

Progression of Skills in Design and Technology

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Mechanisms		<p>Know common uses of sliders</p> <p>Know different methods to create card sliders</p> <p>Know how sliders can create simple mechanisms</p> <p>Be able to design and make a slider product</p> <p>Be able to evaluate the success of their outcomes and recommend improvements</p>	<p>Know how wheels and axles work together</p> <p>Know the size and position of wheels affects how they move</p> <p>Be able to create a simple wheel mechanism Be able to use wheel mechanisms to propel a simple vehicle</p>	<p>Know types of levers and linkages</p> <p>Know key terminology relating to levers and linkages</p> <p>Know how levers and linkages can change the direction of movement</p> <p>Be able to design and make simplistic lever and linkage products</p> <p>Be able to evaluate the success of outcomes and recommend improvements</p>	<p>Know types of hinges and the related terminology</p> <p>Know common uses for hinges</p> <p>Be able to make a variety of model hinges</p> <p>Be able to make and evaluate hinged products using modelling materials</p>	<p>Know types of gears and terminology relating to gears</p> <p>Know common uses of pulleys and gears Know how pulleys and gears can change the direction of movement</p> <p>Be able to design and make products that use pulleys and gears to lift loads</p> <p>Be able to evaluate the success of outcomes and recommend improvements</p>	<p>Know types of pulley systems and gears</p> <p>Know common uses of pulleys and gears</p> <p>Know how pulleys and gears can create simple mechanisms and change direction of movement</p> <p>Be able to design and make a model Ferris wheel powered by gears</p> <p>Be able to evaluate the success of their outcomes and recommend improvements</p>
Structures	<p>Making verbal plans and material choices.</p> <p>Developing a junk model.</p> <p>Joining materials in a variety of ways (temporary and permanent).</p> <p>Describing their junk model, and how they intend to put it together.</p> <p>To know there are a range to different materials that can be used to make a model and that they are all slightly different.</p>	<p>Know a freestanding structure is a structure that stands on its own foundation or base without attachment to anything else</p> <p>Be able to build structures that are freestanding using a range of different materials</p>	<p>Know paper becomes stronger when it is folded</p> <p>Know a load is the amount of weight a structure must carry</p> <p>Be able to fold paper to increase strength and stability</p> <p>Be able to test and record how much weight paper can hold</p>	<p>Know bridges are structures that allow people and vehicles to cross over an open space</p> <p>Know towers, piers and arches provide strength to a bridge</p> <p>Be able to design and build a beam bridge that can hold the weight of 100 pennies</p> <p>Be able to identify and name parts of a bridge</p>	<p>Know triangles provide stability in a structure</p> <p>Know structural engineers work with architects to ensure structures withstand forces</p> <p>Be able to make triangles to form and join trusses</p> <p>Be able to identify the forces that affect structures</p>	<p>Know engineers use a range of methods to strengthen and reinforce structures</p> <p>Be able to identify and describe ways that frames are strengthened and reinforced</p>	<p>Know structures can be supported with guy lines and flying buttresses</p> <p>Know the shorter the piece of spaghetti, the stronger it will be</p> <p>Be able to construct a flying buttress to support a tower</p> <p>Be able to use appropriate lengths of spaghetti to increase strength and stability</p>
Textiles	<p>Choosing from available materials.</p> <p>Developing fine motor/cutting skills with scissors.</p> <p>Exploring fine motor/threading and weaving (under, over</p>	<p>Know fabric can be joined together using a running stitch</p> <p>Know the types and names of tools needed for sewing</p> <p>Be able to create a running stitch</p>	<p>Know how to cut out shapes which have been created by using a template</p> <p>Know how to use a range of basic sewing skills</p> <p>Be able to use a template to transfer a pattern</p>	<p>Know fabric can be stiffened</p> <p>Know stiffened fabric can hold a form</p> <p>Be able to select and apply solutions to stiffen fabric</p>	<p>Know fastenings have different functions</p> <p>Know a shank provides a small amount of space between the button and fabric</p>	<p>Know how to waterproof cotton fabric</p> <p>Know which fabrics are both functional and hardwearing</p> <p>Be able to use beeswax to waterproof cotton fabric</p>	<p>Know plastic waste can be recycled and repurposed into practical, useful items</p> <p>Be able to make a crochet hook out of a chopstick</p>

