



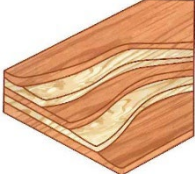


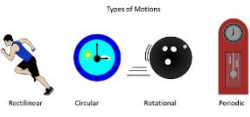
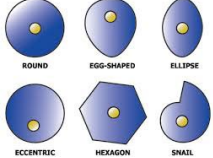



Technology 100% Sheets

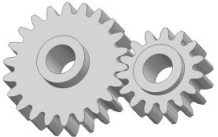
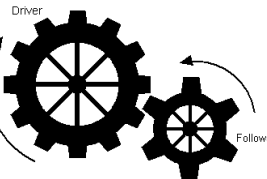
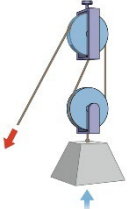

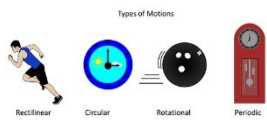
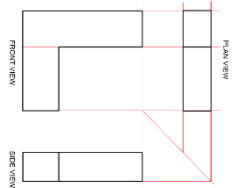
Year 8

Each project in year 8 will link with a key area of knowledge. Use these 100% sheets throughout the year in order to consolidate your theory knowledge within Technology.

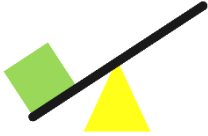
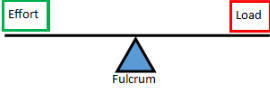

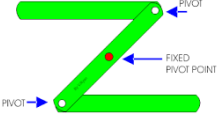
Cams & Types of Motion

Image	PROJECT KEY WORDS:	DEFINITIONS:
	<p>Hardwoods</p>	<p><i>These are deciduous trees that have broad leaves, take a long time to grow & they lose their leaves in autumn/winter.</i></p>
	<p>Softwoods</p>	<p><i>These are coniferous trees (also known as evergreens) that have needle shaped leaves, usually grow quickly & they do not lose their leaves in autumn/winter.</i></p>
	<p>Manufactured boards</p>	<p><i>These were developed as an alternative to natural timbers & there are 2 types: laminated & compressed.</i></p>
	<p>Coping saw</p>	<p><i>A tool used for cutting curves in woods & plastics.</i></p>
	<p>Tenon saw</p>	<p><i>A tool used for cutting straight lines in woods & plastics.</i></p>
	<p>Types of motion</p>	<p><i>The direction an object moves: rotating, linear, reciprocating, oscillating.</i></p>
	<p>Cam</p>	<p><i>A mechanism that converts rotary motions into reciprocating.</i></p>
	<p>Velocity</p>	<p><i>the speed of something in a given direction</i></p>



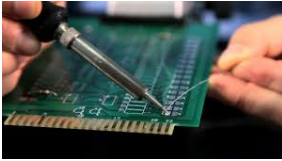


Gears & Pulleys

Image	PROJECT KEY WORDS:	DEFINITIONS:
	<p>Gear</p>	<p>Gears are wheels with teeth around the outside—gears are used to transfer motion. A Gear Train is when two or more gears are joined together.</p>
	<p>Gear Ratio</p>	<p>Is the number of teeth on a driven gear divided by the number of teeth on the drive gear</p>
	<p>Pulley</p>	<p>a wheel with a grooved rim around which a cord passes, which acts to change the direction of a force applied to the cord and is used to raise heavy weights.</p>
	<p>Mechanical Advantage</p>	<p>The ratio of the force produced by a machine to the force applied to it, used in assessing the performance of a machine</p>
	<p>Types of motion</p>	<p><i>The direction an object moves: rotating, linear, reciprocating, oscillating.</i></p>
	<p>Orthographic Projection</p>	<p>is a way of drawing an 3D object from different directions. Usually a front, side and plan view are drawn so that a person looking at the drawing can see all the important sides. Orthographic drawings are useful especially when a design has been developed to a stage whereby it is almost ready to manufacture.</p>

Levers & Linkages

Image	PROJECT KEY WORDS:	DEFINITIONS:
	<p>Levers</p>	<p><i>A simple device that pivots about a fulcrum.</i></p>
	<p>Fulcrum/pivot</p>	<p><i>A point around which something can turn or rotate.</i></p>
	<p>Effort</p>	<p><i>The amount of force applied by the user, also referred to as the input. Measured in Newtons (N).</i></p>
	<p>Load</p>	<p><i>The weight that needs to be moved, also referred to as the output. Measured in Newtons (N).</i></p>
	<p>Newton (N)</p>	<p><i>The unit used to measure force.</i></p>
	<p>Mechanical advantage</p>	<p><i>The ratio of force produced compared to the force applied. Used to assess the performance of a machine</i></p>
	<p>Linkages</p>	<p><i>An assembly of parts used to transfer motion between two mechanisms.</i></p>

Electronic Systems

<i>Image</i>	<i>PROJECT KEY WORDS:</i>	<i>DEFINITIONS:</i>
	Current	<p>An electrical current is the steady flow of electrons. This is measured in amperes (amps).</p>
	Voltage	<p>Voltage is the force that makes the electric current flow. This is measured in volts (V). The greater the voltage, the more current will flow.</p>
	Input, Process & Output	<p>The three parts that make up any electronic system.</p>
	Soldering	<p>Is the process of joining two or more electronic parts together by melting solder around the connection. Solder is a metal alloy and when it cools it creates a strong electrical bond between the parts.</p>
	LED	<p>Is a semiconductor device that emits light when an electric current is passed through it.</p>
	The 6 Rs	<p>Rethink: what could be done differently? Refuse: are there materials a designer would not use? Reduce: can the use of materials be reduced? Reuse: can the product be used again for another purpose? Recycle: can materials be used that are easy to recycle when the product is finished with? Repair: can the product be repaired instead of thrown away?</p>
	Design Specification	<p>a detailed document providing a list of points regarding a product or process.</p>