



KS2 DT Overview



		Autumn	Spring	Summer
Yr 3	Topic	London	Romans	Lion King
	Pupils should be taught about	<p>Structures - Building bridges Apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p>	<p>Mechanisms and Computing Understand and use mechanical systems in their products(e.g. gears, pulleys, cams, levers and <u>linkages</u>) Select from and use a wider range of materials and equipment to perform practical tasks (cutting, shaping, joining and finishing), accurately.</p> <p>Apply their understanding of computing to program, monitor and control their products.</p>	<p>Cooking and Nutrition Understand and apply the principles of a healthy and varied diet. Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processes.</p>
	Outcome	To construct another bridge for London.	To create catapults and use them on various surfaces (Science link – Forces & Magnets). Create a simulation of a catapult.	To cook Jollof rice. (Science link – Animals including humans – Summer 1)
Yr 4	Topic	Raiders and Invaders	Chocolate	Ancient Egypt
	Pupils should be taught about	<p>Structures - Make Viking Longboats Use a range of materials and equipment to design and create a Viking longboat. Design increasingly complex plans. Make templates and mock ups.</p>	<p>Structures - design and build packaging for a chocolate box and Electricity Look at templates of chocolate boxes, design template net and use to build own chocolate boxes. Children to look at different designs, create their own design and plan it according to the template net they create. Understand and use electrical in their products.</p>	<p>Cooking and Nutrition - Macronutrients plan from CHP. Use Macronutrients plans from CHP to learn about natural foods, ingredients and what needs to be included in a healthy meal plan.</p>
	Outcome	To build a Viking longboat.	To create packaging for a chocolate box and display it in a shop front using electrical circuits.	To cook a traditional Egyptian food dish- Koshari which uses plenty of macronutrients.
Yr 5	Topic	Rainforest	Ancient Greece	Age of Change
	Pupils should be taught about	<p>Structures Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, <u>according to their functional properties and aesthetic qualities.</u></p>	<p>Mechanisms Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities. Understand and use mechanical systems in their products (for example gears, pulleys, cams, levers and linkages).</p>	<p>Using lessons from CHP- Cooking and nutrition (10)Diversity- learning about seasonal foods. (1) Macronutrients- use natural ingredients to make a healthy cheesecake..</p> <ul style="list-style-type: none"> Understand and apply the principles of a healthy and varied diet. (CHP 1) Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. (CHP1) <u>Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.</u> (CHP 10)

	Outcome	To create a rainforest themed headdress.	Design and make Pandora's box – Purpose as a toy for an Ancient Greek Child.	To make a healthy cheesecake.
Yr 6	Topic	Crime and Punishment	Our Changing World	Moving On
	Pupils should be taught about	Computing (Cross-curricular project) Apply their understanding of computing to program, monitor and control their products.	Water Cycle, Volcanoes, Earthquakes... Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]	Using lessons from CHP- Cooking and nutrition (7) Food sources- where our food comes from. (2) Micronutrients- Make dips (4) Food and Mood- Good Mood party <ul style="list-style-type: none"> Understand and apply the principles of a healthy and varied diet. (CHP 2) Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. (CHP 2 & 4) Understand seasonality <u>and know where</u> and how <u>a variety of ingredients are grown</u>, reared, caught and processed. (CHP 7)
	Outcome	To create a maze game for a character to escape from.	To create a game using buzzers and motors.	To plan and prepare a good mood party.

<u>KS2 Pupils should be taught</u> <u>Design</u>	Y3 Use knowledge of a range of products to inform plans and designs. Talk about and disassemble products and describe their function. Use simple prototypes, labelled sketches and detailed instructions in plans and designs. Talk in depth about ideas, plans and reasons for choices.	Y4 Use research to develop design criteria that are fit for purpose. Disassemble products and describe in detail their functions. Use annotated sketches, cross-sectional, exploded diagrams and increasingly complex prototypes. Support discussions about ideas, plans and designs with relevant information.	Y5 Generate plans and designs based on research and ideas that take account of the users' views and the intended purpose. Produce detailed designs and plans using prototypes, commentary and diagrams that include accurate measurements. Link discussions about ideas, plans and designs to the investigation, disassembly and evaluation of a range of products describing in detail their parts and their function.	Y6 Clarify and justify plans, designs and ideas by drawing upon and using a range of relevant sources of information. Produce detailed designs and plans drawn to scale from a range of viewpoints, using pattern pieces and computer-aided design packages effectively. Discuss ways in which ideas, plans and designs are formed and modify to ensure that the design criteria are met effectively.
<u>Make</u>	Select materials and components according to known characteristics and functions. Select and use an increasing range of tools to cut, shape and join materials and components. Use a ruler to measure and mark lines for cutting. Make and use gluing tabs. Make simple paper models, mock-ups and templates. Select an appropriate way to improve the appearance of a product. Follow procedures for safety and hygiene.	Select from and use a wide range of materials and components according to both functional and aesthetic qualities. Select and use tools and equipment to measure, mark out and shape materials and components. I use a hack saw and bench hook safely. Insert paper fasteners for card linkages. Make increasingly complex paper models, mock-ups and templates. Select the most effective finish to enhance the	Select a range of appropriate tools to cut, shape and join materials and components effectively. Select and use tools and equipment to measure, mark out and shape materials and components accurately. Use a G clamp effectively. Join and combine materials and components in permanent and temporary ways. Make a range of complex paper models, mock-ups and templates. Produce a well-finished	Select a range of appropriate tools to cut, shape and join materials and components with accuracy and precision. Use an increasing range of tools and equipment to measure, mark out and shape materials and components accurately. Use a drill to make an off-center hole. Join and combine a range of materials and components using the most effective permanent and temporary way. Make and adapt where

		appearance of a product. Follow procedures for safety and hygiene.	product that fulfils the functional and aesthetic design criteria. Follow procedures for safety and hygiene.	necessary complex mock-ups and templates. Identify and apply an appropriate finishing technique to ensure a high quality end product which meeting the design criteria. Follow procedures for safety and hygiene.
<u>Evaluate</u>	Investigate and compare a range of similar existing products. Compare and contrast the similarities and differences of products with the same function. Evaluate ideas and products against design criteria; and suggest ways in which products can be improved.	Investigate and begin to analyse a range of existing products. Use knowledge of similarities and differences between products with the same function to support identification of most effective product. Evaluate ideas and products against own design criteria, taking into account the views of others.	Investigate and use analysis of existing products to inform own work. Identify from a range the key features and functions needed to create an effective and efficient working product. Give reasons, supported by factual evidence for the success of aspects of a product.	Use analysis of existing products supported by accurate factual information to inform own work. Test and evaluate products to identify the variants which <u>may affect the function of a product</u> . <u>Give reasons, supported by factual evidence for the success of aspects of a product and provide considered solutions to resolve those parts that could be improved.</u>
<u>Cooking and Nutrition</u>	As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.		To understand and apply the principles of a healthy and varied diet Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.	
<u>Sketch Book</u>	To use sketch books to record observations and use them to review and revisit ideas.		To use sketch books to record observations and use them to review and revisit ideas.	
<u>DT Resources</u>	To be ordered in advance (before term start) via coordinator.			