



A.R.H. Curriculum Progression Document – Design and Technology.

Our school vision: Pupils will leave A.R.H. as happy, healthy and inspired young people who can confidently participate in the world as resilient, articulate citizens who have a life-long love of learning, creativity and discovery.

Our curriculum: Our curriculum is the vehicle to empower pupils with knowledge and skills. We strive to immerse young people in their topics which are designed to engage, provide real life links and progress all pupils' understanding.

'A.R.H. - Educating a community of life-long learners'

National Curriculum Aims – Design and Technology.			
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 range.	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.

Year 1	Twisted Tales	Inspirational Occupation	Best of Leicester	Weird and Wonderful Weather	Marvellous Makers	World Explorers	D&T Week
NC Objective	Previous knowledge	Questions, knowledge and skills	Date Covered	Vocabulary			
<p>Design</p> <ul style="list-style-type: none"> • Create simple designs for a product. <p><u>Activity for DT Week:</u> <u>Aeroplane</u></p>	<p>ELG Creating with Materials: Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p>	<p>Questions: Can you explain the design of your aeroplane?</p> <p>Skills: To create a simple design using pencils/pens. Draw on their own experiences to help generate ideas. Model their ideas on cards and paper.</p> <p>Knowledge: To understand what a simple design is. To understand what a product is.</p>		Simple Design Product			
<ul style="list-style-type: none"> • Use pictures and words to describe what he/she wants to do. 	<p>ELG Self Regulation: Set and work towards simple goals, being able to wait for what they want and control their immediate impulses when appropriate</p>	<p>Questions: Can you explain, using your design, how you are going to create your aeroplane?</p> <p>Skills: To be able to talk about their design. Suggest ideas and explain what they are going to do to improve their aeroplane.</p> <p>Knowledge: To understand what their product is and how it is going to be used.</p>					
<p><u>Make</u></p> <ul style="list-style-type: none"> • Use simple tools with help to prepare food safely. <p><u>Food to make:</u> <u>Food tumbler</u></p>	<p>ELG Creating with Materials: Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p>	<p>Questions: How can you use simple tools to make your fruit tumblers? E.g. small knives, forks, spoons. What simple tools have you used to prepare your fruit rumbler?</p> <p>Skills: Use simple tools such as a small knives, forks,</p>		Safely Food Tools Simple Prepare Small Knives Forks Spoons			

		<p>spoons safely. To know how to use simple equipment (see above) correctly.</p> <p>Knowledge: To understand how to be safe with simple tools, e.g. spoons/small knives/forks.</p>		
<ul style="list-style-type: none"> Select from and use a range of tools and equipment to perform practical tasks e.g. cutting and joining. 	<p>ELG Creating with Materials: Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p>	<p>Questions: How can you make an aeroplane and can you identify and explain why you have chosen certain tools?</p> <p>Skills: Make their design using appropriate techniques, e.g. cutting, tearing, joining. To join their work together using simple tools, e.g. cello tape / masking tape / pritt sticks. To use simple tools safely and correctly, e.g. scissors / glue / cello tape dispenser.</p> <p>Knowledge: To understand how to use a range of tools, e.g. scissors, glue, cello tape.</p>		<p>Cutting Tearing Joining Equipment Tools Gluing Taping Masking tape Cello tape</p>
<ul style="list-style-type: none"> Use a range of simple tools to cut, join and combine materials and components safely. 	<p>ELG Creating with Materials: Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p>	<p>Questions: How did you combine the materials and components safely in order to make an aeroplane?</p> <p>Skills: To use scissors, pritt stick, cello tape, masking tape safely to cut, join and combine materials safely. Cut materials safely using simple tools, e.g. scissors Join materials and components together using a variety of temporary methods, e.g. gluing and masking tape.</p> <p>Knowledge: Understand how to use simple tools to cut, join and combine materials with temporary methods.</p>		<p>Materials Components Join Cut Tools Glue Masking tape Cellotape Safely</p>

