

Knowledge Organisers for the priority subject for each concept to be issued 2-3 weeks before the learning block is taught.

Metacognition: Metacognition can take many forms; it includes knowledge about when and how to use particular strategies for learning or problem-solving.

Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

The national curriculum for design and technology aims to ensure that all pupils:

- develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
- critique, evaluate and test their ideas and products and the work of others
- understand and apply the principles of nutrition and learn how to cook.

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study. This knowledge and skills organiser for design and technology demonstrates the progression through the year groups. It includes regular opportunities to revisit prior learning and build upon this.

Design and Technology	Term		Term		Term	
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS	3-4 years		Reception		Early Learning Goal (ELG)	
Knowledge	<p><u>Physical Development</u></p> <ul style="list-style-type: none"> • Choose the right resources to carry out their own plan. For example, choosing a spade to enlarge a small hole they dug with a trowel. <p><u>Expressive Arts and Design</u></p> <ul style="list-style-type: none"> ▪ Develop their own ideas and then decide which materials to use to express them. 		<p><u>Expressive Arts and Design</u></p> <ul style="list-style-type: none"> ▪ Return to and build on their previous learning, refining ideas and developing their ability to represent them. 		<p><u>Expressive Arts and Design</u></p> <p><u>Creating with materials</u></p> <ul style="list-style-type: none"> ▪ Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. ▪ Share their creations, explaining the process they have used. 	

Skill Progression	<ul style="list-style-type: none"> ▪ Understanding the World <ul style="list-style-type: none"> ▪ Explore collections of materials with similar and/or different properties. ▪ Expressive Arts and Design <ul style="list-style-type: none"> ▪ Explore different materials freely, in order to develop their ideas about how to use them and what to make. ▪ Join different materials and explore different textures. ▪ Create closed shapes with continuous lines, and begin to use these shapes to represent objects. 		<p>Physical Development</p> <ul style="list-style-type: none"> ▪ 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>Expressive Arts and Design</p> <ul style="list-style-type: none"> • Create collaboratively sharing ideas, resources and skills 		<p>Physical Development</p> <p>Fine Motor Skills</p> <ul style="list-style-type: none"> • Use a range of small tools, including scissors, paintbrushes and cutlery. 	
Meta Cognition						
Year 1	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Concept	Rebellion and Invasion	Natural elements	Civilisation	Environmental	Discoveries	Culture
Knowledge	<p>Technical knowledge: Structures (linked to the Great Fire of London – Tudor Houses) Revisit learning from EYFS Summer term</p> <ul style="list-style-type: none"> ▪ Talk about the simple working characteristics of materials. ▪ Explain how freestanding structures can be made 		<p>Technical knowledge: Structures/Mechanisms (linked to Kings, Queens and Castles – Castles and making a working drawbridge) Revisit learning from Year 1 Autumn 1</p> <ul style="list-style-type: none"> ▪ Explain how freestanding structures can be made stronger, stiffer and more stable. 		<p>Technical knowledge: Mechanisms (linked to Trains/Transport through time – wheels and axles) Revisit learning from Year 1 Spring 1</p> <ul style="list-style-type: none"> ▪ State what products they are designing and making. ▪ Talk about their design ideas and what they are making. 	<p>Make: Cooking and Nutrition (linked to Seaside: a healthy picnic) Revisit learning from EYFS Summer term</p> <ul style="list-style-type: none"> ▪ Say whether the products are for themselves or other users. ▪ Explain what products are, who products are for and what products are for.

