

DT Curriculum Overview

Year 1 DT			
Focused Study	Mechanisms – Christmas Cards with moving parts	Structure - make a lighthouse	Cooking & nutrition - Healthy Eating
What & why?	<p>The children will investigate a range of mechanisms including pop up, sliders and hinges. They will learn to work safely and design and make appealing product Christmas cards for a friend and home. Once made they will evaluate their designs and consider how they could be improved.</p> <p>Linked to science topic My body children will make a hinges skeleton using split pins.</p> <p>Children will make a slider mechanism to control a rocket. They will evaluate and consider how they could make it stronger. They will plan and design they next slider mechanism then work from their design to make a different design – eg – car, firework, shooting star, horse. They will strengthen their slider using thicker card, wooden sticks, etc.</p> <p>Children will muse a hinge mechanism, based on the doors of an advent calendar, to make their own calendar.</p> <p>They will make a Pop-up Christmas card.</p>	<p>Linked to the class text of Lighthouse Keepers Lunch and the history topic Grace Darling. The children will design and make their own Lighthouse. They will use a range of materials and produce a ‘freestanding’ structure which they will present to the class and evaluate.</p> <p>Children will design a light house that they will then make a mock- up of and evaluate. As a class we will discuss how to make a free-standing structure stronger.</p> <p>Children will then make another lighthouses model using their new knowledge.</p> <p>Children will make a simple circuit to produce a light for the lighthouse keeper.</p>	<p>The children will understand the need for a healthy diet and how to achieve it. The pupils will name and sort food into 5 groups on the ‘Eat Well’ plate. They will learn about healthy diet – eating at least 5 portions of fruit and veg each day. They will investigate where food comes from and prepare simple dishes. They will handle food safely and hygienically chopping, peeling and grating.</p> <p>Children will make a salad with a variety of vegetables, they will grate, chop, slice and peel.</p> <p>Children will make a healthy breakfast including porridge, fruit and yogurt and identify the food groups.</p> <p>Children will make soda bread and hand-made butter.</p>
Skills covered in each unit			
	<p>Make Moving select from a range of tools and equipment giving reasons for choices Follow procedures for safety Assemble, join and combine materials and components Use fixing materials e.g. tape, paperclips</p> <p>Technical Knowledge Understand about the movement of simple mechanisms including levers and sliders</p> <p>Evaluate Talk about their designs & what they are making Make simple judgements about their designs</p>	<p>Make Moving select from a range of tools and equipment giving reasons for choices Follow procedures for safety Assemble, join and combine materials and components</p> <p>Technical Knowledge Understand how freestanding structures can be made stronger, stiffer and more stable</p> <p>Evaluate Talk about their designs & what they are making Make simple judgements about their designs</p>	<p>Cooking and Nutrition Know that everyone should eat 5 portions of fruit or veg per day Prepare simple dishes safely and hygienically, using techniques such as cutting Understand where food comes from Name and sort foods into 5 food groups of the ‘eat well’ plate Use equipment to weigh and measure</p> <p>Technical Knowledge Understand that food ingredients should be combined according to their sensory characteristics</p> <p>Evaluate Talk about the food they are making Simple judgements about the food they have made.</p>

DT Curriculum Overview

Ongoing Skills covered in all focused study

Design purposefully - user & purpose (context)

Generate, develop, model & communicate ideas in various ways (explore materials, make templates & mock-ups)

