oil
	Solar
	tidal

2008 - Higher

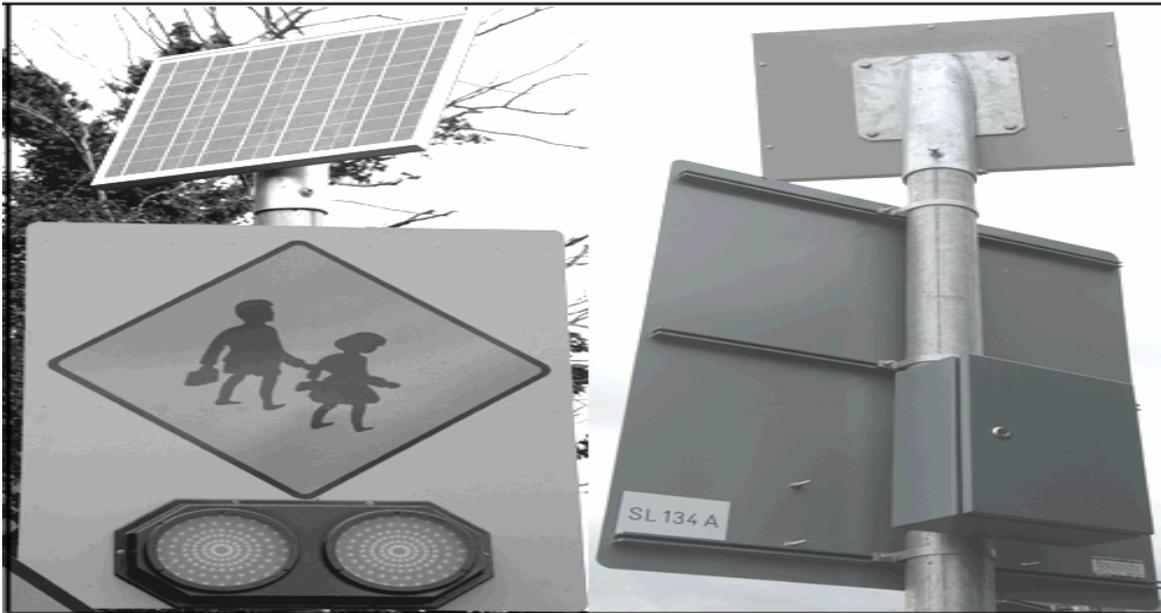
- The ***stretched rubber chord*** has _____ energy.
- If the ***stone is released*** it will have _____ energy.



2008 - Higher

- A Pelamis, converts the energy of waves in seas into *electrical energy*.
- Give **one advantage** and **one disadvantage** of generating electrical power in this way.

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- The two photographs show the front (left) and the rear (right) of a sign warning motorists approaching a school to take care.
 - The photograph underneath shows the *lights flashing* amber alternately. This happens when the *pupils are coming to school* and are *going home from school*.
 - The *rectangular panel* above the sign is a *solar (photovoltaic) panel*. It *changes energy from the sun* into *electrical energy*.



- Name the energy from the sun that the panel changes into electricity.
- The electrical energy is then changed into a form of energy that can be stored in a battery. Name the form of energy that can be stored in a battery.
- Give two energy conversions that occur to produce the flashes of light warning motorists approaching the school on dark mornings.

2008 Ordinary

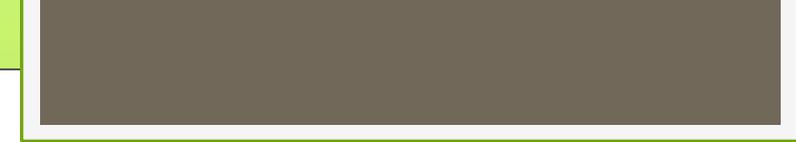
- In the table write the letter **R** beside **two** forms of **renewable** energy.

	Oil
	Wind
	Solar
	Coal
	wave

2008 - Ordinary

- The diagram shows a common light bulb.
- Complete the table below by writing the letter **B** beside the two main energy changes that take place when the bulb is in use.





	Electrical to light
	Electrical to sound
	Electrical to heat
	Chemical to heat
	Heat to light

2007 - Higher

- Give **one advantage** and **one disadvantage** of using nuclear energy to generate electricity.
- Identify one **energy conversion** that occurred when a car brakes.

2007 - Ordinary

- Give **one advantage** and **one disadvantage** of nuclear energy.

2006 - Higher

- List **two disadvantages**, excluding acid rain, of this heavy reliance on fossil fuels for the production of electricity.
- Suggest **two alternative sources** of energy for the generation of electricity in Ireland.

2006 - Ordinary

- Energy cannot be created or destroyed but it can be changed from one form to another e.g. **chemical energy** can be converted into **heat energy**.
- Describe an experiment you could carry out to show the conversion of **chemical energy** to **heat energy**.
- Draw a labelled diagram of any equipment used.

- Give an example from everyday life where **electrical** energy is converted to **kinetic** energy.