






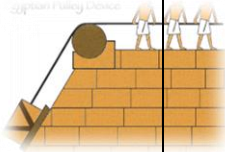



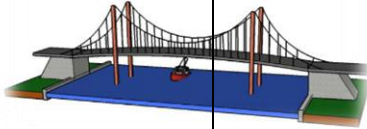














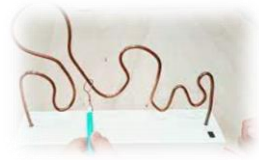




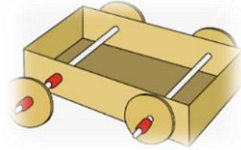




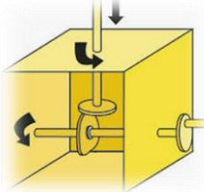

Conflict Autumn		Vocabulary	Technical Knowledge	Research	Design	Make	Evaluate
<b>KS1</b>  Materials	<b>How can we build a durable castle?</b>  	Durable Materials Safety/ly Tools Measure Mark Fold Tear Cut Curl	Know how to cut materials safely using tools.  Know how to measure and mark out to the nearest centimetre.  Know how to use a range of cutting, folding and joining techniques	Establish the necessary features of a castle  Research different models of castles  Discuss and agree the qualities a castle needs to be durable  <b>British Culture</b>	Design a castle that can withstand water, vibrations and wind  <b>Sustainability</b>	Make a product, refining the design as work progresses.  <b>Technological change</b>	Evaluate their design against a success criteria.  <b>Legacy</b>  
<b>LKS2</b>  Materials and Mechanics	<b>How can we honour the WW2 veterans?</b>  	Transfer (of forces) Forces Mechanisms Product Shape Join Finish (eg. the finish of a product) Function Appearance	Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product  How to use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].  How to use a wider range of materials according to their functional properties and aesthetic qualities.	Research, investigate and analyse a range of existing pop up cards.  	Design a product for a purpose and audience.  <b>Legacy</b>  <b>British Culture</b>  	Make a product by carefully selecting materials. Refine work and techniques as work progresses, continually evaluating the product design	Evaluate their product against the design criteria  <b>Sustainability</b>
<b>UKS2</b>  Materials and Mechanics	<b>How can we use mechanics to simplify manual labour?</b>	Convert Rotary motion Linear motion Cams Transference of forces Mechanisms Levers Winding mechanisms Pulleys Gears	Know how to convert rotary motion to linear using cams.  Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears).  How to use a wider range of tools and equipment to perform practical tasks [for example: cutting, shaping, joining and finishing] accurately.	Compare a range of simple mechanical stems used throughout history    <b>Technological change</b>  <b>Legacy</b>	Design with the user in mind, a functional product that is fit for purpose (a device to simplify manual labour)  Create a set of design criteria for a mechanical implement	Make a product through stages of prototypes, making continual refinements  	Evaluate their product against the set design criteria.

Planet Earth Spring		Vocabulary	Technical Knowledge	Research	Design	Make	Evaluate
KS1 <b>FOOD</b>	<b>What does a healthy meal look like to you?</b>	Cut Peel Grate Ingredients Safely Hygienic Healthy Varied diet Measure Weigh Electronic scales	Know how to cut, peel or grate ingredients safely and hygienically.  Know the basic principles of a healthy and varied diet to prepare dishes.  Know how to measure or weigh using measuring cups or electronic scales.	Identify a range of meals enjoyed by children  Discuss the healthy food groups  Sort meals/ ingredients into healthy and unhealthy groups	Design and plan a healthy meal  <b>British Culture</b>  <b>Sustainability</b>  	Make a meal by assembling or cooking ingredients.  Technological change	Evaluate their meal against a design criteria.
LKS2 <b>CONSTRUCTION</b>	<b>Can your design withstand a natural disaster?</b>  	Techniques (different) Construct Product Repair Strengthen Materials	Use suitable techniques to construct products Use suitable techniques to repair items. Know how to strengthen materials using suitable techniques.  	Research a range of bridges  Identify the features of bridges that make them strong	From research into bridges create a design criteria for your product  Design and make a prototype using research  Technological change  <b>Sustainability</b>	Make a product by carefully selecting materials	Evaluate their own and their peers' designs against a design criteria.  <b>Legacy</b>
UKS2 <b>FOOD</b>	<b>How does sustainability impact a human diet?</b>	Sustainable Microorganisms Ratios Scale Variety Processed Savoury Aesthetic Environmental Accurate Ingredients recipe.	Know where and how a variety of ingredients are grown, reared, caught and processed. Understand the importance of correct storage and handling of ingredients (using knowledge of microorganisms). Measure accurately and calculate ratios of ingredients to scale up or down from a recipe.  <b>Sustainability</b>	Understand what sustainability means in relation to food.  <b>Sustainability</b>  	Design a savoury dish with sustainable ingredients,  <b>Sustainability</b>	Make and refine a recipe for a sustainable savoury dish.  <b>Sustainability</b>  Technological change	Evaluate the savoury dish so as to suggest improvements to taste and aesthetic qualities.

