



Progression of Design and Technology in St Pius X 2021-2022

Updated: December 2021

Curriculum Intent

In Design and Technology, we recognise that all children should have the skills and knowledge to design, make and evaluate products that solve real and relevant problems within a variety of contexts. As the St Pius X curriculum is thematic in design, we aim to allow children to transfer their knowledge of Design and Technology to a range of rich learning contexts.

Big Ideas in Design and Technology



Within the big idea of creativity, there are two main aspects including generation of ideas and structures.



Within the big idea of materials, the aspect focus is on materials for purpose.



Within the big idea of nature, there are three main aspects including food preparation and cooking, nutrition and the origin of food.



Within the big idea of humankind, there are two main aspects including everyday products and staying safe.



Within the big idea of comparison, the aspect focus is on comparing and contrasting.



Within the big idea of significant individuals, the aspect focus is on significant people.



Within the big idea of investigation, there are two main aspects including investigating and evaluation.



Within the big idea of processes, there are three main aspects including electricity, mechanisms and movement.



Big Idea – Creativity

	<u>Year Group</u>	<u>Skills</u>	<u>Knowledge</u>	<u>Coverage</u>
Generation of Ideas	Nursery	Develop their own ideas and explore a variety of resources, including blocks and construction kits to create 'small worlds' and objects linked to their interests.		Big Wide World Build It Up
	Reception	Create collaboratively, share ideas and use a variety of resources to make products inspired by existing products, stories or their own ideas, interests or experiences.		Exploring Autumn Once Upon a Time Sparkle and Shine Starry Night Winter Wonderland Dangerous Dinosaurs Puddles and Rainbows Sunshine and Sunflowers Splash!
	Year 1	Create a design to meet simple design criteria.	Design criteria are the explicit goals that a project must achieve	Shade and Shelter Taxi Chop, Slice and Mash
	Year 2	Generate and communicate their ideas through a range of different methods.	Ideas can be communicated in a variety of ways, including written work, drawings and diagrams, modelling, speaking and using information and communication technology.	Remarkable Recipes Beach Hut Cut, Stitch and Join
	Year 3	Develop design criteria to inform a design.	Design criteria are the exact goals a project must achieve to be successful. These criteria might include the product's use, appearance, cost and target user.	Cook Well, Eat Well Making It Move Greenhouse
	Year 4	Use annotated sketches and exploded diagrams to test and communicate their ideas.	Annotated sketches and exploded diagrams show specific parts of a design, highlight sections or show functions. They communicate ideas in a visual, detailed way.	Fresh Food, Good Food Functional and Fancy Fabrics
	Year 5	Use pattern pieces and computer-aided design packages to design a product.	A pattern piece is a drawing or shape used to guide how to make something. There are many different computer-aided design packages for designing products.	Architecture
	Year 6	Develop design criteria for a functional and appealing product that is fit for purpose, communicating ideas clearly in a range of ways.	Design criteria should cover the intended use of the product, age range targeted and final appearance. Ideas can be communicated in a range of ways, including through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.	Engineer
	Use of ICT	Year 4	Write a program to control a physical device, such as a light, speaker or buzzer.	Remote control is controlling a machine or activity from a distance. Computers can be used to remotely control a device, such as a light, speaker or buzzer.
Year 6		Use a sensor to monitor an environmental variable, such as temperature, sound or light.	Computer monitoring uses sensors as a scientific tool to record information about environmental changes over time. Computer monitoring can also log data from sensors and record the resulting information in a table or graph.	Light Y6
Structure	Nursery	Make simple structures using a range of materials.	Different materials can be used for construction. They have different properties.	Once Upon a Time (Aut2)
	Reception	Construct simple structures and models using a range of materials.	Different materials have different properties and can be used for different purposes.	Exploring Autumn Me and My Community

