

YEAR 6

DIGITAL WORLD – NAVIGATING THE WORLD

	EYFS	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6
DESIGNING	<p>The three Prime ELGS of Communication and Language, PSED and Physical Development provide the foundations of which all other learning is built upon.</p> <p>Specific:</p> <p>Creating with Materials ELG</p> <p>Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form, and function.</p> <p>Share their creations, explaining the process they have used.</p> <p>People Culture and Communities ELG</p> <p>Describe their immediate environment using knowledge from observation, discussion, stories,</p>	<p>Use own ideas to design something</p> <p>Describe how their own idea works</p> <p>Design a product which moves</p> <p>Explain to someone else how they want to make their product</p> <p>Make a simple plan before making</p>	<p>Think of an idea and plan what to do next</p> <p>Explain why they have chosen specific criteria</p>	<p>Prove that a design meets a set criteria</p> <p>Design a product and make sure that it looks attractive</p> <p>Choose a material for both its suitability and its appearance</p>	<p>Use ideas from other people when designing</p> <p>Produce a plan and explain it</p> <p>Persevere and adapt when original ideas do not work</p> <p>Communicate ideas in a range of ways, including by sketches and drawings which are annotated</p>	<p>Come up with a range of ideas after collecting information from different sources</p> <p>Produce a detailed step-by-step plan</p> <p>Explain how a product will appeal to a specific audience</p> <p>Design a product that requires pulleys or gears</p>	<p>Use market research to inform plans and ideas</p> <p>Follow and refine original plans</p> <p>Justify planning in a convincing way</p> <p>Show that culture and society is considered in plans and designs</p>

	non-fiction texts, and maps.						
MAKING	<p>The three Prime ELGS of Communication and Language, PSED and Physical Development provide the foundations of which all other learning is built upon.</p> <p>Specific:</p> <p>Creating with Materials ELG</p> <p>Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form, and function.</p> <p>Share their creations, explaining the process they have used.</p>	<p>Use own ideas to make something</p> <p>Make a product which moves</p> <p>Choose appropriate resources and tools</p>	<p>Choose tools and materials and explain why they have chosen them</p> <p>Join materials and components in different ways</p> <p>Measure materials to use in a model or structure</p>	<p>Follow a step-by-step plan, choosing the right equipment and materials</p> <p>Select the most appropriate tools and techniques for a given task</p> <p>Make a product which uses both electrical and mechanical components</p> <p>Work accurately to measure, make cuts and make holes</p>	<p>Know which tools to use for a particular task and show knowledge of handling the tool</p> <p>Know which material is likely to give the best outcome</p> <p>Measure accurately</p>	<p>Use a range of tools and equipment competently</p> <p>Make a prototype before making a final version</p> <p>Make a product that relies on pulleys or gears</p>	<p>Know which tool to use for a specific practical task</p> <p>Know how to use any tool correctly and safely</p> <p>Know what each tool is used for</p> <p>Explain why a specific tool is best for specific action</p>
EVALUATING	<p>The three Prime ELGS of Communication and Language, PSED and Physical Development provide the foundations of which all other</p>	<p>Describe how something works</p> <p>Explain what works well and not so well in the model they have made</p>	<p>Explain what went well with their work</p>	<p>Explain how to improve a finished model</p> <p>Know why a model has or has not been successful</p>	<p>Evaluate and suggest improvements for designs</p> <p>Evaluate products for both their purpose and appearance</p>	<p>Suggest alternative plans; outlining the positive features and draw backs</p> <p>Evaluate appearance and</p>	<p>Know how to test and evaluate designed products</p> <p>Explain how products should be stored and give reasons</p>

	<p>learning is built upon.</p> <p>Specific:</p> <p>Creating with Materials ELG</p> <p>Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form, and function.</p> <p>Share their creations, explaining the process they have used.</p>				<p>Explain how the design has been improved</p> <p>Use IT where appropriate to add to the quality of the product</p>	<p>function against original criteria</p>	<p>Evaluate product against clear criteria</p>
<p>TECHNICAL KNOWLEDGE</p>		<p>Make their own model stronger</p> <p>Make a model stronger and more stable</p> <p>Use wheels and axles, when appropriate to do so</p>		<p>Know how to strengthen a product by stiffening a given part or reinforce a part of the structure</p> <p>Use a simple IT program within the design</p> <p>Know how to be hygienic and safe when using food</p> <p>Bring a creative element to the food product being designed</p>		<p>Link scientific knowledge to design by using pulleys or gears</p> <p>Use more complex IT program to help enhance the quality of the product produced</p> <p>Use electrical systems correctly and accurately to enhance a given product</p> <p>Know which IT product would enhance a specific product</p> <p>Use knowledge to improve a made product by strengthening, stiffening or reinforcing</p>	

FOOD TECHNOLOGY		<p>Cut food safely Weigh ingredients to use in a recipe</p> <p>Describe the ingredients used when making a dish or cake</p>	<p>Describe how food ingredients come together</p> <p>Weigh out ingredients and follow a given recipe to create a dish</p> <p>Talk about which food is healthy and which food is not Know when food is ready for harvesting Describe how food ingredients come together</p> <p>Weigh out ingredients and follow a given recipe to create a dish</p> <p>Talk about which food is healthy and which food is not</p> <p>Know when food is ready for harvesting</p>	<p>Be both hygienic and safe in the kitchen</p> <p>Know how to prepare a meal by collecting the ingredients in the first place</p> <p>Know which season various foods are available for harvesting Explain how food ingredients should be stored and give reasons</p> <p>Work within a budget to create a meal</p> <p>Understand the difference between a savoury dish and sweet dish.</p>
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COMPOSITES