Britain Summer		Vocabulary	Technical Knowledge	Research	Design	Make	Evaluate
KS1 Textiles	<b>What clothes would be fit for a Queen?</b>	Thread Needle Decorate Textiles Templates Stitch Running stitch Technique Purpose Join	Children know: how to shape textiles using templates. How to thread a needle. How to join textiles using running stitch. How to colour and decorate textiles using a number of techniques.	Research clothing items discussing designs and simple construction (The Queen's Knickers) <b>British Culture</b> 	<u>Design</u> clothing for a purpose and specific user. <b>Sustainability</b>	<u>Make</u> a product, refining the design as work progresses.	<u>Evaluate</u> their product against, a given design criteria. <b>Sustainability</b> Technological change <b>Equality</b> <b>Legacy</b>
LKS2 Textiles	<b>How would you commemorate the life of Edward VI?</b>	Join Textiles Stitching Running stitch Seam Seam allowance. Techniques Decorate	Children can independently thread a needle.  Children know how and when to use a range of basic stitches.  How to over-stitch to produce a finished cross-stitch.	Research contents of cross stitch kits and how instructions are used to support the user  Research the effectiveness and impact of simple designs	Design a Cross stitch kit for a purpose and with a specific audience in mind. <b>Sustainability</b> 	Make a product using all the elements of a Cross Stitch kit  Demonstrate a range of sewing techniques using a variation of stitches	Evaluate the quality of the design and the instructions giving reasons for success or the need for improvement
UKS2 Food	<b>What is a traditional British meal?</b>	Sustainable Microorganisms Ratios Scale Processed Savoury Aesthetic Environmental Accurate Calculate Ingredients Recipe Variety	Children know what sustainability means in relation to food. Children Understand the importance of correct storage and handling of ingredients Children measure accurately and calculate ratios of ingredients to scale up or down from a recipe. <b>British Culture</b> Technological change <b>Sustainability</b>	Children use their geographical knowledge to investigate how a variety of ingredients are grown, reared, caught and processed.  Children research meals from a range of cultures in Britain <b>British Culture</b> <b>Sustainability</b>	<u>Design</u> a savoury dish with consideration of sustainable ingredients.  Design a dish that reflects British traditions <b>Sustainability</b> <b>Equality</b>	<u>Make</u> and refine a recipe for a sustainable, savoury, traditional British dish. <b>Sustainability</b> <b>Equality</b> 	<u>Evaluate</u> the savoury dish so as to suggest improvements to taste and aesthetic qualities. <b>Sustainability</b> Technological change <b>Equality</b>

Autumn Humankind	Engages with debate	Vocabulary	Technical Knowledge	Research	Design	Make	Evaluate
KS1 Construction	What instrument would Mr Noisy play?	Drill Screw Glue Cut Nail Safely Strengthen Tools Product Designs User	Know how to drill, screw, glue and nail materials to make and strengthen products.  Know how to cut materials safely using tools. Technological change	Research a range of instruments recognising how volume can be changed Technological change	Design a product that has a clear purpose and an intended user.  	Make a product, refining the design as work progresses. Sustainability	Evaluate existing designs, saying what they like and dislike before designing their own. Sustainability
LKS2 Textiles	How can we use different stitches to create a map of Dunwich ?  	Join Textiles Stitching Running stitch Seam Seam allowance. Techniques Decorate	Know how to join textiles with appropriate stitching including a running stitch.  Know why it's important to leave a seam allowance.  How to select the most appropriate techniques to decorate textiles.	Research examples of embroidery stitches and maps  Research methods of joining material to create a seam (including use of machines)	Develop design criteria to inform the design of a functional, appealing product aimed at a particular individual or group.  British culture Legacy	Make a product by carefully selecting materials.  i.e. small embroidered panel on a cushion  Sustainability	Evaluate their own and their peers' designs against a design criteria.  
UKS2 Construction & Materials	What is the most effective way to save the islander?  	Aesthetic qualities Functional properties Innovative Durable Construction Materials Components shaping Joining Finishing Accurate	Develop a range of practical skills to create products (such as cutting, drilling and screwing, nailing, gluing, filing and sanding)  Choose suitable techniques to construct products or to repair items.  Know how to build models using a range of materials that can be manipulated.	Research a range of rafts built using a variety of materials Technological change Sustainability  	Design, with the user in mind, a functional product that is fit for purpose i.e build a raft for the "man" in <i>The Island</i>  Sustainability Technological change	Make a product that is effective for the purpose intended (i.e a raft that floats)  	Evaluate their own and their peers' designs against a design criteria and say how the design could be improved.