Collect ideas, look at existing products

Follow safety procedures

DT Curriculum Overview

Year 2 DT			
Focused Study	Animal Puppet	Mechanism – making a moving vehicle	Structure – mini seascape/garden
What & why?	<p>Linking to the geography topic of continents & oceans explore different animals from around the world. the children can choose an animal they would like to make a puppet design for, drawing the animal from observation and looking at shape, size, colour, detail, etc.</p> <p>The children will design a simple animal puppet shape, work out materials and components they require and explore the joining together to produce their puppet.</p>	<p>Linking to our history topic of the Great Fire of London & the fire vehicles they had as opposed to modern vehicles. Investigate emergency & a variety of vehicles and their purpose.</p> <p>The children will design a vehicle they wish to make and explore how to make it move looking at wheels and axles. Explore some toy vehicles and deconstruct. Once constructed they can decorate their vehicle appropriately and evaluate.</p>	<p>Linking to the History topic we will design and make a seascape. This topic also links to building on & using simple moving mechanisms from year 1.</p> <p>They will investigate which materials to use and to evaluate the work.</p>
Skills covered in each unit			
	<p>Make Select from a range of materials and components according to their characteristics Use and make own templates Use finishing techniques, including those from art and design</p> <p>Technical Knowledge Know the correct technical vocabulary for the project they are undertaking. Understand about the simple working characteristics of materials and components</p> <p>Evaluate Suggest & discuss any improvements for their puppet</p>	<p>Make Select from a range of materials and components according to their characteristics Use and make own templates Use finishing techniques, including those from art and design</p> <p>Technical Knowledge Understand about the movement of simple mechanisms including wheels and axels Know the correct technical vocabulary for the project they are undertaking. Understand about the simple working characteristics of materials and components</p> <p>Evaluate Discuss & suggest any improvements for their vehicle</p>	<p>Make Select from a range of materials and components according to their characteristics Use and make own templates Use finishing techniques, including those from art and design</p> <p>Technical Knowledge Know the correct technical vocabulary for the project they are undertaking. Understand about the simple working characteristics of materials and components</p> <p>Evaluate Discuss & suggest any improvements on their work.</p>
Cooking & Nutrition			
<p>A Healthy Kenyan Dish Link to healthy eating in science and the basic principles for a healthy balanced diet. Explore what Kenyans eat – staple foods. Conditions for growth, climate & weather. Explore Kenyan fruits – tasting session and design a ‘Kenyan Fruit Salad’ Children make their salads, sample and discuss which ones they preferred and why.</p>			

DT Curriculum Overview

Ongoing Skills covered in all focused study

Design purposefully - user & purpose (context)
Generate, develop, model & communicate ideas in various ways (explore materials, make templates & mock-ups)
Collect ideas, look at existing products
Follow safety procedures

DT Curriculum Overview

Focused Study	Cooking & Nutrition	Mechanisms Moving Books	Textiles Egyptian God Kites
What & Why?	Linked to Science study of animals including humans. The children will investigate a healthy lunch box and design a wrap with a protective package for a packed lunch. They will investigate fillings and 'brad' products for the wrap. Then design and test an appropriate package to protect the product as it is transported to school.	The children will design a mechanical book based on a local legend e.g 'The Lampton Worm'. They will explore moving mechanisms using previous knowledge and building on from Key Stage 1.	Linked to History study of Ancient Egypt. The children will design and make a usable kite to represent an Egyptian God. They will look into what a kite needs – which fabric is the best to use and design the form and design. They will produce prototypes and test for the best 'kite action' before making a final version
Skills covered in each unit			
	<p>Cooking and Nutrition Understand and apply the principles of a healthy and varied diet Cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet Become competent in a range of cooking techniques Understand the source, seasonality and characteristics of a broad range of ingredients</p> <p>Make Select tools and equipment suitable for the task Select materials and components suitable for the task Order the main stages of making Measure, mark out, cut and shape materials with some accuracy</p> <p>Evaluate Identify strengths & weaknesses of their ideas Refer back to their design criteria Investigate production & design of products & materials chosen</p>	<p>Make Select tools and equipment suitable for the task Select materials and components suitable for the task Order the main stages of making Measure, mark out, cut and shape materials with some accuracy</p> <p>Technical Knowledge Use the correct technical vocabulary for the projects they are undertaking</p> <p>Evaluate Identify strengths & weaknesses of their ideas Refer back to their design criteria Investigate production & design of products & materials chosen</p>	<p>Make Select tools and equipment suitable for the task Select materials and components suitable for the task Order the main stages of making Measure, mark out, cut and shape materials with some accuracy</p> <p>Technical Knowledge Use the correct technical vocabulary for the projects they are undertaking Know that a single textile fabric shape can be used to make a 3d textile product Know that materials have both functional and aesthetic properties</p> <p>Evaluate Identify strengths & weaknesses of their ideas Refer back to their design criteria Investigate production & design of products & materials chosen</p>

DT Curriculum Overview

Ongoing Skills covered in all focused study

Use research & develop design criteria to inform their products for specific individuals and groups
Generate, develop, model & communicate ideas through discussion, annotated sketches, diagrams, prototypes & computer-aided design
Expand their choice of materials being used
Select tools & equipment and say why they're suitable for the task
Follow safety procedures
Begin to measure and mark out materials to become more accurate at their task
Investigate & analyse existing products
Begin to identify designers of certain products and their influences

