

	Declarative Knowledge	Procedural Knowledge (National Curriculum)				
		Designing	Making	Evaluating	Technical Knowledge	Cooking and Nutrition
<p>Year 1</p> <p>Mechanisms – Axels and wheels</p> <p>Prior link to science - Materials</p>	<ul style="list-style-type: none"> DT specific processes Wheel Axle Balance History linked to wheels and axles Examples of wheels and axles in all forms (Not just vehicles) 	<p>Understanding contexts, users and purpose</p> <ul style="list-style-type: none"> Work confidently within the context of imaginary story State the product they are making Describe what product is for Say how their product will work Say how product is suitable for intended user <p>Generating, developing, modelling and communication ideas</p> <ul style="list-style-type: none"> Generate ideas drawing on experiences Use knowledge of existing products Develop and communicate ideas by talking and drawing Model ideas by exploring materials, components and construction kits Use templates and mock-ups 	<p>Planning</p> <ul style="list-style-type: none"> Plan by suggesting what to do Select from a range of equipment – explaining choices <p>Practical skills and techniques</p> <ul style="list-style-type: none"> Follow safety procedures Use a range of materials / components including construction materials Investigate how freestanding structures can be made stronger, stiffer and more stable 	<p>Own ideas / product</p> <ul style="list-style-type: none"> Talk about their design Make a simple judgment against a given design criteria Suggest how they can improve it <p>Existing products:</p> <ul style="list-style-type: none"> Explore what products are and their use Explore materials the product is made from 	<ul style="list-style-type: none"> The movement of simple mechanisms: Wheels Axels Use the correct technical vocabulary for their project. 	
<p>Year 2</p> <p>Food and nutrition</p> <p>Linked to science – Biology</p>	<ul style="list-style-type: none"> Food hygiene Food processes and equipment Cutting terminology <p>Knowledge of healthy plate from science</p>	<p>Consolidation of Yr1 plus</p> <p>Understanding contexts, users and purpose</p> <ul style="list-style-type: none"> Work confidently in the context of serving their community. Say whether the product is for themselves or others <p>Generating, developing, modelling and communication ideas</p> <ul style="list-style-type: none"> Ideas drawn from own experiences 	<p>Consolidation of Yr1 plus</p> <p>Planning</p> <ul style="list-style-type: none"> Select from a range of cutting tools Select from a range of components according to their characteristics <p>Practical skills and techniques</p> <ul style="list-style-type: none"> Follow safety and hygiene procedures Cut products 	<p>Consolidation of Yr1 plus</p> <p>Own ideas / product</p> <ul style="list-style-type: none"> Talk about their design Make a simple judgment against a given design criteria Suggest how they can improve it <p>Existing products:</p> <ul style="list-style-type: none"> Explore what they like and dislike about products. 	<ul style="list-style-type: none"> Food is combined according to sensory characteristics 	<ul style="list-style-type: none"> Sort and classify food groups How to prepare food hygienically without a heat source Techniques of: Cutting Peelin Grating Correct knife / tool hold: Grip Pointer Rock Push Claw & Draw Slow and Sharp <p>https://www.eatyourbeets.com/kitchen-tips/7-tips-for-teaching-your-kids-how-to-use-a-knife/</p>