Spring Inventions	Engages with debate	Vocabulary	Technical Knowledge	Research	Design	Make	Evaluate
KS1 Electricity	How can electricity be used to help us?	Circuit Electricity Faults Batteries Design Wire Component	Know what a series circuit is.  Know that the cell or battery provides the power.  How to find faults in circuits and battery operated devices	Invent a battery powered product to help people in everyday life  	Design a functional product based on a design criteria.  Sustainability Technological change Equality	Make a product, selecting and using a range of materials and components.  	Evaluate their product against a design criteria.
LKS2 Electricity	How do toys use electricity to entertain children?  	Switches B buzzers Bulbs Motors Circuits Series circuit Parallel circuit Wires System Electricrical Disassemble	The difference between a series and parallel circuit.  How to use electrical systems in their products [such as switches, bulbs, buzzers and motors]  How to test if a circuit will work or not.	Research existing products with circuits by disassembling and investigating how they work.  Sustainability Technological change	Design their own product and circuit.  	Make a product including a circuit.  Sustainability Technological change Equality Legacy	Refine work and techniques as work progresses, continually evaluating the product design.  Sustainability Technological change Equality Legacy
UKS2	Why are torches all different shapes and sizes?	<u>Series circuit</u> <u>Parallel circuit</u> Symbols <u>Circuits</u> Components Exploded diagram Prototypes Continual refinements Electronic kits	Know how series and parallel circuits work.  Draw circuits in designs using the correct symbols.  Know to draw an exploded diagram.	Research a variety of torches and understand why they are constructed differently  	Design with the user in mind, a functional product that is fit for purpose I.e. a reading light that is compact or a general torch that is bright	Make a product through stages of prototypes, making continual refinements.  Sustainability Technological change Equality Legacy	Evaluate the design of products, to improve the user experience  

Summer Civilisations	Engages with debate	Vocabulary	Technical Knowledge	Research	Design	Make	Evaluate
<b>KS1</b> Mechanics	<b>How can we improve the speed of a vehicle?</b>	Levers Sliders Wheels Axles Mechanisms Design criteria Product	How to create products using mechanisms, such as levers, sliders, wheels, axles. 	Research a range of wheeled vehicles  Identify which what makes a vehicle fast and reliable <b>British Culture</b>	Design a product that has a clear purpose and an intended user.  <b>Sustainability</b> Technological change <b>Equality</b> <b>Legacy</b>	Make a product, refining the design as work progresses. 	Evaluate their product against a design criteria.  <b>Sustainability</b> Technological change <b>Equality</b> <b>Legacy</b>
<b>LKS2</b> Food	<b>Does where you live affect the foods you eat?</b> 	Seasonality Ingredients Processed Hygienic Utensils Recipes Reared Gram Accurate Assemble Temperature Oven Hob	Know how to prepare ingredients hygienically using appropriate utensils.  Know how to measure ingredients to the nearest gram accurately.  Know how to assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking).	Research where and how a variety of ingredients are grown, reared, caught and processed and understand seasonality <b>British Culture</b> 	Design a recipe using seasonal ingredients related to a specific country or region.  <b>Sustainability</b> Technological change <b>Equality</b> <b>Legacy</b>	Make a recipe using seasonal ingredients. 	Identify and evaluate existing seasonal recipes from around the world.  <b>Sustainability</b> Technological change <b>Equality</b> <b>Legacy</b>
<b>UKS2</b> Construction/ Materials	<b>What uses do cams and cranks have?</b> 	Aesthetic qualities Functional properties Innovative Durable Cams Cranks Moving element Construction Materials Components	How to strengthen materials using suitable techniques.  How to use a wider range of materials and components, including construction materials according to their functional properties and aesthetic qualities.	Research existing cam and crank products and toys.  <b>Sustainability</b> Technological change <b>Equality</b> <b>Legacy</b>	Design a product with a moving element. 	Make a product using innovative designs that use cams and cranks to create movement.  Refine the design as work progresses <b>Sustainability</b> Technological change <b>Equality</b> <b>Legacy</b>	Evaluate the design of the product in relation to movement and durability.  <b>Sustainability</b> Technological change <b>Equality</b> <b>Legacy</b>