UR ES				Once Upon a Time Sparkle and Shine Starry Night Winter Wonderland Shadows and Reflections Big Wide World
	Year 1	Construct simple structures, models or other products using a range of materials.	Different materials can be used for different purposes, depending on their properties. For example, cardboard is a stronger building material than paper. Plastic is light and can float. Clay is heavy and will sink.	Childhood Shade and Shelter Bright Lights, Big City School Days
	Year 2	Explore how a structure can be made stronger, stiffer and more stable.	Structures can be made stronger, stiffer and more stable by using cardboard rather than paper and triangular shapes rather than squares. A broader base will also make a structure more stable.	Coastline Beach Hut
	Year 3	Create shell or frame structures using diagonal struts to strengthen them.	Shell structures are hollow, 3-D structures with a thin outer covering, such as a box. Frame structures are made from thin, rigid components, such as a tent frame. The rigid frame gives the structure shape and support. Diagonal struts can strengthen the structure.	Greenhouse
	Year 4	Prototype shell and frame structures, showing awareness of how to strengthen, stiffen and reinforce them.	A prototype is a mock-up of a design that will look like the finished product but may not be full size or made of the same materials. Shell and frame structures can be strengthened by gluing several layers of card together, using triangular shapes rather than squares, adding diagonal support struts and using 'Jinks' corners (small, thin pieces of card cut into a right-angled triangle and glued over each joint to straighten and strengthen them).	Fresh Food, Good Food
	Year 5	Build a framework using a range of materials to support mechanisms.	Various methods can be used to support a framework. These include cross braces, guy ropes and diagonal struts. Frameworks can be built using lolly sticks, skewers and bamboo canes.	Moving Mechanisms Architecture
	Year 6	Select the most appropriate materials and frameworks for different structures, explaining what makes them strong.	Strength can be added to a framework by using multiple layers. For example, corrugated cardboard can be placed with corrugations running alternately vertically and horizontally. Triangular shapes can be used instead of square shapes because they are more rigid. Frameworks can be further strengthened by adding an outer cover.	Engineer

Big Idea – Investigation

	<u>Year Group</u>	<u>Skills</u>	<u>Knowledge</u>	<u>Coverage</u>
Investigation	Reception	Choose and explore appropriate tools for simple practical tasks.	Different tools are needed for different tasks. For example, pencils and paper are needed for drawing pictures.	Exploring Autumn Me and My Community (Aut1) Starry Night Winter Wonderland Dangerous Dinosaurs
	Year 1	Select the appropriate tool for a simple practical task.	Specific tools are used for particular purposes. For example, scissors are used for cutting and glue is used for sticking.	Chop, Slice and Mash
	Year 2	Select the appropriate tool for a task and explain their choice.	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.	Movers and Shakers Remarkable Recipes Beach Hut Cut, Stitch and Join
	Year 3	Use tools safely for cutting and joining materials and components.	Specific tools can be used for cutting, such as saws. Wood can be joined using glue, nails, staples, or a combination of these. Safety rules must be followed to prevent injury from sharp blades. These rules include using a bench hook to keep the wood still, using a junior hacksaw with a pistol grip and working under adult supervision.	Making It Move Greenhouse
	Year 4	Select, name and use tools with adult supervision.	Useful tools for cutting include scissors, craft knives, junior hacksaws with pistol grip and bench hooks. Useful tools for joining include glue guns. Tools should only be used with adult supervision and safety rules must be followed.	Functional and Fancy Fabrics
	Year 5	Name and select increasingly appropriate tools for a task and use them safely.	There are many rules for using tools safely and these may vary depending on the tools being used. For example, someone using a chisel should chip or cut with the cutting edge pointing away from their body. All tools should be cleaned and put away after use, and should not be used if they are loose or cracked.	Moving Mechanisms
	Year 6	Select appropriate tools for a task and use them safely and precisely.	Precision is important in producing a polished, finished product. Correct selection of tools and careful measurement can ensure the parts fit together correctly.	Engineer Make Do and Mend
Evaluation				
	Nursery	Share their creations with others and respond to questions and suggestions about how it was made.	Different aspects of designing and making can be discussed with others.	Once Upon a Time
	Reception	Adapt and refine their work as they are constructing and making.	Recognise that it is possible to change and alter their designs and ideas as they are making them.	Puddles and Rainbows Moving On
	Year 1	Talk about their own and each other's work, identifying strengths or weaknesses and offering support.	A strength is a good quality of a piece of work. A weakness is an area that could be improved.	Shade and Shelter Taxi Chop, Slice and Mash
	Year 2	Explain how closely their finished products meet their design criteria and say what they could do better in the future.	Finished products can be compared with design criteria to see how closely they match. Improvements can then be planned.	Remarkable Recipes Beach Hut Cut, Stitch and Join Push and Pull
Year 3	Suggest improvements to their products and describe how to implement them, beginning to take the views of others into account.	Asking questions can help others to evaluate their products, such as asking them whether the selected materials achieved the purpose of the model.	Cook Well, Eatwell Making It Move Greenhouse	

