

KS2 Y34 D&T COVERAGE (**Move on from KS1 in bold**)

	Autumn	Spring	Summer
<b>DESIGN</b>			
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.	<p>Cycle 1 What a Wonderful World Seasonal food from around the world. Looking at sustainability/packaging. Make an alternative to sandwich. (KS1)</p> <p>Cycle 2 Greenhouse design and make linked to Arctic/Antartic project. Project work on plants in Science. Research product types and develop criteria for build.</p>	<p>Cycle 1 Ancient Egypt. Moving Story Books.</p> <p>Cycle 2 Textile project. Making re-usable shopping bags. Looking at use and user group.</p>	<p>Cycle 1 Make a Light Box linked to Science topic electricity. Develop design criteria.</p> <p>Cycle 2 The Romans Design and make a Trebuchet Catapult. Research Roman designs.</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>Cycle 1 Sketch packaging and product suggestions.</p> <p>Cycle 2 Greenhouse design and make linked to Arctic/Antartic project. Project work on plants in Science. Cross section work and computer-aided design.</p>	<p>Cycle 1 Ancient Egypt. Moving Story Books. Develop design through discussion and sketching. Use of templates and pattern pieces.</p> <p>Cycle 2 Textile project. Making re-usable shopping bags. Devising patterns and using sketch plans.</p>	<p>Cycle 1 Make a Light Box linked to Science topic electricity. Develop design through discussion and sketching. Cross section design, pattern pieces and prototype makes.</p> <p>Cycle 2 The Romans Design and make a Trebuchet Catapult. Exploded diagrams/prototypes. Developing design through discussion, trial and error.</p>
<b>MAKE</b>			
Select from and use a wider range of tools and equipment to perform practical tasks eg: example, cutting, shaping, joining and finishing accurately.	<p>Cycle 1 What a Wonderful World Seasonal food from around the world. Kitchen/cooking utensils.</p> <p>Cycle 2 Greenhouse design and make linked to Arctic/Antartic project. Project work on plants in Science. Creating wooden frame/woodworking tools.</p>	<p>Cycle 1 Ancient Egypt. Moving Story Books. Tools for cutting and shaping.</p> <p>Cycle 2 Textile project. Making re-usable shopping bags. Sewing and textile tools.</p>	<p>Cycle 1 Make a Light Box linked to Science topic electricity. Cutting tools. Methods of joining.</p> <p>Cycle 2 The Romans Design and make a Trebuchet Catapult. Tools for cutting and joining.</p>

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	Joining methods. Fixing for polythene sheeting etc.		
Select from and use a <b>wider</b> range of materials and components, including construction materials, textiles and ingredients, according to their <b>functional properties and aesthetic qualities</b> .	<p>Cycle 1 What a Wonderful World Seasonal food from around the world. Ingredient selection.</p> <p>Cycle 2 Greenhouse design and make linked to Arctic/Antartic project. Project work on plants in Science. Material choices based on functional properties.</p>	<p>Cycle 1 Ancient Egypt. Moving Story Books. Select materials for construction based on properties.</p> <p>Cycle 2 Textile project. Making re-usable shopping bags. Looking at properties of textiles and identifying suitable construction material.</p>	<p>Cycle 1 Make a Light Box linked to Science topic electricity. Selection of materials for construction.</p> <p>Cycle 2 The Romans Design and make a Trebuchet Catapult. Construction materials choice and analysis.</p>
<b>EVALUATE</b>			
<b>Investigate and analyse</b> a range of existing products.	<p>Cycle 1 What a Wonderful World Seasonal food from around the world. Existing alternatives to sandwiches. Look at packaging and materials.</p> <p>Cycle 2 Greenhouse design and make linked to Arctic/Antartic project. Project work on plants in Science. Looking at current products. Visit to Botanical Gardens.</p>	<p>Cycle 1 Ancient Egypt. Moving Story Books. Look at examples. How do moving parts function?</p> <p>Cycle 2 Textile project. Making re-usable shopping bags. Roadtesting existing products in order to develop criteria checklist.</p>	<p>Cycle 1 Make a Light Box linked to Science topic electricity. Look at examples of product and packaging.</p> <p>Cycle 2 The Romans Design and make a Trebuchet Catapult. Look at completed examples of catapults and identify key components.</p>
Evaluate their ideas and products against design criteria and <b>consider the views of others to improve their work</b> .	<p>Cycle 1 What a Wonderful World Seasonal food from around the world. Evaluate against simple checklist.</p> <p>Cycle 2 Greenhouse design and make linked to Arctic/Antartic project. Project work on plants in Science. Prototype work and design improvement through group discussion.</p>	<p>Cycle 1 Ancient Egypt. Moving Story Books. Develop design through discussion and feedback.</p> <p>Cycle 2 Textile project. Making re-usable shopping bags.</p>	<p>Cycle 1 Make a Light Box linked to Science topic electricity. Evaluate against simple criteria.</p>
<b>Understand how key events and individuals in design</b>	Cycle 2	Cycle 1 Ancient Egypt.	Cycle 1

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<b>and technology have helped shape the world.</b>	Greenhouse design and make linked to Arctic/Antartic project. Project work on plants in Science. Joseph Paxton and Crystal Palace.	Moving parts: The Shaduf. Develop design through discussion and sketching.  Cycle 2 Textile project. Making re-usable shopping bags. Brief history of the shopping bag.	Make a Light Box linked to Science topic electricity. Benjamin Franklin. Father of Electricity. Thomas Edison & The Light Bulb.
<b>TECHNICAL KNOWLEDGE</b>			
<b>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.</b>	Cycle 2 Greenhouse design and make linked to Arctic/Antartic project. Project work on plants in Science. How to strengthen/improve function of greenhouse.	Cycle 1 Ancient Egypt. Moving Story Books. Strengthening designs. Looking at durability.  Cycle 2 Textile project. Making re-usable shopping bags. Practical shopping tests and design for improvement.	Cycle 1 Make a Light Box linked to Science topic electricity. Improving joins and strengthening moving parts.  Cycle 2 The Romans Design and make a Trebuchet Catapult. Testing and improving stages.
<b>Understand and use mechanical systems in their products ( for example: gears, pulleys, cams, levers and linkages)</b>	Cycle 2 Greenhouse design and make linked to Arctic/Antartic project. Project work on plants in Science. Possibility of extending to computer controlled operation of windows/doors. Levers and linkages.	Cycle 1 Ancient Egypt. Moving Story Books. Pulleys, cams, levers and linkages.	Cycle 2 The Romans Design and make a Trebuchet Catapult. Pulleys, levers, cams and linkages.
<b>Understand and use electrical systems in their products (eg: series circuits incorporating switches, bulbs, buzzers and motors.)</b>			Cycle 1 Make a Light Box linked to Science topic electricity. Simple circuits with switches and bulbs.
<b>Apply their understanding of computing to program, monitor and control their products.</b>	Cycle 2 Greenhouse design and make linked to Arctic/Antartic project. Project work on plants in Science. Possibility of extending to computer controlled operation of windows/doors.		Cycle 1 Make a Light Box linked to Science topic electricity. Looking at programming to control the product.

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<b>COOKING AND NUTRITION</b>			
<b>Understand and apply the principles of a healthy and varied diet.</b>	Cycle 1 What a Wonderful World Seasonal food from around the world. Looking at healthy options.		
<b>Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.</b>	Cycle 1 What a Wonderful World Seasonal food from around the world. Variety of cooking techniques/savoury alternatives to sandwiches.		
<b>Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</b>	Cycle 1 What a Wonderful World Seasonal food from around the world. Concept of seasons/food availability etc.		