DT Curriculum Overview

Year 4 DT			
Focused Study	Dragons - pneumatics	Making a buzzer game	Cooking & Nutrition – Healthy Greek Food
What & Why?	<p>Linked to the English novel ‘Where the mountain meets the moon. The children will be designing a moving dragon. Using pneumatics to create the moving part.</p> <p>The children will study animal movements. Decide which parts can and should move and which can be moved by the pneumatic system.</p>	<p>Practical use of Science knowledge on circuits. The children will design, make and test a wire loop game. Explore existing games to see how they work and why. Evaluate the existing products. Based on this the children can design using their own ideas.</p> <p style="text-align: center;">This follows the Science Electricity unit.</p>	<p>Linked to study of Ancient Greece the children will design and produce an authentic Greek food. They will investigate which ingredients they will need –how they need to be prepared.</p> <p style="text-align: center;">Then prepare some Greek food e.g salad, dip, wrap...</p>
Skills covered in each unit			
	<p>Make Use a wider range of materials and components Assemble, join and combine materials and components Produce detailed lists of tools, equipment and materials needed and explain their choices</p> <p>Technical Knowledge Understand how levers and linkages or pneumatic systems can create movement</p> <p>Evaluate Consider views of others to improve their work Use their design criteria to evaluate products produced Identify key designers related to their work</p>	<p>Make Explain their choices of tools and equipment Use a wider range of materials and components Assemble, join and combine materials and components Produce detailed lists of tools, equipment and materials needed and explain their choices Use of pliers and wire cutters.</p> <p>Technical Knowledge Understand how simple electrical circuits and components can be used to create functional products</p> <p>Know that mechanical and electrical systems have an input and output process</p> <p>Evaluate Consider views of others to improve their work Use their design criteria to evaluate products produced Identify key designers related to their work</p>	<p>Cooking and Nutrition Know that food is grown, reared and caught Know that to be healthy and active food is needed to provide energy for the body Hygienically prepare and cook a variety of mostly savoury dishes Use a range of techniques such as peeling, chopping slicing, grating, mixing</p> <p>Technical Knowledge Know that food ingredients can be fresh, pre-cooked and processed</p> <p>Evaluate Consider views of others to improve their work Use their design criteria to evaluate products produced</p>

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Ongoing Skills covered in all focused study

Use research & develop design criteria to inform their products for specific individuals and groups
Generate, develop, model & communicate ideas through discussion, annotated sketches, diagrams, prototypes & computer-aided design
Expand their choice of materials being used
Select tools & equipment and say why they're suitable for the task
Follow safety procedures
Begin to measure and mark out materials to become more accurate at their task
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DT Curriculum Overview

Year 5 DT			
Focused Study	Electrical Control	Textiles	Cooking and Nutrition
What & Why?	<p>Following on from the Year 4 topic of electricity, children will use their knowledge of circuits to build one which can power an electric vehicle.</p> <p>Children will investigate the products needed for the circuit and experiment with compartments to find the most effective.</p> <p>Investigate an existing electric model to see the materials and components used.</p> <p>Children will build a chassis for their vehicle and experiment with the idea of fly wheels.</p> <p>Children will design and create a net for their vehicle, turning it into whichever four wheeled vehicle they want to create.</p>	<p>Linking to the art topic of weaving, children will design and create a mobile phone cover using felt. They will have to draw an appropriate design, measure cut out and use a variety of stitches to assemble their product.</p> <p>Investigate & evaluate existing products and the materials they're made from and how the materials and components are joined together.</p> <p>Children will personalise their product by adding embellishments.</p>	<p>Linking to the geography topic of Mexico, children will investigate food trade and understand why seasons may affect the food available.</p> <p>Children will make Mayan inspired tortilla using their own recipe and talk about the need for fibre in our diet. They will experiment with creating their own chocolate bar and marketing their product.</p>
Skills covered in each unit			
	<p>Make Use techniques that require a number of steps</p> <p>Technical Knowledge Understand how complex electrical circuits and components can be used to create functional products</p> <p>Evaluate Use design criteria to evaluate their product After looking at existing models, investigate materials chosen</p>	<p>Make Accurately measure to the nearest mm, mark out, cut and shape materials and components Accurately assemble, join and combine materials and components.</p> <p>Technical Knowledge Know that 3 d textile products can be made from a combination of fabric shapes</p> <p>Evaluate Use design criteria to evaluate their product Investigate the cost of making the product and sustainability Look at existing products and how they're made</p>	<p>Technical knowledge Know that a recipe can be adapted by adding or substituting one or more ingredients</p> <p>Cooking and Nutrition Know that the seasons may affect the food available Know that recipes can be adapted to change the appearance, taste, texture and aroma Know that different foods contain different substances – nutrients, water, fibre - that are needed for health Measure accurately</p> <p>Evaluate Investigate the cost of making the product</p>