	Year 4	Identify what has worked well and what aspects of their products could be improved, acting on their own suggestions and those of others when making improvements.	Evaluation can be done by considering whether the product does what it was designed to do, whether it has an attractive appearance, what changes were made during the making process and why the changes were made. Evaluation also includes suggesting improvements and explaining why they should be made.	Fresh Food, Good Food Functional and Fancy Fabrics Tomb Builders
	Year 5	Test and evaluate products against a detailed design specification and make adaptations as they develop the product.	Testing a product against the design criteria will highlight anything that needs improvement or redesign. Changes are often made to a design during manufacture.	Moving Mechanisms Architecture
	Year 6	Demonstrate modifications made to a product as a result of ongoing evaluation by themselves and to others.	Design is an iterative process, meaning alterations and improvements are made continually throughout the manufacturing process. Evaluating a product while it's being manufactured, and explaining these evaluations to others, can help to refine it.	Food for Life Engineer

Big Idea – Nature

	<u>Year Group</u>	<u>Skills</u>	<u>Knowledge</u>	<u>Coverage</u>
Food Preparation & Cooking	Reception	Follow instructions, including simple recipes, that include measures and ingredients	A recipe is set of instructions for preparing a dish and includes a list of the ingredients required.	Sparkle and Shine Winter Wonderland Big Wide World Splash!
	Year 1	Measure and weigh food items using non-standard measures, such as spoons and cups.	Using non-standard measures is a way of measuring that does not involve reading scales. For example, weight may be measured using a balance scale and lumps of plasticine. Length may be measured in the number of handspans or pencils laid end to end.	Chop, Slice and Mash
	Year 2	Prepare ingredients by peeling, grating, chopping and slicing.	Some ingredients need to be prepared before they can be cooked or eaten. There are many ways to prepare ingredients: peeling skins using a 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.	Remarkable Recipes
	Year 3	Prepare and cook a simple savoury dish.	Preparation techniques for savoury dishes include peeling, chopping, deseeding, slicing, dicing, grating, mixing and skinning.	Cook Well, Eatwell
	Year 4	Identify and use a range of cooking techniques to prepare a simple meal or snack.	Cooking techniques include baking, boiling, frying, grilling and roasting.	Fresh Food, Good Food
	Year 5	Use an increasing range of preparation and cooking techniques to cook a sweet or savoury dish.	Sweet dishes are usually desserts, such as cakes, fruit pies and trifles. Savoury dishes usually have a salty or spicy flavour rather than a sweet one.	Eat the Seasons
	Year 6	Follow a recipe that requires a variety of techniques and source the necessary ingredients independently.	Ingredients can usually be bought at supermarkets, but specialist shops may stock different items. Greengrocers sell fruit and vegetables, butchers sell meat, fishmongers sell fresh fish and delicatessens usually sell some unusual prepared foods, as well as cold meats and cheeses.	Food for Life
Nutrition	Nursery	Help to prepare a range of healthy snacks.	Some foods are healthy. These include fruits, vegetables, nuts and seeds.	Ready Steady Grow
	Reception	Suggest healthy ingredients that can be used to make simple snacks.	There are healthy and unhealthy foods. Fruit and vegetables are an important part of a healthy diet.	Ready Steady Grow
	Year 1	Select healthy ingredients for a fruit or vegetable salad.	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.	Chop, Slice and Mash
	Year 2	Describe the types of food needed for a healthy and varied diet and apply the principles to make a simple, healthy meal.	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.	Remarkable Recipes
	Year 3	Identify the main food groups (carbohydrates, protein, dairy, fruits and vegetables, fats and sugars).	There are five main food groups that should be eaten regularly as part of a balanced diet: fruit and vegetables; carbohydrates (potatoes, bread, rice and pasta); proteins (beans, pulses, fish, eggs and meat); dairy and alternatives (milk, cheese and yoghurt) and fats (oils and spreads). Foods high in fat, salt and sugar should only be eaten occasionally as part of a healthy, balanced diet.	Cook Well, Eatwell

