

Design and Technology

Reception	<p>Through continuous and enhanced provision children in Reception will:</p> <p>CL - Develop social phrases. Use talk to help work out problems and organise thinking and activities and to explain how things work and why they might happen. Connect one idea or action to another using a range of connectives. Articulate their ideas and thoughts in well-formed sentences. Learn new vocabulary and use throughout the day in different contexts.</p> <p>PSED - Know and talk about the different factors that support their overall health and wellbeing such as healthy eating. Think about the perspectives of others. Show resilience and perseverance in the face of challenge. Build constructive and respectful relationships.</p> <p>PD - Develop their small motor skills so that they can use a range of tools competently, safely and confidently. Suggested tools: pencils for drawing and writing, paintbrushes, scissors, knives, forks and spoons.</p> <p>L - Spell words by identifying the sounds and then writing the sound with letter/s. Write short sentences</p> <p>M - Compose and decompose shapes so that children recognise a shape can have other shapes within it. Select, rotate and manipulate shapes to develop spatial reasoning skills. Count objects.</p> <p>KUW - Recognise some environments that are different from the one in which they live. Explore the natural world around them.</p> <p>EAD - Explore, use and refine a variety of artistic effects to express their ideas and feelings. Return to and build on their previous learning, refining ideas and developing their ability to represent them. Create collaboratively, sharing ideas, resources and skills.</p>				<p>Continuous provision areas and activities that support learning and skill development that relate to DT are:</p> <p>Indoors – art and craft area, construction area, book corner, investigation table, topic tables.</p> <p>Outdoors – construction area, mark making cupboard, mud kitchen, forest school.</p>	
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Themes and topics	All about me	Around the world	Fantasy	Plant a tiny seed	All creatures great and small	Journeys
Enhancements These are flexible and will follow the interests and needs of the children.	<p>Design and build a home. Cooking – vegetable soup, chutney – Teacher lead Design and build a vehicle to travel to another country. Diva lamps Christmas craft Cooking in class: Harvest Bread, School garden chutney Volunteers: Gingerbread</p>		<p>Design and build a space craft. Paper lanterns Easter craft Cooking in class: spring rolls Volunteers: TBD</p>		<p>Design and build a trap for a fruit bat/pirate Design and build a boat that floats Design and build home for minibeast Minibeast craft Cooking in class - TBD Volunteers: Gold Digger Buns</p>	
Year 1	<p>Moving Pictures Content: To design purposeful, appealing products for themselves and other users based on design criteria. Select from and use a range of tools and equipment to perform practical tasks such as cutting and joining. Explore and evaluate our own designs. Skill: Mechanisms Use paper and card to design and make a picture with moveable features. Build structures Explore and use mechanisms such as levers, sliders, push and pull in their products. Cross Curricular Link: Literacy</p>		<p>Making Pizzas Content: Select from and use a wide range of ingredients. Explore and evaluate a range of existing products. Use the basic principles of a healthy and varied diet to prepare dishes. Instil a love of cooking which will open a door to creativity. Generate, develop, model and communicate their ideas through talking, drawing, templates, Skills: Cooking Use healthy ingredients to design and make a pizza for the school dinner Cross Curricular Link: Healthy Eating Cooking session with class</p>		<p>Playgrounds Content: To design purposeful, appealing products for themselves and other users based on design criteria. Select from and use a range of tools and equipment to perform practical tasks such as cutting, and joining. Explore and evaluate their own designs. Skill: Structure Looking at joining paper together. Making a design for a purpose. Looking at a variety of ways to make a structure. Cooking session with class.</p>	
Key Vocabulary			<p>Ingredients, healthy, balanced diet, protein, carbohydrates, fats, design, make, evaluate, prepare.</p>		<p>Moving pictures, mechanisms, push, pull, sliders, cut, join.</p>	
Year 2	<p>Puppets –Autumn 2 Context: Design purposeful, appealing products for themselves and other users based on design criteria. To develop their ideas through talking and drawing. To make by using a range of tools and equipment to perform practical tasks for example cutting and joining through sewing. To evaluate and explore their designs.</p>		<p>N/A Cooking session whole class</p>		<p>Vehicles- Summer 2 Context: Design purposeful, appealing products for themselves and other users based on design criteria. To develop their ideas through talking and drawing. To evaluate and explore their designs against their criteria. To build structures, exploring how they can be made stronger, stiffer and more stable.</p>	