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<p>Year 3 Pneumatics</p> <p>LINKS: Science Forces Summer 2</p>	<ul style="list-style-type: none"> Pneumatics History of Pneumatics German physicist Otto James Watt Uses of Pneumatics DT vocabulary Tools required for a simple pneumatic 	<p>Understanding contexts, users and purpose</p> <ul style="list-style-type: none"> Describe the purpose of products Indicate the design features that will appeal to intended users Explain how parts work <p>Generating, developing, modelling and communication ideas</p> <ul style="list-style-type: none"> Share and clarify ideas through discussion 	<p>Planning</p> <ul style="list-style-type: none"> Select tools and equipment suitable for task Explain choice of tools and equipment in relation to skills and techniques they will be using Select materials and components suitable for task <p>Practical skills and techniques</p> <ul style="list-style-type: none"> Follow safety procedures Use mechanical components 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 including those from ART with some accuracy 	<p>Own ideas / product</p> <ul style="list-style-type: none"> Identify the strengths and areas for development in ideas and products Refer to their design criteria as they design and make Use their design criteria to evaluate their completed products <p>Existing products: Investigate and analyse:</p> <ul style="list-style-type: none"> How well products have been designed and made Why materials have been chosen Methods of construction 	<ul style="list-style-type: none"> That materials can be combined and mixed to create more useful characteristics Use correct technical vocabulary for projects they are undertaking How pneumatic systems create movement. 	<p>History Summer 2</p> <ul style="list-style-type: none"> 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.
<p>Year 4 Electrical systems – simple circuits and switches</p> <p>LINKS – Science Autumn 1</p>	<ul style="list-style-type: none"> Design criteria All declarative knowledge from yr4 Physics Electricity and Alessandro Volta Toggle switch Reed switch Secure connections Hand made switches Commercial switches Circuit symbols 	<p>Consolidation of Yr3 plus</p> <p>Understanding contexts, users and purpose</p> <ul style="list-style-type: none"> Gather information about needs and wants of particular individuals and groups Develop own design criteria and use these to inform ideas. <p>Generating, developing, modelling and communication ideas</p> <ul style="list-style-type: none"> Model ideas using prototypes. Use annotated sketches / exploded diagrams to develop and communicate ideas Generate realistic ideas focussing on the needs of the user Make design decisions that take account of the availability of resources 	<p>Consolidation of Yr3 plus</p> <p>Planning</p> <ul style="list-style-type: none"> Explain their choice of materials and components according to functional properties. <p>Practical skills and techniques</p> <p>Consolidation of all aspects</p>	<p>Consolidation of Yr3 plus</p> <p>Own ideas / product</p> <ul style="list-style-type: none"> Consider views of others including intended users to improve their work <p>Existing products: Investigate and analyse:</p> <p>Consolidation of all aspects</p>	<ul style="list-style-type: none"> Use learning from Science and maths to help design and make products that work. That materials have both functional properties and aesthetic qualities How simple electrical circuits and components can be used to create functional products. 	

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Year 5 Mechanical systems – Pulleys and gears	<ul style="list-style-type: none"> 6 simple machines identified by science and DT Pulley rotations Gear ratios Reversing switches Annotated diagram Exploded diagram 	<p>Understanding contexts, users and purpose</p> <ul style="list-style-type: none"> Describe the purpose of product Explain how particular parts work Develop a design specification to guide thinking <p>Generating, developing, modelling and communication ideas</p> <ul style="list-style-type: none"> Share and clarify ideas through discussion Model ideas using prototypes Use annotated sketches and exploded diagrams Make design decisions that take account availability of resources 	<p>Consolidation Yr4 Plus Planning</p> <ul style="list-style-type: none"> Select tools and equipment suitable for the task Explain choices made Produce an appropriate list of tools, equipment and tools Formulate a step by step plan as a guide to making <p>Practical skills and techniques</p> <ul style="list-style-type: none"> Use techniques that follow of number of steps 	<p>Consolidation Yr4 Plus Own ideas / product</p> <ul style="list-style-type: none"> Critically evaluate the quality of the design manufacture and fitness for purpose of their products as they design and make Evaluate their ideas and products against design specification 	<p>Consolidation of yr3 and 4</p> <ul style="list-style-type: none"> How mechanical systems such as cams or pulleys and gears create movement 	
Year 6 All DT knowledge		<p>Consolidation of Yr5 plus Understanding contexts, users and purpose</p> <ul style="list-style-type: none"> Carry out research and web based resources <p>Generating, developing, modelling and communication ideas</p> <ul style="list-style-type: none"> Share and clarify ideas through discussion Model ideas using prototypes Use annotated sketches and exploded diagrams Make design decisions that take account availability of resources 	<p>Consolidation of Yr4 / 5 plus Consolidation Yr4 Plus</p> <p>Practical skills and techniques</p> <ul style="list-style-type: none"> Demonstrate resourcefulness when tackling practical problems 	<p>Consolidation of Yr5 plus Existing products: Investigate and analyse:</p> <ul style="list-style-type: none"> Who designed and made the products Where, when and why products are made Whether products can be recycled or reused <p>Evaluation key events and individuals:</p> <ul style="list-style-type: none"> Inventors designers engineers 	<p>Consolidation of all DT</p>	<p>understand and apply the principles of a healthy and varied diet</p> <ul style="list-style-type: none"> <input type="checkbox"/> prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques <input type="checkbox"/> understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.