

# Energy Types

How many can you think of ?

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# Light Energy

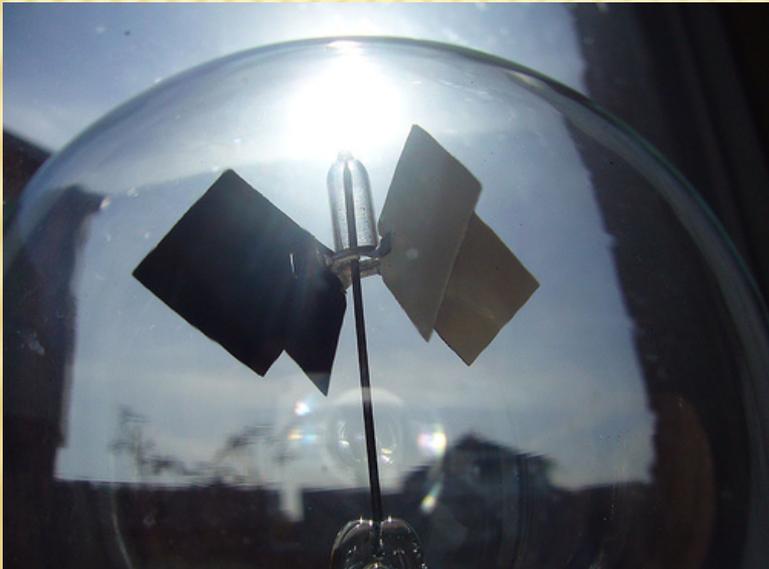
Light Energy from the Sun can be used to generate electricity.



Solar Furnace at Odeillo Font-Romeu, France

# Light Energy

Solar Powered calculators use photovoltaic cells to capture Light Energy



A Crooke's Radiometer spins in Sunlight

# Light Energy

Plants use Light Energy to make food in a process called **Photosynthesis**



This horse relies on food made by plants. In fact all life on Earth relies on Light Energy trapped by plants.

# Heat Energy



Heat Energy from the Sun drives the Water Cycle and keeps us warm.

It's not just humans who like to sunbathe on sunny days



# Heat Energy



Hot air balloons use Heat Energy to make them rise



# Sound Energy

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Sound Energy makes our ear drums move and can be converted into Electrical Energy by a microphone

# Electrical Energy

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Lightning is pure  
Electrical Energy

We use Electrical Energy  
every day to make our  
lives easier

How many uses for Electrical Energy can you think of ?

# Electrical Energy



# Chemical Energy



Chemical Energy is stored in chemicals such as petrol.

It is also the energy stored in batteries and the food we eat.



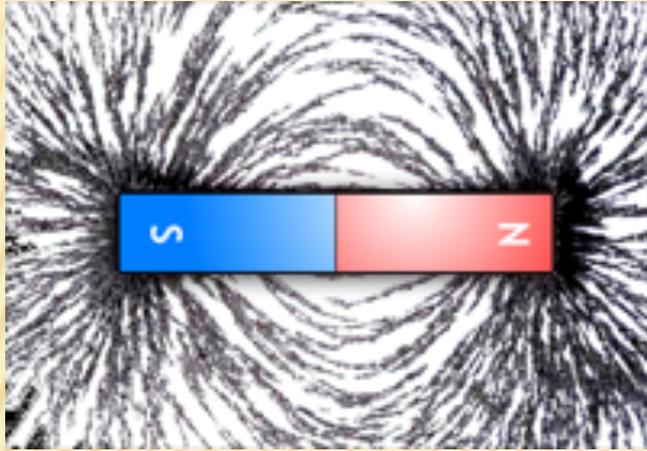
# Nuclear Energy

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There is energy stored in the nuclei of atoms that can be released for good or for bad...

# Magnetic Energy



Magnetic Energy is often forgotten.

But without it we wouldn't have had any of these.....

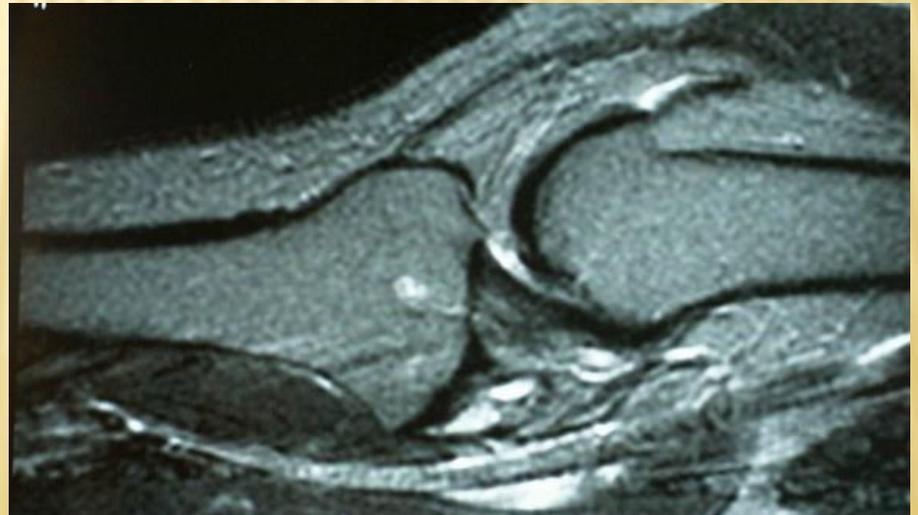


# Magnetic Energy



We wouldn't have this either....  
The Magnetic Resonance  
Imaging, or MRI, scanner

The MRI scanner  
gives us pictures of  
inside the body



# Kinetic Energy



Moving things have Kinetic Energy...

This includes air, water and.....

Lamborghinis and Tornado jet fighters



# Potential Energy



Potential Energy is stored energy and covers all the rest....

Humpty Dumpty squashing the cat he is about to land on....



...or the Potential Energy stored in the string of this bow.

# How many can you remember ?

1. L \_ \_ \_ T Energy
2. H \_ A \_ Energy
3. \_ O U \_ \_ Energy
4. \_ L \_ \_ \_ R \_ C \_ \_ Energy
5. \_ \_ \_ I C \_ \_ Energy
6. N \_ \_ \_ \_ A R Energy
7. \_ A \_ N \_ \_ \_ C Energy
8. K \_ \_ \_ \_ C Energy
9. \_ O T \_ \_ \_ \_ \_ Energy



# Write down these notes

## Energy

Energy is the ability to do work and is measured in **Joules**.

## Energy Types

**Light Energy** is used in solar cells to power calculators.

**Heat (Thermal) Energy** is used to boil water.

**Sound Energy** allows us to hear.

**Electrical Energy** powers all our appliances.

**Chemical Energy** is stored in food.

**Nuclear Energy** is the energy of the atom.

# Write down these notes

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**Magnetic Energy** forces the poles of a magnet apart.

**Kinetic Energy** is movement energy.

**Potential Energy** is stored energy. The energy in a coiled spring... the energy in a charged battery ... The energy stored in water behind a dam.