

**Design and Technology – Knowledge Progression Infants**

		<b>Reception</b>	<b>Year 1</b>	<b>Year 2</b>
<b>Humankind</b>	<b>Everyday products</b>	Everyday products are objects that we use every day. These objects have a specific use.	Everyday products are objects that are used routinely at home and school, such as a toothbrush, cup or pencil. All products are designed for a specific purpose.	Products can be improved in different ways, such as making them easier to use, more hardwearing or more attractive.
	<b>Staying safe</b>	Rules keep us safe when using equipment. Safety rules include always listening carefully and following simple instructions, using equipment only for the tasks they are designed for and washing hands before touching food.	Rules are made to keep people safe from danger. Safety rules include always listening carefully and following instructions, using equipment only as and when directed, wearing protective clothing if appropriate and washing hands before touching food.	Hygiene rules include washing hands before handling food, cleaning surfaces, tying long hair back, storing food appropriately and wiping up spills.
<b>Processes</b>	<b>Mechanisms and movement</b>	Vehicles and machines have wheels and axles to help them move.	An axle is a rod or spindle that passes through the centre of a wheel to connect two wheels.	A mechanism is a device that takes one type of motion or force and produces a different one. A mechanism makes a job easier to do. Mechanisms include sliders, levers, linkages, gears, pulleys and cams.
	<b>Electricity</b>	Many appliances at home and school need electricity to work. The appliances need to be attached to electricity through a plug and socket, or use batteries.	Electricity is a form of energy. Many household appliances use electricity, such as kettles, televisions and washing machines. They can be switched on by completing the circuit to allow the flow of electricity or off by breaking the circuit to prevent electricity from flowing. This can be a switch on the appliance or a wall socket switch.	A series circuit is made up of an energy source, such as a battery or cell, wires and a bulb. The circuit must be complete for the electricity to flow.
<b>Creativity</b>	<b>Generation of ideas</b>		Design criteria are the explicit goals that a project must achieve.	Ideas can be communicated in a variety of ways, including written work, drawings and diagrams, modelling, speaking and using information and communication technology.
	<b>Structures</b>	Different materials have different properties and can be used for different purposes.	Different materials can be used for different purposes, depending on their properties. For example, cardboard is a stronger building material	Structures can be made stronger, stiffer and more stable by using cardboard rather than paper and

			than paper. Plastic is light and can float. Clay is heavy and will sink.	triangular shapes rather than squares. A broader base will also make a structure more stable.
	<b>Use of ICT</b>	Digital devices can be used to share information about creations with others.	Computer-aided design is when computers are used to help design products. It has advantages over paper design in that it will show how finished products will look.	Computer software can be used to help design or plan a product. Advantages include identifying and solving problems before the product is made and experimenting with different materials and colours. Labels can be added to designs for clarity.
<b>Investigation</b>	<b>Investigation</b>	Different tools are needed for different tasks. For example, pencils and paper are needed for drawing pictures.	Specific tools are used for particular purposes. For example, scissors are used for cutting and glue is used for sticking.	Different tools have characteristics that make them suitable for specific purposes. For example, scissors are used for cutting paper because they have sharp, metal blades that can cut through thin materials.
	<b>Evaluation</b>	Recognise that it is possible to change and alter their designs and ideas as they are making them.	A strength is a good quality of a piece of work. A weakness is an area that could be improved.	Finished products can be compared with design criteria to see how closely they match. Improvements can then be planned.
<b>Materials</b>	<b>Cutting and joining textiles</b>		Scissors are used to cut fabrics. Glue and simple stitches, such as running stitch, can be used to join fabrics. Running stitch is made by passing a needle in and out of fabric at an even distance.	A running stitch is a basic stitch that is used to join fabric. It is made by passing a needle in and out of fabric at an even distance.
	<b>Materials for purpose</b>	Different materials are suitable for different purposes, such as construction kits for modelling and ingredients for baking.	Different materials are suitable for different purposes, depending on their specific properties. For example, glass is transparent, so it is suitable to be used for windows.	Properties of components and materials determine how they can and cannot be used. For example, plastic is shiny and strong but it can be difficult to paint.
	<b>Decorating and embellishing textiles</b>		Fabric can be decorated using materials and small objects, such as buttons and sequins. Decorations can be attached to the fabric by gluing, stapling or tying.	Embellishment is a decorative detail or feature added to something to make it more attractive.
<b>Nature</b>	<b>Food preparation and cooking</b>	A recipe is set of instructions for preparing a dish and includes a list of the ingredients required.	Using non-standard measures is a way of measuring that does not involve reading scales. For example, weight may be measured using a	Some ingredients need to be prepared before they can be cooked or eaten. There are many ways to prepare ingredients: peeling skins using a

			balance scale and lumps of plasticine. Length may be measured in the number of handspans or pencils laid end to end.	vegetable peeler, such as potato skins; grating hard ingredients, such as cheese or chocolate; chopping vegetables, such as onions and peppers and slicing foods, such as bread and apples.
	<b>Nutrition</b>	There are healthy and unhealthy foods. Fruit and vegetables are an important part of a healthy diet.	Fruit and vegetables are an important part of a healthy diet. It is recommended that people eat at least five portions of fruit and vegetables every day.	A healthy diet should include meat or fish, starchy foods (such as potatoes or rice), some dairy foods, a small amount of fat and plenty of fruit and vegetables.
	<b>Origins of food</b>	Food comes from different sources, including from animals, such as meat, fish, eggs and dairy, or from plants, such as fruit and vegetables.	Some foods come from animals, such as meat, fish and dairy products. Other foods come from plants, such as fruit, vegetables, grains, beans and nuts.	Food comes from two main sources: animals and plants. Cows provide beef, sheep provide lamb and mutton and pigs provide pork, ham and bacon. Examples of poultry include chickens, geese and turkeys. Examples of fish include cod, salmon and shellfish. Milk comes mainly from cows but also from goats and sheep. Most eggs come from chickens. Honey is made by bees. Fruit and vegetables come from plants. Oils are made from parts of plants. Sugar is made from plants called sugar cane and sugar beet. Plants also give us nuts, such as almonds, walnuts and hazelnuts.
<b>Comparison</b>	<b>Compare and contrast</b>	Aspects of designing and making can be compared with others, including inspiration for making a product and the tools and techniques used.	Two products can be compared by looking at a set of criteria and scoring both products against each one.	Products can be compared by looking at particular characteristics of each and deciding which is better suited to the purpose.
<b>Significance</b>	<b>Significant people</b>	Some products are significant because they have changed the way people live their lives.	The importance of a product may be that it fulfils its goals and performs a useful purpose.	Many key individuals have helped to shape the world. These include engineers, scientists, designers, inventors and many other people in important roles.