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Ongoing Skills covered in all focused study

Use research & develop design criteria to inform their products for specific individuals and groups - surveys, interviews, questionnaires
Generate, develop, model & communicate ideas through discussion, annotated sketches, diagrams, prototypes & computer-aided design
Expand their choice of materials being used
Select tools & equipment and say why they're suitable for the task & order the main stages of making
Follow safety procedures
Measure and mark out materials to become more accurate at their task, apply finishing techniques, make refinements
Investigate & analyse existing products - costs, sustainability
Identify designers of certain products and their influences

DT Curriculum Overview

Year 6 DT			
Focused Study	Cam Model	Den Making Make A Boat	Cooking - American style food
What & why?	<p>Linked to the class text - Skellig. Children will make a Cam Model that shows an owl moving. The children will learn how cams, pulleys and gears create movement. They will learn about different materials, and how they can be combined to make more useful characteristics. Look at any existing models to explore how they work, how and what they are made from and their effectiveness.</p>	<p>Linked to our Titanic topic, the children will be exploring the different parts of the boat. The children will design a boat by carrying out research and developing prototypes. The children will learn how to reinforce and strengthen 3D framework, so the boat stands unaided. Throughout the building process, the children will accurately apply a range of finishing techniques using skill from Art lessons. The children will also make refinements throughout. Look any specific existing products to inspire and improve their work and help their understanding.</p>	<p>Linked to the 'Amazing America' topic, the children will make burgers. The children will need to understand how the different ingredients come together to make the patty. The children will work out ratios and measure the ingredients that are required. The children will use different skills such as peeling, chopping, grating and mixing to create the burger. The children will then learn how to store the food correctly and safely.</p>
Skills covered in each unit			
	<p>Make Explain their choices of materials and components according to functional properties Follow safety procedures Accurately apply a range of finishing techniques including those from art and design Demonstrate resourcefulness e.g. making refinements</p> <p>Technical knowledge Understand how cams, pulleys and gears create movement Know how to reinforce/strengthen a 3d framework Understand how to use learning in science and maths to help design and make products that work Understand that materials can be combines and mixed to create more useful characteristics</p> <p>Evaluate Critically evaluate the quality of the design, manufacture & fitness for purpose of the product</p>	<p>Make Explain their choices of materials and components according to functional properties and aesthetic qualities Follow procedures for safety Accurately apply a range of finishing techniques including those from art and design Demonstrate resourcefulness e.g. making refinements Know how to reinforce/strengthen a 3d framework</p> <p>Technical knowledge Know how to reinforce/strengthen a 3d framework Understand how to use learning in science and maths to help design and make products that work Understand that materials can be combines and mixed to create more useful characteristics</p> <p>Evaluate Critically evaluate the quality of the design, manufacture & fitness for purpose of the product Compare their design to their original design specification</p>	<p>Technical knowledge Know that a recipe can be adapted by adding or substituting one or more ingredients</p> <p>Cooking & Nutrition Understand how food is processed into ingredients that can be eaten or used for cooking Understand the need for correct storage Measure accurately Work out ratios in recipes</p> <p>Evaluate Investigate the cost of making the product</p>

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	Compare their design to their original design specification		
Ongoing Skills covered in all focused study	<p>Use research & develop design criteria to inform their products for specific individuals and groups - surveys, interviews, questionnaires</p> <p>Generate, develop, model & communicate ideas through discussion, annotated sketches, diagrams, prototypes & computer-aided design</p> <p>Expand their choice of materials being used</p> <p>Select tools & equipment and say why they're suitable for the task & order the main stages of making</p> <p>Follow safety procedures</p> <p>Measure and mark out materials to become more accurate at their task, apply finishing techniques, make refinements</p> <p>Investigate & analyse existing products - costs, sustainability</p> <p>Identify designers of certain products and their influences</p>		