	<i>stronger, stiffer and more stable.</i>		<ul style="list-style-type: none"> ▪ Know that a 3D textiles product can be assembled from two identical fabric shapes. ▪ Talk about the movement of simple mechanisms: lever and pulley) ▪ State what products they are designing and making. 		<ul style="list-style-type: none"> ▪ Talk about the movement of simple mechanisms: wheels and axles. 	<ul style="list-style-type: none"> ▪ Begin to recognise that all food comes from plants or animals. ▪ Begin to recognise that food has to be farmed, grown elsewhere or caught. ▪ Know that everyone should eat at least five portions of fruit and vegetables every day. ▪ Begin to know how to use techniques such as cutting, peeling and grating <p>Food from around the world</p>
Skill Progression	<p>Technical knowledge: Structures (linked to the Great Fire of London – Tudor Houses) <i>Revisit learning from EYFS Summer term</i></p> <ul style="list-style-type: none"> ▪ Select from a range of tools and equipment. 		<p>Technical knowledge: Structures/Mechanisms (linked to Kings, Queens and Castles – Castles and making a working drawbridge) <i>Revisit learning from Year 1 Autumn 1</i></p> <ul style="list-style-type: none"> ▪ Incorporate the movement of 		<p>Technical knowledge: Mechanisms (linked to Trains/Transport through time – wheels and axles) <i>Revisit learning from Year 1 Spring 1</i></p> <ul style="list-style-type: none"> ▪ Plan by suggesting what to do next. 	<p>Make: Cooking and Nutrition (linked to Seaside: a healthy picnic) <i>Revisit learning from EYFS Summer term</i></p> <ul style="list-style-type: none"> ▪ Generate ideas by drawing on their own experiences.

	<ul style="list-style-type: none"> Use materials and components to make a product. Begin to assemble, joining and combine materials and components. 		<p>simple mechanisms: lever and pulley) into their product.</p> <ul style="list-style-type: none"> Generate ideas by drawing on their own experiences. Plan by suggesting what to do next. Begin to use procedures for safety. 		<ul style="list-style-type: none"> Follow procedures for safety. Use materials and components to make a product. Assemble, join and combine materials and components. Incorporate the movement of simple mechanisms into their product: wheels and axles. 	<ul style="list-style-type: none"> Follow procedures for health and safety. Begin to name and sort food into the five groups in the eat-well plate. Begin to use techniques such as cutting, peeling and grating. <p>Food from around the world</p>
Meta Cognition						
Year 2	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Concept	Rebellion and Invasion	Natural elements	Civilisation	Environmental	Discoveries	Culture
Knowledge		<p>Make: Cooking and Nutrition (linked to Science – Nutrition for humans/Geography – The Galapagos Islands) Revisit learning from Year 1 Summer 2</p> <ul style="list-style-type: none"> Know that all food comes from plants or animals. 	<p>Make: Textiles (linked to Queen Victoria - crowns) Revisit learning from EYFS Summer term</p> <ul style="list-style-type: none"> Describe what their products are for. Use knowledge of existing products to help come up with ideas. Know that a 3D textiles product can 		<p>Technical knowledge: Mechanisms (linked to the Wright Brothers inventions) Revisit learning from Year 1 Summer 1</p> <ul style="list-style-type: none"> Say how their products will work. Explain safety procedures to others. 	

		<ul style="list-style-type: none"> Know that food has to be farmed, grown elsewhere or caught. Know that everyone should eat at least five portions of fruit and vegetables every day, suggesting different fruits and vegetables. Know how to prepare simple dishes safely and hygienically without using a heat source. Know how to use techniques such as cutting, peeling and grating <p>Food from around the world</p>	<p>be assembled from two identical fabric shapes.</p> <ul style="list-style-type: none"> Explain who products are for. Suggest what materials products are made from. <p>Crowns from different countries</p>		<ul style="list-style-type: none"> Explain how products work. Suggest what materials products are made from and suggest why materials have been chosen. Talk about the movement of simple mechanisms. Know the correct technical vocabulary for the products they are undertaking. 	
Skill Progression		<p>Make: Cooking and Nutrition (linked to Science – Nutrition for humans/Geography – The Galapagos Islands) Revisit learning from Year 1 Summer 2</p>	<p>Make: Textiles (linked to Queen Victoria - crowns) Revisit learning from EYFS Summer term</p> <ul style="list-style-type: none"> Working confidently with a range of contexts. 		<p>Technical knowledge: Mechanisms (linked to the Wright Brothers inventions) Revisit learning from Year 1 Summer 1</p>	