<p>Evaluate</p> <ul style="list-style-type: none"> Use structures exploring how they can be made stronger, stiffer and more stable. 	<p>ELG Creating with Materials: Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p>	<p>Questions: How can you make your aeroplane structure stronger/stiffer/more stable?</p> <p>Skills: To build structures using different materials, e.g. cardboard, paper, card, junk modelling. To change a structure to make it stronger. To use glue, cello tape to make a structure stronger.</p> <p>Knowledge: Understand the key vocabulary = stronger/stiffer and stable. To know how to use cardboard, paper, card and junk modelling materials to make their aeroplane stronger, stiffer and more stable.</p>	<p>Stronger Stiffer Stable Structure Cardboard Paper Card Junk modelling Materials</p>
<p>Technical Knowledge</p> <ul style="list-style-type: none"> Talk about what he/she eats at home and begin to discuss what healthy foods are. 	<p>ELG Managing Self: Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.</p>	<p>Questions: What types of food do you eat at home? What different types of healthy food do you know, e.g. fruit, such as apples, oranges, pears and vegetables, such as carrots / peas?</p> <p>Skills: To talk about which foods are healthy – fruit and vegetables. To discuss what types of food they eat at home. Select appropriate fruit and vegetables.</p> <p>Knowledge: To understand which foods are healthy – fruit and vegetables.</p>	<p>Healthy Food Home Vegetables Fruit Discuss</p>
<ul style="list-style-type: none"> Say where some foods come from and give examples of food that are grown 	<p>ELG Managing Self: Manage their own basic hygiene and personal needs, including dressing, going to the toilet</p>	<p>Questions: What types of fruit are grown in the ground in the UK? What types of fruit are grown in the ground outside of the UK?</p>	<p>Grown UK In the ground Bushes Fruit</p>

<p>underground.</p>	<p>and understanding the importance of healthy food choices.</p>	<p>Skills: To know that some types of fruit are grown in the ground. To know what types of fruit come from, either UK or outside of the UK.</p> <p>Knowledge: To understand where food that is grown come from. To understand what it means when food is grown.</p>	<p>Non UK Ground fruits Strawberries Raspberries Blackberries Blueberries Cherries Grapes</p> <p>Apricots – China Avocadoes- Mexico</p> <p>Website with examples of fruits that grow from the ground: Fruits that grow in the ground - Food Keg</p>
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Year 2	Captivating Capitals	Terrible Tudors	Food Glorious Food	Magnificent Materials	Into the woods	Tales From Around The World	D&T Week
NC Objective	Previous Knowledge	Questions, knowledge and skills	Date Covered	Vocabulary			
<p>Design</p> <ul style="list-style-type: none"> Design purposeful, functional, appealing products for themselves and others based on a design criteria. <p><u>Activity for DT Week:</u> <u>Making a cart using wheels and axles</u></p>	<p>ELG Creating with Materials: Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p> <p>Year 1- Creates simple designs for a product using pictures, pens and pencils- aeroplane / peg doll outfits.</p>	<p>Questions:</p> <p>Can you design a cart, using your design criteria? Can you explain how your cart, using wheels and axles, is purposeful and functional?</p> <p>Skills:</p> <p>Creativity Design products with a purpose and an intended user- based on their experiences.</p> <p>Knowledge:</p> <p>To understand a design criteria and whether a design has met this criteria. I know how to make adjustments to my design so that it fits with the criteria I have made. Understand the key vocabulary, e.g. purposeful, functional and appealing.</p>		<p>Purposeful Design Functional Appealing Product Criteria Cart Wheels Axles</p>			
<p>Make</p> <ul style="list-style-type: none"> Use a wider range of cookery techniques to prepare food safely. <p><u>Food to make:</u> <u>Pitta bread pizzas</u></p>	<p>ELG Managing Self: Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.</p> <p>Year 1- Using simple tools to prepare food safely- knives, forks, spoons.</p>	<p>Questions:</p> <p>How do you use techniques safely to make pitta bread pizzas? E.g. how do you safely use a cheese grater? How do you safely chop your vegetables?</p> <p>What techniques have you used safely to prepare your food? How do you know you have used them safely?</p> <p>Skills:</p> <p>To cut using sharp knives safely. To use a cheese grater safely. To spread using a knife, e.g. spreading tomato puree.</p>		<p>Techniques Cooking Food Safely Chopping Grating Chopping boards Slicing Spreading Knives Measure Weigh</p>			