DIGITAL WORLD – NAVIGATING THE WORLD

Design, create and evaluate a navigation tool

COMPONENTS

	1	2	3	4	5	End Point
	<p>How can I create a set of design criteria based upon a client's request?</p> <p>What is a design brief?</p> <p>CHECK IT WITH MATT AS PROGRAM MAY NEED CHANGING</p>	<p>How do you program a cardinal compass?</p> <p>What are the key functions of a program?</p> <p>CHECK IT WITH MATT AS PROGRAM MAY NEED CHANGING</p>	<p>What is a sustainable product concept?</p> <p>How can I use annotated sketches to show design and material use?</p> <p>CHECK IT WITH MATT AS PROGRAM MAY NEED CHANGING</p>	<p>How can I produce a virtual model?</p> <p>CHECK IT WITH MATT AS PROGRAM MAY NEED CHANGING</p>	<p>How can a present a client specific pitch?</p> <p>CHECK IT WITH MATT AS PROGRAM MAY NEED CHANGING</p>	<p>Children will be able create a design and virtual model based upon a client's request.</p> <p>Children will have explored a new IT program.</p> <p>Children will have designed a sustainable cover for the product.</p> <p>Children will have itched their idea to an adult.</p>
CONCEPTS	Design		Design	Design		Children will have used to consumers request to design a product
Link to concept map	Purpose	Purpose	Purpose		Purpose	Children will have used to consumers request to design a product.

	Influence and Impact		Influence and Impact		Influence and Impact	Children will have designed a sustainable resource
		Systems	Systems	Systems		Children will have explored IT tools
		Technique		Technique		Children will have used an IT program to create a virtual model
			Critical Thinking		Critical Thinking	Children will evaluate their design and reflect on peer feedback.
SKILLS		<p>Follow and refine original plans</p> <p>Show that culture and society is considered in plans and designs</p> <p>Evaluate product against clear criteria</p> <p>Use more complex IT program to help enhance the quality of the product produced</p> <p>Use electrical systems correctly and accurately to enhance a given product</p> <p>Know which IT product would enhance a specific product</p>	<p>Use market research to inform plans and ideas</p> <p>Justify planning in a convincing way</p> <p>Show that culture and society is considered in plans and designs</p>	<p>Use market research to inform plans and ideas</p> <p>Follow and refine original plans</p> <p>Justify planning in a convincing way</p> <p>Show that culture and society is considered in plans and designs</p> <p>Explain how products should be stored and give reasons</p> <p>Evaluate product against clear criteria</p> <p>Use electrical systems correctly and accurately to enhance a given product</p> <p>Know which IT product would enhance a specific product</p>	<p>Link scientific knowledge to design by using pulleys or gears</p> <p>Use more complex IT program to help enhance the quality of the product produced</p> <p>Use electrical systems correctly and accurately to enhance a given product</p> <p>Know which IT product would enhance a specific product</p> <p>Use knowledge to improve a made product by strengthening, stiffening or reinforcing</p>	<p>Children will have designed a product with a sustainable cover based upon a client's request.</p> <p>Children will have created a virtual model.</p> <p>Children will have Pitched their idea to an adult.</p>
KNOWLEDGE Z:\Hubs\Science and DT\DT\2023-2024\KAPOW\YEAR	Draw on a client's request to write a brief	Programming a cardinal compass	Designing a sustainable cover	Creating a virtual model	Pitch product to 'clients' based	Children will have designed a product with a sustainable cover based upon a client's request.

6DIGITAL WORLD - Navigating the World\Knowledge Organiser.pdf	Follow design criteria	Exploring a new IT Program			upon their initial request	<p>Children will have created a virtual model.</p> <p>Children will have Pitched their idea to an adult.</p>
LESSON LINK	KAPOW - DIGITAL WORLD – NAVIGATING THE WORLD	KAPOW - DIGITAL WORLD – NAVIGATING THE WORLD	KAPOW - DIGITAL WORLD – NAVIGATING THE WORLD	KAPOW - DIGITAL WORLD – NAVIGATING THE WORLD	KAPOW - DIGITAL WORLD – NAVIGATING THE WORLD	
PROGRESSIVE VOCABULARY	application (app) compass equipment navigation smart tablet client design criteria gps tracker pedometer smartphone	boolean duplicate if statement program variable copy function loop value	biodegradable corrode finite infinite materials non-recyclable product lifespan unsuitable design environmentally friendly functional properties lightweight mouldable lifecycle recyclable suitable	3 model cgi group opaque shape properties transparent virtual cad consumables manoeuvre replica tinkercad ungroup workplane	convince functional manufacture pitch feature investment model stock	Articulate and recognise subject specific vocabulary

CURRICULUM EXPERIENCES		Children using different IT tools		Children create a virtual model	Children to pitch to an adult in the school	
END POINT	Children will have created design criteria based upon a client's request	Children will have programmed a compass. Children will have explored a new IT program	Children will have designed a sustainable cover	Children will have created a virtual model	Children will have pitched their product based upon the client's requests	