		<ul style="list-style-type: none"> ▪ Able to name and sort foods into the five groups in the eat-well plate. ▪ Prepare simple dishes safely and hygienically without using a heat source. ▪ Use techniques such as cutting, peeling and grating. ▪ Use a simple design criteria to help develop their ideas. ▪ Develop and communicate ideas by talking and drawing. ▪ Follow procedures for safety and hygiene. ▪ Use materials and components including food ingredients. ▪ Make simple judgements about their products and 	<ul style="list-style-type: none"> ▪ Use simple design criteria to help develop their ideas. ▪ Use knowledge of existing products to help come up with ideas. ▪ Develop and communicate ideas by talking and drawing. ▪ Select from a range of tools and equipment, explaining their choices. ▪ Follow procedures for safety. ▪ Measure, mark out, cut and shape materials. ▪ Assemble, join and combine materials. ▪ Use finishing techniques, including those from art and design. ▪ Make simple judgements about their products and ideas against design criteria. 		<ul style="list-style-type: none"> ▪ Work confidently within a range of contexts. ▪ Use simple design criteria to help develop their ideas. ▪ Model ideas by exploring materials, components and construction kits and by making templates and mock-ups. ▪ Develop and communicate ideas by talking and drawing. ▪ Select from a range of tools and equipment, explaining their choices. ▪ Confidently follow procedures for safety. ▪ With increasing accuracy, measure, mark out, cut and shape materials and components. ▪ With confidence, assemble, join 	
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		<i>ideas against design criteria.</i>	<ul style="list-style-type: none"> ▪ <i>Explain what they like and dislike about products.</i> 		<i>and combine materials and components.</i> <ul style="list-style-type: none"> ▪ <i>Suggest how their products could be improved based on the success criteria.</i> ▪ <i>Use the correct technical vocabulary for the products they are undertaking.</i> 	
Meta Cognition						
Year 3	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Concept	Rebellion and Invasion	Natural elements	Civilisation	Environmental	Discoveries	Culture
Knowledge		Technical knowledge: Mechanical systems (linked to Science – forces and magnets) <i>Revisit learning from Year 2 Summer 1</i> <ul style="list-style-type: none"> ▪ <i>Begin to describe the purpose of their products.</i> ▪ <i>Explain how particular parts of their products work.</i> ▪ <i>Investigate and analyse: why</i> 	Structures (linked to Ancient Egypt) <i>Revisit learning from Year 1 Spring 1</i> <ul style="list-style-type: none"> ▪ <i>Begin to explain their choice of tools and equipment in relation to the skills and techniques they will be using.</i> ▪ <i>Begin to explain their choice of materials and components according to functional</i> 			Cooking and Nutrition (linked to Science - plants) <i>Revisit learning from Year 2 Autumn 2</i> <ul style="list-style-type: none"> ▪ <i>Begin to know of chefs who have developed ground-breaking products.</i> ▪ <i>That food ingredients can be fresh, pre-cooked and processed.</i>