		<p>Measure or weigh using measuring cups/digital scales to the nearest whole number.</p> <p>Knowledge: To understand different cookery techniques and how to safely use these techniques e.g. cutting, chopping, measuring, grating. Understand simple food hygiene, e.g. washing our hands before touching food / washing our equipment / using the right chopping board to chop the vegetables / cheese.</p>		
<ul style="list-style-type: none"> Choose appropriate tools, equipment, techniques and materials from a wide range, e.g. shaping and finishing. 	<p>ELG Creating with Materials: Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p> <p>Year 1- Select from and use a range of tools and equipment to perform practical tasks e.g. cutting and joining / tearing using pritt stick glue / cello tape / masking tape.</p> <p>Materials – card, cardboard,</p>	<p>Questions: How do you make a cart?</p> <p>What tools, equipment, techniques and materials have you used and why?</p> <hr/> <p>Skills: Begin to select tools and describe them using some correct vocabulary. To cut, join, shape and finish products.</p> <p>Knowledge: To understand what shaping and finishing means and different techniques they can use to do this, e.g. measuring / using simple slots for the wheels and axles / folding, curling</p>		<p>Tools Equipment Techniques Materials Appropriate Finishing Shaping Simple slots Measuring Folding Wheels Axles Junk modelling materials Cardboard curling</p>

	paper, junk modelling materials.			
<ul style="list-style-type: none"> Safely measure, mark out, cut and shape materials and components using a range of tools. 	<p>ELG Creating with Materials: Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p> <p>Year 1- Select from and use a range of tools and equipment to perform practical tasks e.g. cutting and joining.</p>	<p>Questions: How did you safely measure, mark out, cut and shape different materials and components to make a cart? E.g. using a ruler / scoring board and scissors.</p> <p>Skills: Measure and mark out to the nearest centimetre using a ruler. Measure, cut and score with some accuracy using a scoring board and scissors. Demonstrate a range of cutting and shaping techniques (cutting, tearing, folding, curling, gluing with PVA) with adult support, if needed.</p> <p>Knowledge: To understand a range of cutting and shaping techniques such as tearing, folding and curling. To understand measuring and CMs using a ruler. To know why accuracy in cutting and measuring is important to the structure and overall quality.</p>		<p>Safely Measure Mark out Cut Shape Components Tools Materials Scoring board Scissors Ruler Curling Cutting Tearing Folding Centimetres</p>
<p>Evaluate</p> <ul style="list-style-type: none"> Understand the need for a variety of food in a diet. 	<p>ELG Managing Self: Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.</p> <p>Year 1- Talk about what he/she eats at home and begin to</p>	<p>Questions: What is the importance of a varied diet when making pitta bread pizzas? What is a varied diet? Why do you need a varied diet?</p> <p>Skills: Be able to prepare and make a pitta bread pizza and explain how this shows a varied diet.</p> <p>Knowledge: Know that everyone should have 5 portions of fruit and vegetables and why. Know what foods you need in a varied diet.</p>		<p>Variety Varied Diet Food Balance diet</p>

	<p>discuss what healthy foods are- fruits and vegetables.</p>	<p>To understand what a varied diet means.</p>		
<ul style="list-style-type: none"> Evaluate and assess existing products and those that he/she has made using design criteria. 	<p>New objective.</p>	<p>Questions: Does your cart meet the design criteria you made? How?</p> <p>Skills: To evaluate their cart against their design criteria. Suggest improvements to their designs with teacher support. Evaluate their products as they are developed- identifying possible strengths and changes they might make.</p> <p>Knowledge: Understand how to evaluate and assess their product (cart). To understand what a design criteria is.</p>		<p>Evaluate Assess Product Design criteria Improve</p>
<ul style="list-style-type: none"> Investigate different techniques for stiffening a variety of materials and explore different methods of enabling structures to remain stable. 	<p>Year 1- Use structures exploring how they can be made stronger, stiffer and more stable when creating an aeroplane.</p>	<p>Questions: What method have you used to make your cart stable? What techniques have you used to stiffen your structure?</p> <p>Skills: To problem solve. To use techniques/methods including taping, using simple slots, gluing with PVA and stapling to ensure their cart remains stable.</p> <p>Knowledge: Understand how to use different techniques, e.g.</p>		<p>Structure Stable Stiffening Materials Investigate Techniques Enabling Stapling Gluing PVA glue Taping</p>

