

## We will learn: Energy

Element	Harder 			
1. Food and fuels	Describe energy requirements in different situations  Interpret data on food intake for some activities	Compare the energy values of food and fuels  Compare the energy in food and fuels with the energy needed for different activities	Explain data on food intake and energy requirements for a range of activities	Calculate energy requirements for various situations
2. Energy adds up	State the nine forms of energy	Be able to identify the forms of energy that are being used by a device	Be able to identify which forms of energy are useful and which are wasted	
3. Energy and temperature	State how energy and temperature are measured	Describe how energy is transferred through solids, liquids and gases	State the difference between energy and temperature	Describe what is meant by equilibrium
4. Energy transfer- particles, conduction		Explain what this is in terms of particles	Carry out an experiment and analyse results to explain which material is the best conductor	Explain in terms of particles which state is the best conductor and why
5. Energy transfer- particles, convection	Recall the arrangement of particles in liquids and gases	Explain densities in terms of particles	Relate density to the energy levels of particles	Compare convection and conduction
6. Energy transfer- radiation		Describe what hot objects give out and the process by which this travels	Explain why radiation can travel through space and use knowledge of radiation to explain real life situations	Compare radiation to other methods of heat transfer
7. Energy resources	Name renewable and non-renewable energy resources	Describe the difference between a renewable and non-renewable energy resource	Be able to calculate power  Calculate energy usage and how much domestic appliances cost to use	Rearrange the equation to calculate energy transferred or time taken
8. Energy and power		Describe what is power	Evaluate data	
9. Work, energy and machines	Calculate work done	Apply the principle of conservation of energy to simple machines		