		<p><i>materials have been chosen, how well products achieve their purposes, whether products can be recycled or reused.</i></p> <ul style="list-style-type: none"> ▪ <i>How to use learning from science to help design and make products that work.</i> ▪ <i>How mechanical systems such as levers and linkages create movement.</i> ▪ <i>Begin to know of inventors who have developed ground-breaking products.</i> 	<p><i>properties and aesthetic qualities.</i></p> <ul style="list-style-type: none"> ▪ <i>Order the main stages of making.</i> ▪ <i>Investigate and analyse: how well products have been designed, how well products have been made, why materials have been chosen, how well products achieve their purposes, when products were designed and made.</i> ▪ <i>Begin to know of engineers who have developed ground-breaking products.</i> ▪ <i>How to use learning from mathematics to help design and make products that work.</i> ▪ <i>How to make strong, stiff shell structures.</i> 			<ul style="list-style-type: none"> ▪ <i>Is aware that a recipe can be adapted by adding or substituting one or more ingredients.</i> ▪ <i>That food is grown, reared and caught in the UK, Europe and the wider world.</i> ▪ <i>Begin to know how to prepare and cook a savoury dish safely and hygienically including, where appropriate, the use of a heat source.</i> ▪ <i>Start to know techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</i> ▪ <i>Is aware that a healthy diet is made up from a variety and</i>
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						<p><i>balance of different food and drinks, as depicted in the eat well plate.</i></p> <ul style="list-style-type: none"> ▪ <i>That to be active and healthy, food and drink are needed to provide energy for the body.</i>
Skill Progression		<p>Technical knowledge: Mechanical systems (linked to Science – forces and magnets) <i>Revisit learning from Year 2 Summer 1</i></p> <ul style="list-style-type: none"> ▪ <i>Work within a range of contexts.</i> ▪ <i>Share and clarify ideas through discussion.</i> ▪ <i>Use annotated sketches to develop and communicate their ideas.</i> ▪ <i>Select tools and equipment suitable for the task.</i> 	<p>Structures (linked to Ancient Egypt) <i>Revisit learning from Year 1 Spring 1</i></p> <ul style="list-style-type: none"> ▪ <i>Work within a range of contexts.</i> ▪ <i>Share and clarify ideas through discussion.</i> ▪ <i>Use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas.</i> ▪ <i>Select tools and equipment suitable for the task.</i> 			<p>Cooking and Nutrition (linked to Science - plants) <i>Revisit learning from Year 2 Autumn 2</i></p> <ul style="list-style-type: none"> ▪ <i>Work within a range of contexts.</i> ▪ <i>Share and clarify ideas through discussion.</i> ▪ <i>Follow procedures for safety and hygiene.</i> ▪ <i>Use a wider range of materials and components from KS1,</i>

		<ul style="list-style-type: none"> ▪ Select materials and components suitable for the task. ▪ Follow procedures for safety. ▪ Use a wider range of materials and components than KS1, including mechanical components. ▪ Measure, mark out, cut and share materials and components. ▪ Identify the strengths and areas for development in their products. ▪ Investigate and as levers and linkages create movement. 	<ul style="list-style-type: none"> ▪ Follow procedures for safety. ▪ Use a wider range of materials and components from KS1 including construction materials and textiles. ▪ Measure, mark out, cut and shape materials and components with some accuracy. ▪ Assemble, join and combine materials and components with some accuracy. ▪ Apply a range of finishing techniques. ▪ Refer to their design criteria as they design and make. ▪ Make strong, stiff shell structures. 			<p>including food ingredients.</p> <ul style="list-style-type: none"> ▪ Consider the views of others to improve their work. ▪ Use their design criteria to evaluate their completed products. ▪ Prepare and cook a savoury dish safely and hygienically including, where appropriate, the use of a heat source. ▪ Start to use techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. <p>Focus on traditional foods in Malaysia; Morocco; Mexico.</p>
Meta Cognition						
Year 4	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Concept	Rebellion and Invasion	Natural elements	Civilisation	Environmental	Discoveries	Culture

