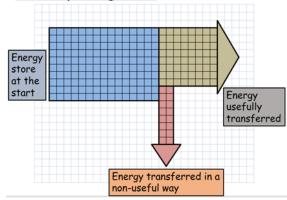


## Year 7 Energy Knowledge Organiser



1. Energy Stores				
Energy Store	Definition Example			
Kinetic	Energy of a mov- ing object	A moving car.		
Gravita- tional Po- tential	Energy stored by being above ground level	A diver stand- ing on a diving board.		
Chemical	Energy stored in the bonds be- tween particles	A burger and fries.		
Electro- static	Energy stored in charged particles	A build up of static electricity.		
Thermal	Energy stored in an object that is hot	A hot cup of coffee.		
Elastic Po- tential	Energy stored in an object that is stretched or compressed.	A stretched bow string.		
Magnetic	Energy stored in magnetic fields	A magnet		
Nuclear	Energy stored in atoms	Nuclear power		

## Sankey Diagrams



## 2. Efficiency

Efficiency (%)= (Useful energy output (J))/(total energy input (J)) $\times$ 100

3. Fossil fuels			
Fuel	How its made		
Coal	Dead trees and plants, over millions of years the pressure underground causes these to form coal.		
Oil and Gas	When small sea animals die they become encased in sand, this all gets buried under the sea. Over millions of years the sad becomes rock and form crude oil and natural gas.		

4. Energy Re	sources		
Energy Re- source	Renewable	Advantages	Disadvantages
Fossil Fuels	No	Low cost, easily transportable.	Produce large amounts of pol- lution.
Nuclear	No	Generates a lot of electricity.	Expensive. Pro- duces dangerous by products.
Solar	Yes	No fuel costs or pollution.	Expensive to set up. Doesn't work at night.
Wave	Yes	No fuel costs. Reli- able and easily accessible.	Can damage marine ecosystems.
Tidal	Yes	No fuel costs or pollution. Predictable.	Can damage ma- rine ecosystems.
Wind	Yes	No fuel costs or pollution.	Not always relia- ble, noisy.
Geothermal	Yes	No fuel costs or pollution.	Very few areas where it is acces- sible.
Biomass	Yes	Low cost, readily available.	Large scale land use requiring irrigation.
Hydro- electric	Yes	No fuel costs, reli- able and easily controlled.	Environmental impact during construction.