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	<p>technique) with a variety of materials.</p> <p>Using a prepared needle and wool to practice threading.</p>	<p>Be able to select tools for sewing</p> <p>Be able to thread a needle</p>	<p>Be able to cut out and join fabric shapes using a template</p>	<p>Be able to make a box using stiffened fabric</p>	<p>Be able to select appropriate fastenings and attach them to fabric</p> <p>Be able to make a shank for a button</p>	<p>Be able to repurpose a pair of jeans</p>	<p>Be able to use plastic bags and snack packets to create practical items</p>
Food and Nutrition	<p>Understanding the importance of healthy food choices</p> <p>Name different types of fruit and vegetables</p> <p>Describing some of the following when tasting food: look, feel, smell and taste.</p>	<p>Know why colourful food can be healthier</p> <p>Know how different foods can affect senses</p> <p>Be able to peel, chop and grate a selection of vegetables</p> <p>Be able to modify food to suit food senses</p> <p>Know the importance of including a range of vegetables in a diet</p> <p>Be able to peel, grate, season and breadcrumb a range of vegetables</p>	<p>Know why vegetables are so important to our health</p> <p>Know what processed foods are Be able to prepare a range of salad vegetables</p> <p>Be able to shape and season a bread snack</p> <p>Know the difference between fresh food and ultra-processed foods</p> <p>Be able to shape and form ingredients to make delicious food</p> <p>Be able to use a range of culinary techniques</p>	<p>Know what is meant by the term balanced</p> <p>Know why fresh foods are better</p> <p>Be able to make a fruit and yoghurt dessert</p> <p>Be able to make homemade chips</p> <p>Be able to flavour foods to increase their sensory qualities</p> <p>Know food can help body and mind</p> <p>Know how to prepare and cook a range of vegetables</p> <p>Be able to peel and grate a range of vegetables</p> <p>Be able to add flavour and texture to foods</p>	<p>Know processed foods have many added ingredients</p> <p>Be able to make, roll and shape bread dough</p> <p>Be able to make a soup</p> <p>Know that cheap processed food often contains additives, salt and sugar, which makes it less healthy than unprocessed food</p> <p>Be able to peel, grate and chop vegetables to make economical, tasty and healthy food</p>	<p>Know some foods and key ingredients from other cultures</p> <p>Know how other cultures' food can be nutritious</p> <p>Be able to make, roll and cook a flatbread</p> <p>Be able to prepare a range of vegetables</p> <p>Be able to present foods to a high standard</p> <p>Know how foods can be used as medicines</p> <p>Know how eating food from different countries can help us be healthy</p> <p>Be able to roll and shape ingredients</p> <p>Be able to slice and ribbon a range of vegetables</p> <p>Be able to stir-fry vegetables</p>	<p>Know what street foods are</p> <p>Know how snacks can be good foods to eat</p> <p>Be able to make a burrito</p> <p>Be able to make and roll bread dough</p> <p>Be able to make a savoury pastry</p> <p>Know the difference between slow release and quick release carbohydrates</p> <p>Know how food can improve mood and energy levels</p> <p>Be able to dice, slice, peel, grate and cook a range of vegetables</p> <p>Be able to make a sauce and a stock</p> <p>Be able to use height and colour to improve the visual appeal of food</p>
Systems				<p>Know different types of energy</p> <p>Know why designers need to carefully consider energy sources</p> <p>Be able to identify how things are powered</p> <p>Be able to suggest appropriate energy sources for design problems</p>		<p>Know technology can be used to program and control a product</p> <p>Be able to combine elements of their design knowledge to fulfil a brief</p>	

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<p>Understanding Materials</p>	<p>Safely use and explore a variety of materials, tools and techniques. Make use of props and materials.</p>	<p>Know building materials have different properties which enable them to be used for different purposes</p> <p>Be able to identify, sort and select materials that can be used in construction</p> <p>Be able to combine materials</p>	<p>Know materials can be modified to become waterproof</p> <p>Know origami comes from the Japanese words: ori – folding and kami – paper</p> <p>Be able to make paper waterproof</p> <p>Be able to transform flat paper by folding and creasing to form a hat</p>				
<p>Electrical Systems</p>					<p>Know a switch is an interruption in a circuit</p> <p>Know switches are widely used in a range of products</p> <p>Be able to incorporate different types of switches into circuits to perform a function</p>		<p>Know more than one switch can be used to change the functionality of a product</p> <p>Be able to use switches to adapt a product in response to a design brief</p>