<p>Knowledge</p>	<p>Technical knowledge: electrical systems (linked to science – electricity) <i>Revisit learning from Year 3 Autumn 2</i></p> <ul style="list-style-type: none"> ▪ Describe the purpose of their products. ▪ Explain how particular parts of their products work. ▪ Explain their choice of tools and equipment in relation to the skills and techniques they will be using. ▪ Explain their choice of materials and components according to functional properties and aesthetic qualities. ▪ Investigate and analyse: how well products have been designed, how well products 		<p>Cooking and Nutrition (linked to the Roman Empire) <i>Revisit learning from Year 3 Summer 2</i></p> <ul style="list-style-type: none"> ▪ Investigate and analyse: who designed and made the products, where products were designed and made and when products were designed and made. ▪ Know chefs who have developed ground-breaking products. ▪ Know that a recipe can be adapted by adding or substituting one or more ingredients. ▪ Know that food is grown, reared and caught in the UK, Europe and the wider world. ▪ Know how to prepare and cook a variety of predominantly savoury dishes 		<p>Design and technical knowledge: computer aided design and programming (linked to Computing) <i>Revisit learning from Year 4 Autumn 1</i></p> <ul style="list-style-type: none"> ▪ Investigate and analyse: how well products have been designed, how well products achieve their purposes. ▪ Confidently talk about designers who have developed ground-breaking products. ▪ How to program a computer to control their products. 	
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	<p><i>have been made, why materials have been chosen, what methods of construction have been used, how well products work, how well products meet user needs and wants, who designed and made the products, whether products can be recycled or reused.</i></p> <ul style="list-style-type: none"> ▪ <i>Know inventors, engineers and manufacturers who have developed ground-breaking products.</i> ▪ <i>Know how to use learning from science to help and design and make products that work.</i> ▪ <i>Know that mechanical and</i> 		<p><i>safely and hygienically including, where appropriate, the use of a heat source.</i></p> <ul style="list-style-type: none"> ▪ <i>Know how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</i> ▪ <i>Know that a healthy diet is made up from a variety and balance of different food and drink, as depicted in the eat well plate.</i> ▪ <i>Can explain that to be active and healthy, food and drink are needed to provide energy for the body.</i> 			
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	<p><i>electrical systems have an input, process and output.</i></p> <ul style="list-style-type: none"> ▪ <i>Know how simple electrical circuits and components can be used to create functional products.</i> 					
Skill Progression	<p>Technical knowledge: electrical systems (linked to science – electricity) <i>Revisit learning from Year 3 Autumn 2</i></p> <ul style="list-style-type: none"> ▪ <i>Work confidently within a range of contexts.</i> ▪ <i>Describe the purpose of their products.</i> ▪ <i>Indicate the design features of their products that will appeal to intended users.</i> ▪ <i>Gather information about the needs and wants of particular</i> 		<p>Cooking and Nutrition (linked to the Roman Empire) <i>Revisit learning from Year 3 Summer 2</i></p> <ul style="list-style-type: none"> ▪ <i>Work confidently with a range of contexts.</i> ▪ <i>Make design decisions that take account of the availability of resources.</i> ▪ <i>Confidently order the main stages of making.</i> ▪ <i>Correctly follow procedures for safety and hygiene.</i> ▪ <i>Confidently use a wider range of materials and components than</i> 		<p>Design and technical knowledge: computer aided design and programming (linked to Computing) <i>Revisit learning from Year 4 Autumn 1</i></p> <ul style="list-style-type: none"> ▪ <i>Develop their own design criteria and use these to inform their ideas.</i> ▪ <i>Use computer aided design to develop and communicate ideas.</i> ▪ <i>Generate realistic ideas, focusing on the needs of the user.</i> ▪ <i>Consider the views of others,</i> 	

	<p><i>individuals and groups.</i></p> <ul style="list-style-type: none"> ▪ <i>Share and clarify ideas through discussion.</i> ▪ <i>Model their ideas using prototypes.</i> ▪ <i>Use annotated sketches, cross-sectional drawings to develop and communicate their ideas.</i> ▪ <i>Select tools and equipment suitable for the task.</i> ▪ <i>Select materials and components suitable for the task.</i> ▪ <i>Follow procedures for safety.</i> ▪ <i>Use a wider range of materials and components from KS1, including electrical components.</i> 		<p><i>KS1, including food ingredients.</i></p> <ul style="list-style-type: none"> ▪ <i>Refer to their design criteria as they design and make to inform the marking process.</i> ▪ <i>Prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source.</i> ▪ <i>Use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</i> <p>Food around the world</p>		<p><i>including intended users, to improve their work.</i></p> <ul style="list-style-type: none"> ▪ <i>Use their design criteria to evaluate their completed products considering the intended user.</i> 	
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	<ul style="list-style-type: none"> ▪ <i>With accuracy, measure, mark out, cut and shape materials and components.</i> ▪ <i>With accuracy, assemble, join and combine materials and components.</i> ▪ <i>Apply a range of finishing techniques.</i> ▪ <i>Identify the strengths and areas for development in their ideas and products.</i> ▪ <i>Refer to their design criteria as they design and make.</i> ▪ <i>Use their design criteria to evaluate their completed products.</i> ▪ <i>Use the correct technical vocabulary for the projects they are undertaking.</i> 					
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Meta Cognition							
Year 5	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2	
Concept	Rebellion and Invasion	Natural elements	Civilisation	Environmental	Discoveries	Culture	
Knowledge	<p>Make: Structures (linked to Vikings - making a Viking Ship) <i>Revisit learning from Year 3 Spring 1</i></p> <ul style="list-style-type: none"> Investigate and analyse: why materials have been chosen, what methods of construction have been used. Investigate different designers and engineers who have developed ground-breaking products. 	<p>Mechanical Systems (linked to Carbon Footprint) <i>Revisit learning from Year 3 Autumn 2</i></p> <ul style="list-style-type: none"> Think about how particular parts of their products work. Investigate and analyse: how well products have been designed, how well products have been made, why materials have been chosen, what methods of construction have been used, how well products work, how well products achieve their purposes. 		<p>Cooking and Nutrition (linked to Geography/Science) <i>Revisit learning from Year 4 Spring 1</i></p> <ul style="list-style-type: none"> Investigate and analyse: how well products meet user needs and wants. Investigate different chefs who have developed ground-breaking products. Know that seasons may affect the food available. Know how food is processed into ingredients that can be eaten. Know that recipes can be adapted to change the appearance, taste, texture and aroma. 			