	Year 4	Design a healthy snack or packed lunch and explain why it is healthy.	Healthy snacks include fresh or dried fruit and vegetables, nuts and seeds, rice cakes with low-fat cream cheese, homemade popcorn or chopped vegetables with hummus. A healthy packed lunch might include a brown or wholemeal bread sandwich containing eggs, meat, fish or cheese, a piece of fresh fruit, a low-sugar yoghurt, rice cake or popcorn and a drink, such as water or semi-skimmed milk.	Fresh Food, Good Food
	Year 5	Evaluate meals and consider if they contribute towards a balanced diet.	A balanced diet gives your body all the nutrients it needs to function correctly. This means eating a wide variety of foods in the correct proportions.	Eat the Seasons
	Year 6	Plan a healthy daily diet, justifying why each meal contributes towards a balanced diet.	Eating a balanced diet is a positive lifestyle choice that should be sustained over time. Food that is high in fat, salt or sugar can still be eaten occasionally as part of a balanced diet.	Food for Life
Origins of Food				
	Nursery	Explore and try a range of foods and suggest where they come from.	Food can come from plants or animals.	Sparkle and Shine
	Reception	Begin to identify the origins of some foods.	Food comes from different sources, including from animals, such as meat, fish, eggs and dairy, or from plants, such as fruit and vegetables.	Ready Steady Grow
	Year 1	Sort foods into groups by whether they are from an animal or plant source.	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.	Chop, Slice and Mash
	Year 2	Identify the origin of some common foods (milk, eggs, some meats, common fruit and vegetables)	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.	Remarkable Recipes
	Year 3	Identify and name foods that are produced in different places.	The types of food that will grow in a particular area depend on a range of factors, such as the rainfall, climate and soil type. For example, many crops, such as potatoes and sugar beet, are grown in the south-east of England. Wheat, barley and vegetables grow well in the east of England.	Cook Well, Eatwell
	Year 4	Identify and name foods that are produced in different places in the UK and beyond.	Particular areas of the world have conditions suited to growing certain crops, such as coffee in Peru and citrus fruits in California in the United States of America.	Fresh Food, Good Food
	Year 5	Describe what seasonality means and explain some of the reasons why it is beneficial.	Seasonality is the time of year when the harvest or flavour of a type of food is at its best. Buying seasonal food is beneficial for many reasons: the food tastes better; it is fresher because it hasn't been transported thousands of miles; the nutritional value is higher; the carbon footprint is lower, due to reduced transport; it supports local growers and is usually cheaper.	Sow, Grow and Farm Eat the Seasons
Year 6	Explain how organic produce is grown.	Organic produce is food that has been grown without the use of man-made fertilisers, pesticides, growth regulators or animal feed additives. Organic farmers use crop rotation, animal and plant manures, hand-weeding and biological pest control.	Food for Life	

Big Idea – Materials

	<u>Year Group</u>	<u>Skills</u>	<u>Knowledge</u>	<u>Coverage</u>
M a t e r i a l s f o r P u r p o s e	Reception	Select appropriate materials when constructing and making.	Different materials are suitable for different purposes, such as construction kits for modelling and ingredients for baking.	Once Upon a Time Starry Night Winter Wonderland Moving On
	Year 1	Select and use a range of materials, beginning to explain their choices.	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.	Shade and Shelter
	Year 2	Choose appropriate components and materials and suggest ways of manipulating them to achieve the desired effect.	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.	Movers and Shakers Beach Hut Magnificent Monarchs Cut, Stitch and Join Push and Pull
	Year 3	Plan which materials will be needed for a task and explain why.	Materials for a specific task must be selected on the basis of their properties. These include physical properties as well as availability and cost	Making it Move Greenhouse
	Year 4	Choose from a range of materials, showing an understanding of their different characteristics.	Different materials and components have a range of properties, making them suitable for different tasks. It is important to select the correct material or component for the specific purpose, depending on the design criteria. Recipe ingredients have different tastes and appearances. They look and taste better and are cheaper when in season.	Warp and Weft Fresh Food, Good Food Misty Mountain, Winding River Functional and Fancy Fabrics Tomb Builders
	Year 5	Select and combine materials with precision	Materials should be cut and combined with precision. For example, pieces of fabric could be cut with sharp scissors and sewn together using a variety of stitching techniques.	Moving Mechanisms Architecture
	Year 6	Choose the best materials for a task, showing an understanding of their working characteristics.	It is important to understand the characteristics of different materials to select the most appropriate material for a purpose. This might include flexibility, waterproofing, texture, colour, cost and availability.	Engineer Make Do and Mend
Cu t t i n g a n d j o i n i n g t e x t i l e s	Year 1	Cut and join textiles using glue and simple stitches.	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.	Funny Faces and Fabulous Features
	Year 2	Use different methods of joining fabrics, including glue and running stitch.	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.	Cut, Stitch and Join
	Year 3	Cut and join wools, threads and other materials to a loom.	A loom is a piece of equipment that is used for making fabric by weaving wool or thread. Weaving involves interlacing pieces of thread or yarn.	Beautiful Botanicals
	Year 4	Hand sew a hem or seam using a running stitch.	A hem runs along the edge of a piece of cloth or clothing. It is made by turning under a raw edge and sewing to give a neat and quality finish.	Functional and Fancy Fabrics
	Year 5	Combine stitches and fabrics with imagination to create a mixed media collage.	A collage is artwork made by sticking materials, such as scraps of paper or fabric, onto a background. A mixed media collage is made using various materials and media, such as ink and paint.	Mixed Media