	<p>Skill: Textiles - Sewing- Running stitch Use textiles and sewing to design and make the puppet of a character in a traditional tale. Children's first experience of sewing and joining materials using thread. Cross Curricular Link: English Cooking session whole class</p>		<p>To explore and use mechanisms such as wheels in their products. Skill: Moving Mechanics Use recycled boxes to design and make a vehicle to safely transport an egg. Children make the basic structure of a car, creating a chassis using wood. Children begin to learn how to use a saw safely to make the bottom of the car. Children use PVA glue to join materials together successfully.</p>
Key Vocabulary	Puppet, sew, stich, running stich, join, design, make, evaluate,		Vehicle, transport, mechanism, wheel, explore, designs, evaluate, make
Year 3	<p>Designing Packaging – Autumn 1 Content: Design functional, appealing products that are fit for purpose, aimed at particular individuals or groups Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. Apply their understanding of how to strengthen, stiffen and reinforce more complex structures Skill: Designing packaging/ Food Learning about food packaging, looking at purpose, sustainability and the environment. Children build nets and make packaging for a purpose. Cooking once a term.</p>	<p>N/A Cooking once a term.</p>	<p>Picture frames – Summer 1 Content: Select and use a wide range of materials, including construction materials. Begin to understand structure and strength. Investigate and analyse a range of existing products. Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. Skill: Structure Use card, foam and other materials to design and make a standing picture frame. Learn to join wood together to make a wooden frame which has stable corners. Cross Curricular Link: RE (Holy communion pictures) Cooking once a term.</p>
Key Vocabulary		Packaging, review, environment, recycle, net, structure, plastic, purpose.	Join, structure, stable,
Year 4	<p>N/A Cooking once a term.</p>	<p>Daily Containers (Purses) – Spring 2 Content: To use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose. Select from and use a wider range of tools and equipment to perform practical tasks (cutting, sewing, joining) Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. Skill: Textiles - Sewing- Blanket Stitch Device holder – use textiles to sew, design and make a holder for a personal device. Children are to make their own purse. Cooking once a term.</p>	<p>Games – Summer 2 Content: To understand and use electrical systems in their products such as series circuits incorporating switches, bulbs, buzzers and motors Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups Select and use a wider range of materials and components to ensure they function correctly. Generate, develop, model and communicate their ideas through discussion, annotated sketches. Skill: Electricity Use simple electrical circuit to design and make an alarm system. To create a working torch using tubes and circuits. Cooking once a term.</p>
Key Vocabulary		Blanket stich, join, cut, design, purpose.	Electrical, bulb, motor, buzzer, battery, component, design, make, evaluate
Year 5	<p>Building bridges – Structure – Autumn 2 Content: Select from and use a wider range of tools and equipment to perform practical tasks such as cutting, shaping, joining and finishing accurately Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. Understand how key events and individuals in design and technology have helped shape the world Apply their understanding of how to strengthen, stiffen and reinforce</p>	<p>Tapestry – Spring Term Content: Use research and develop design criteria to inform the design of innovative, functional, products that are fit for purpose. Generate, develop, model and communicate their ideas through discussion, annotated sketches. Select from and use a wider range of tools and equipment to perform practical tasks Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p>	<p>N/A Cooking once a term.</p>

	<p>more complex structures</p> <p>Skill: Structure</p> <p>Use the knowledge of forces to make bridges with the correct structure to hold certain weight.</p> <p>To investigate how to create different style bridges such as a truss, arch and suspension bridge.</p> <p>Design and make a bridge for a purpose.</p> <p>Cross Curricular Link: Science and Geography (Rivers)</p> <p>Use the knowledge of forces and structures to make a bridge which can hold a certain weight.</p> <p>Cooking once a term.</p>	<p>Skill: Textiles – Sewing</p> <p>Combine all sewing skills taught from lower KS2 and KS1.</p> <p>To create a tapestry which reflects a picture/image.</p> <p>To have a clear end product.</p> <p>Learning how to create a tapestry piece using different types of joining and sewing.</p> <p>Children will learn how to quilt, weave, layer, thread, stitch and join.</p> <p>To study artists over time and observe how art has changed.</p> <p>Developing understanding of quilting, sewing, weaving</p> <p>Cross Curricular Link: Myths and Legends</p> <p>Cooking once a term.</p>	
Key Vocabulary	bridge, structure, stability, stable, firm, beam, arch, suspension, weight, bend	Blanket stitch, join, cut, design, needle, thread, design, imagery, myth, legend, Tapestry, quilt, weave, layer, textiles, techniques, scale.	
Year 6	<p>N/A</p> <p>Cooking once a term.</p>	<p>N/A</p> <p>Cooking once a term.</p>	<p>Fair ground rides –</p> <p>Content:</p> <p>Select from and use a wider range of tools and equipment to perform practical tasks such as cutting, shaping, joining and finishing accurately.</p> <p>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p> <p>Understand and use mechanical systems in their products such as gears, pulleys, cams, levers and linkages</p> <p>Understand and use electrical systems in their products such as series circuits incorporating switches, bulbs, buzzers and motors</p> <p>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</p> <p>Skill: All skills</p> <p>Combine elements from previous projects to design and make a model of a moving fairground ride</p> <p>Cooking once a term.</p>
Key Vocabulary			Cam, axel, rotation, rotate, handle, mechanism, sustainability, gears, motor, battery, electrical, structure, firm, join, glue, mend, adapt, review, design.