		<ul style="list-style-type: none"> ▪ Investigate different inventors and engineers who have developed ground-breaking products. ▪ Know that mechanical systems have an input, process and output. ▪ Know the correct technical vocabulary for the projects they are undertaking. 		<ul style="list-style-type: none"> ▪ Know that different food and drink contain different substances. 		
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Skill Progression	<p>Make: Structures (linked to Vikings - Making a Viking Ship) <i>Revisit learning from Year 3 Spring 1</i></p> <ul style="list-style-type: none"> ▪ <i>Develop a simple design specification to guide their thinking.</i> ▪ <i>Share ideas through discussion.</i> ▪ <i>Begin to use annotated sketches, cross-sectional drawing and exploded diagrams and exploded diagrams to develop and communicate their ideas.</i> ▪ <i>Select tools and equipment suitable for the task.</i> ▪ <i>Select materials and components suitable for the task.</i> ▪ <i>Explain their choice of</i> 	<p>Mechanical Systems (linked to Carbon Footprint) <i>Revisit learning from Year 3 Autumn 2</i></p> <ul style="list-style-type: none"> ▪ <i>Describe the purpose of their products.</i> ▪ <i>Carry out research, using surveys, interview, questionnaires and web-based resources.</i> ▪ <i>Develop a simple design specification to guide their thinking.</i> ▪ <i>Share and clarify ideas through discussion.</i> ▪ <i>Model their ideas using prototypes.</i> ▪ <i>Generate ideas for products.</i> ▪ <i>Select tools and equipment suitable for the task.</i> ▪ <i>Follow procedures for safety.</i> 		<p>Cooking and Nutrition (linked to Geography/Science) <i>Revisit learning from Year 4 Spring 1</i></p> <ul style="list-style-type: none"> ▪ <i>Indicate the design features of their products that will appeal to intended users.</i> ▪ <i>Develop a simple design specification to guide their thinking.</i> ▪ <i>Formulate step-by-step plans as a guide to making.</i> ▪ <i>Accurately use a wider range of materials and components than KS1, including food ingredients.</i> ▪ <i>Consider the views of others, including intended users to improve their work.</i> ▪ <i>Begin to critically evaluate the quality of the design, manufacture and fitness for purpose</i> 		
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	<p><i>materials and components.</i></p> <ul style="list-style-type: none"> ▪ <i>Produce appropriate lists of tools, equipment and materials that they need.</i> ▪ <i>Follow procedures for safety.</i> ▪ <i>Accurately use a wider range of materials and components than KS1, including construction materials.</i> ▪ <i>Accurately measure, mark out, cut and shape materials and components.</i> ▪ <i>Accurately assemble, join and combine materials and components.</i> ▪ <i>Identify the strengths and areas for development in</i> 	<ul style="list-style-type: none"> ▪ <i>Accurately use a wider range of materials and components than KS1, including mechanical components.</i> ▪ <i>Demonstrate resourcefulness when tackling practical problems.</i> ▪ <i>Begin to critically evaluate the quality of their design, manufacture and fitness for the purpose of their product as they design and make.</i> ▪ <i>Use the correct technical vocabulary for the projects they are undertaking.</i> 		<p><i>of their products as they design and make.</i></p> <ul style="list-style-type: none"> ▪ <i>Adapt recipes to change the appearance, taste, texture or aroma.</i> <p>Food around the world</p>		
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	<p><i>their ideas and products.</i></p> <ul style="list-style-type: none">▪ <i>Evaluate their ideas and products against their original design specification.</i>					
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Meta cognition						
Year 6	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Concept	Rebellion and Invasion	Natural elements	Civilisation	Environmental	Discoveries	Culture
Knowledge		<p>Technical knowledge: Electrical systems (linked to Science - Electricity) Revisit learning from Year 4 Autumn 1</p> <ul style="list-style-type: none"> ▪ Explain how particular parts of their products work. ▪ Explain their choice of tools and equipment in relation to the skills and techniques they will be using. ▪ Explain their choice of materials and components according to their functional properties. ▪ Investigate and analyse: how well products have been 		<p>Design and Technical knowledge: Computing to Program (linked to Computing) Revisit learning from Year 4 Summer 1</p> <ul style="list-style-type: none"> ▪ Investigate and analyse: how well have products been designed, how well products achieve their purposes, how innovative products are, what impact products have beyond their intended purpose. 		<p>Cooking and Nutrition (linked to Science – Animals including humans) Revisit learning from Year 5 Spring 2</p> <ul style="list-style-type: none"> ▪ Understand that a recipe can be adapted by adding or substituting one or more ingredients. ▪ Recognise what foods are available in different seasons. ▪ Know how food is processed into ingredients that can be eaten or used in cooking. ▪ Know that recipes can be adapted to change the