	Year 6	Pin and tack fabrics in preparation for sewing and more complex pattern work.	Pinning with dressmaker pins and tacking with quick, temporary stitches holds fabric together in preparation for and during sewing.	Make Do and Mend
Deco ratin g and emb ellish ing textil es				
	Year 1	Use gluing, stapling or tying to decorate fabric, including buttons and sequins.	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.	Funny Faces and Fabulous Features
	Year 2	Add simple decorative embellishments, such as buttons, prints, sequins and appliqué.	Embellishment is a decorative detail or feature added to something to make it more attractive.	Cut, Stitch and Join
	Year 3	Decorate a loom weaving using embellishments, such as natural or silk flowers, tassels and bows.	A loom weaving is a piece of fabric that has been woven on a loom by interlacing threads. An embellishment is a decorative detail or feature, such as a silk flower, tassel or bow, added to something to make it more attractive.	Beautiful Botanicals
	Year 4	Create detailed decorative patterns on fabric using printing techniques.	Block printing techniques and fabric paint are used to create decorative, repeated patterns on fabrics.	Functional and Fancy Fabrics
	Year 5	Use applique to add decoration to a product or artwork.	Applique is a technique where pieces of material are attached to another material by stitching or gluing.	Mixed Media
	Year 6	Use different methods of fastening for function and decoration, including press studs, Velcro and buttons.	Fastenings hold a piece of clothing together. Types of fastenings include zips, press studs, Velcro and buttons.	Make Do and Mend

Big Idea – Processes

	<u>Year Group</u>	<u>Skills</u>	<u>Knowledge</u>	<u>Coverage</u>
E l e c t r i c i t y	Reception	Identify products that use electricity to make them work.	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.	Marvellous Machines
	Year 3	Incorporate a simple series circuit into a model.	An electric circuit can be used in a model, such as a lighthouse. It can be controlled using a switch.	Greenhouse
	Year 4	Incorporate circuits that use a variety of components into models or products.	Components can be added to circuits to achieve a particular goal. These include bulbs for lighthouses and torches, buzzers for burglar alarms and electronic games, motors for fairground rides and motorised vehicles and switches for lights and televisions.	Electricity
	Year 5	Use electrical circuits of increasing complexity in their models or products, showing an understanding of control.	Electrical circuits can be controlled by a simple on/off switch, or by a variable resistor that can adjust the size of the current in the circuit. Real-life examples are a dimmer switch for lights or volume control on a stereo.	Properties and Changes of Materials
	Year 6	Understand and use electrical circuits that incorporate a variety of components (switches, lamps, buzzers and motors) and use programming to control their products.	Computer programs can control electrical circuits that include a variety of components, such as switches, lamps, buzzers and motors.	Electricity
	M e c h a n i s m s & M o v e m e n t	Nursery	Explore, build and play with a range of resources and construction kits with wheels.	Vehicles and ride-on toys have wheels to help them move.
Reception		Explore, build and play with a range of resources and construction kits with wheels.	Vehicles and ride-on toys have wheels to help them move.	Me and My Community Once Upon a Time
Year 1		Use wheels and axles to make a simple moving model.	An axle is a rod or spindle that passes through the centre of a wheel to connect two wheels.	Taxi
Year 2		Use a range of mechanisms (levers, sliders, wheels and axles) in models or products.	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.	Push and Pull
Year 3		Explore and use a range of mechanisms (levers, sliders, axles, wheels and cams) in models or products.	Levers consist of a rigid bar that rotates around a fixed point, called a fulcrum. They reduce the amount of work needed to lift a heavy object. Sliders move from side to side or up and down, and are often used to make moving parts in books. Axles are shafts on which wheels can rotate to make a moving vehicle. Cams are devices that can convert circular motion into up-and-down motion.	Making it Move
Year 4		Explore and use a range of mechanisms (levers, axles, cams, gears and pulleys) in models or products. Mechanisms can be used to add functionality to a model.	For example, sliders or levers can be used in moving pictures, storybooks or simple puppets; linkages in moving vehicles or puppets; gears in motorised vehicles or spinning toys; pulleys in cable cars or transport systems and cams in 3-D moving toys or pictures.	Tomb Builders
Year 5		Use mechanical systems in their products, such as pneumatics.	Pneumatic systems use energy that is stored in compressed air to do work, such as inflating a balloon to open a model monster's mouth. These effects can be achieved using syringes and plastic tubing.	Moving Mechanisms