		<p><i>designed, how well products have been made, why materials have been chosen, what methods of construction have been used, how well products work, how well products achieve their purposes, how much products cost to make.</i></p> <ul style="list-style-type: none"> ▪ <i>Independently explore inventor, engineers and manufacturers who have developed ground-breaking products.</i> ▪ <i>Know how more complex electrical circuits and components can be used to create functional products.</i> 				<p><i>appearance, taste, texture and aroma.</i></p> <ul style="list-style-type: none"> ▪ <i>Understand that different food and drink contain different substances – nutrients, water and fibre – that are needed for health.</i>
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Skill Progression		<p>Technical knowledge: Electrical systems (linked to Science - Electricity) <i>Revisit learning from Year 4 Autumn 1</i></p> <ul style="list-style-type: none"> ▪ Work confidently within a different context. ▪ Consider the design features of their products that will appeal to intended users. ▪ Explain how particular parts of their products work. ▪ Develop a design specification to guide their thinking. ▪ Use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas. 		<p>Design and Technical knowledge: Computing to Program (linked to Computing) <i>Revisit learning from Year 4 Summer 1</i></p> <ul style="list-style-type: none"> ▪ Work confidently within a different context. ▪ Indicate the design features of their products that will appeal to intended users. ▪ Consider the needs, wants, preferences and values of particular individuals and groups. ▪ Share and clarify ideas through discussion, taking on board the views of others. ▪ Use computer-aided design to develop and communicate their ideas. ▪ Generate innovative ideas. ▪ Consider the views of others, 		<p>Cooking and Nutrition (linked to Science – Animals including humans) <i>Revisit learning from Year 5 Spring 2</i></p> <ul style="list-style-type: none"> ▪ Working confidently within a range of contexts. ▪ Carry out in depth research, using surveys, interviews, questionnaires and web-based resources. ▪ Develop a design specification to guide their thinking. ▪ Formulate step-by-step plans as a guide to making for others to confidently follow. ▪ Follow procedures for safety and hygiene and supporting others to do so.
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Meta Cognition						