	Year 6	Explain and use mechanical systems in their products to meet a design brief.	Mechanical systems can include sliders, levers, linkages, gears, pulleys and cams. Other mechanisms include pneumatics and hydraulics.	Engineer
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Big Idea – Comparison

C o m p a r e a n d C o n t r a s t	<u>Year Group</u>	<u>Skills</u>	<u>Knowledge</u>	<u>Coverage</u>
	Reception	Describe what, why and how something was made and compare with others.	Aspects of designing and making can be compared with others, including inspiration for making a product and the tools and techniques used.	Marvellous Machines Puppets and Pop Ups Stories and Rhymes
	Year 1	Describe the similarities and differences between two products.	Two products can be compared by looking at a set of criteria and scoring both products against each one.	Shade and Shelter Taxi!
	Year 2	Compare different or the same products from the same or different brands.	Products can be compared by looking at particular characteristics of each and deciding which is better suited to the purpose.	Cut, Stitch and Join
	Year 3	Explain the similarities and difference between the work of two designers.	Work from different designers can be compared by assessing specific criteria, such as their visual impact, fitness for purpose and target market.	Greenhouse
	Year 4	Create and complete a comparison table to compare two or more products.	A comparison table can be used to compare products by listing specific criteria on which each product can be judged or scored.	Functional and Fancy Fabrics Electricity Y4
	Year 5	Survey users in a range of focus groups and compare results.	A focus group is a small group of people whose reactions and opinions about a product are taken and studied. Evaluations can be made by asking product users a selection of questions to obtain data on how the product has met its design criteria.	Moving Mechanisms
	Year 6	Create a detailed comparative report about two or more products or inventions.	Products and inventions can be compared using a range of criteria, such as the impact on society, ease of use, appearance and value for money.	Food for Life Engineer Make Do and Mend

Big Idea – Humankind

	<u>Year Group</u>	<u>Skills</u>	<u>Knowledge</u>	<u>Coverage</u>
Everyday Products	Nursery	Name and explore a range of everyday products and explore how things work.	Everyday products, such as cups, plates and spoons are designed to help us.	Puppets and Popups
	Reception	Name and explore a range of everyday products and explore how things work.	Everyday products, such as cups, plates and spoons are designed to help us	Sunshine and Sunflowers Splash! Let's Explore
	Year 1	Name and explore a range of everyday products and describe how they are used.	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.	Shade and Shelter Taxi
	Year 2	Explain how an everyday product could be improved.	Products can be improved in different ways, such as making them easier to use, more hardwearing or more attractive	Cut, Stitch and Join Push and Pull
	Year 3	Explain how an existing product benefits the user.	Particular products have been designed for specific tasks, such as nail clippers, the spinning top and the cool box.	Making It Move Greenhouse
	Year 4	Investigate and identify the design features of a familiar product.	Design features are the aspects of a product's design that the designer would like to emphasise, such as the use of a particular material or feature that makes the product easier to use or more durable.	Fresh Food, Good Food Misty Mountain, Winding River Functional and Fancy Fabrics
	Year 5	Explain how the design of a product has been influenced by the culture or society in which it was designed or made.	Culture is the language, inventions, ideas and art of a group of people. A society is all the people in a community or group. Culture affects the design of some products. For example, knives and forks are used in the western world, whereas chopsticks are used mainly in China and Japan. The design of products needs to take into account the culture of the target audience. For example, colours might mean very different things in different cultures.	Moving Mechanisms Architecture
	Year 6	Analyse how an invention or product has significantly changed or improved people's lives.	People's lives have been improved in countless ways due to new inventions and designs. For example, the Morrison shelter, designed by John Baker in 1941, was an indoor air-raid shelter used in over half a million homes during the Second World War. It saved the lives of many people caught in bombing raids.	Food for Life Engineer Make Do and Mend
	Staying Safe	Reception	Show an understanding that tools and equipment need to be used safely and collaborate with others when moving large equipment.	It is important to listen to adults and follow simple rules and procedures when using equipment and tools.
Year 1		Follow the rules to keep safe during a practical task.	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.	Shade and Shelter Chop, Slice and Mash
Year 2		Work safely and hygienically in construction and cooking activities.	Hygiene rules include washing hands before handling food, cleaning surfaces, tying long hair back, storing food appropriately and wiping up spills.	Remarkable Recipes
Year 3		Use appliances safely with adult supervision.	Electrical appliances must only be used under the supervision of an adult. Safety rules must also be followed when using electricity: fingers and other objects must not be put into electrical outlets, anything with a cord or plug should never be used around water and a plug should never be pulled out by its cord.	Cook, Well, Eatwell
Year 4		Work safely with everyday chemical products under supervision, such as disinfectant hand wash and surface cleaning spray.	Chemicals are used in the home every day. They include cleaning products, such as bleach and disinfectant, but also paints, glues, oils, pesticides and medicines. Most chemical products carry a	Fresh Food, Good Food

			<p>hazard symbol showing in what way the chemical could be harmful. Chemicals should only be used under adult supervision. Appropriate safety precautions, such as wearing goggles and gloves, working in a well-ventilated room, wiping up spills and tying back long hair, should be taken.</p>	
Year 5	Explain the functionality and purpose of safety features on a range of products.	Safety features are often incorporated into products that might cause harm. Some examples include the child-safety caps on medicine bottles, seatbelts in cars, covers for electrical sockets and finger guards on doors.	Moving Mechanisms	
Year 6	Demonstrate how their products take into account the safety of the user.	The safety of the user has to be taken into account when designing a new product. Methods to help keep users safe include providing clear instructions for use; clear indication of the age range for which it is designed; safety features (such as child-resistant packaging); warning symbols and electrical safety checks.	Engineer	

Big Idea – Significance

Significant People	Year Group	Skills	Knowledge	Coverage
	Reception	Explore significant products.	Some products are significant because they have changed the way people live their lives.	Sunshine and Sunflowers Puppets and Pop Ups
	Year 1	Describe why a product is important.	The importance of a product may be that it fulfils its goals and performs a useful purpose.	Chop, Slice and Mash
	Year 2	Explain why a designer or inventor is important.	Many key individuals have helped to shape the world. These include engineers, scientists, designers, inventors and many other people in important roles.	Remarkable Recipes Cut, Stitch and Join
	Year 3	Describe how key events in design and technology have shaped the world.	Key inventions in design and technology have changed the way people live.	Cook Well, Eatwell
	Year 4	Explain how and why a significant designer or inventor shaped the world.	Significant designers and inventors can shape the world.	Fresh Food, Good Food Functional and Fancy Fabrics
	Year 5	Describe the social influence of a significant designer or inventor.	Many new designs and inventions influenced society. For example, labour-saving devices in the home reduced the amount of housework, which was traditionally done by women. This enabled them to have jobs	Architecture
	Year 6	Present a detailed account of the significance of a favourite designer or inventor.	The significance of a designer or inventor can be measured in various ways. Their work may benefit society in health, transport, communication, education, the built environment or technology. It may enhance culture in different areas, such as fashion, ceramics or computer games.	Engineer