		gluing, taping, stapling.		
Technical Knowledge <ul style="list-style-type: none"> Understand where a range of food comes from. 	<p>Year 1- Say where some foods come from and give examples of fruit that are grown underground in the UK and outside the UK, e.g. berries / apricots / avocados.</p>	<p>Questions: Which types of vegetables are grown, either in the UK or outside the UK? Which types of fruit are grown, either in the UK or outside the UK?</p> <p>Skills: To identify and explain where key fruit and vegetables come from and how they are grown, e.g. underground / on a tree- see vocabulary.</p> <p>Knowledge: Understand that fruit and vegetables are grown, either underground, in the ground (bush/plant) or above ground (from a tree)</p> <p>Know which fruit and vegetables are grown underground, in the ground (bush/plant) or above ground (from a tree)</p> <p>To have a bank of ideas to show understanding of different places that common fruit and vegetables comes from.</p>		<p>Food Grown Fruit Vegetables Underground Trees Apples Carrots Beetroots Onions Potatoes Radishes Bananas Mangoes</p> <p>Website with some examples of fruits/vegetables that grow from the ground or on trees: Fruits that grow in the ground - Food Keg</p>
<ul style="list-style-type: none"> Generate, develop, model and communicate his/her ideas through drawing, templates, mock-ups and, where appropriate, information and communication technology. 	<p>Year 1- Use pictures and words to describe what he/she wants to do.</p>	<p>Questions: Can you explain your ideas of how to make a cart using your drawing, template or mock up? Can you share your ideas with your teachers by uploading them to seesaw?</p> <p>Skills: Develop their idea through discussion, observation, drawing and modelling. Make simple drawings and label parts.</p>		<p>Generate Develop Model Communication technology Ideas Design Drawing Templates Mock ups</p>

		<p>Communicating their ideas with their teachers through communication technology, e.g. seesaw.</p> <p>Knowledge: Know what a template/mock is and how they can use them. Understand how to communicate effectively about their design to their partner. Know how to use seesaw correctly and effectively to share their ideas with their teachers.</p>		Seesaw
<ul style="list-style-type: none"> Explore and use mechanisms, e.g. wheels and axles in his/her products. <p><u>Use the Lego wheels and axle set to support with exploring wheels and axles.</u></p>	New objective.	<p>Questions: Which mechanisms have you used, such as wheels and axles, and how? How do you use these mechanisms to make a cart?</p> <p>Skills: Create a cart using wheels and axles. Use these mechanisms, wheels and axles, safely and begin to show confidence.</p> <p>Knowledge: To understand what wheels and axles are and why and how these are used when making a cart.</p>		Mechanisms Explore Axles Wheels Product Cart Lego


Year 3	Awesome Oceans	Kapow!	Smashing Saxons	Rock 'n' Roll	Ancient China	The Wizarding World of Harry Potter	D&T Week
NC Objective	Previous Knowledge	Questions, knowledge and skills			Date Covered	Vocabulary	
<p>Design</p> <ul style="list-style-type: none"> Use knowledge of existing products to design his/her own functional product. <p><u>Activity for DT Week:</u> <u>Making a bat house</u></p>	<p>Year 2- Evaluate and assess existing products and those that he/she has made using design criteria with teacher support.</p>	<p>Questions: How do you make a bat cave? How have you used your existing knowledge of toy bat caves to ensure your bat cave is functional?</p> <p>Skills: Design bat cave with purpose using existing products to help, e.g. bat cave toys. Make products work effectively using their knowledge and understanding of existing products, e.g. bat cave toys. Identify a purpose and establish criteria for a successful product.</p> <p>Knowledge: Have a bank of existing toy bat caves and their functions in order to design their own, e.g. looking at toy bat caves / pictures of bat caves.</p>		<p>Knowledge Functional Product Bat cave toys</p>			
<ul style="list-style-type: none"> Create designs using annotated sketches, cross-sectional diagrams and simple computer programmes. 	<p>Year 1- create simple designs and talk about it using pictures they have drawn. Year 2- Generate, develop, model and communicate his/her ideas through drawing, templates, mock-ups and, where appropriate, information and communication</p>	<p>Questions: Can you explain how to make your bat cave, using your cross sectional diagram? What else have you used to design your bat cave? Which one did you prefer? Why? E.g. annotated sketch, cross sectional diagram or the simple computer programme (paint)</p> <p>Skills: Model designs using software (Paint.) Label their designs using correct vocabulary when making their annotated sketches and</p>		<p>Design Annotated sketches Cross-sectional Diagrams Computer Programmes Bat cave Paint</p>			


	technology, e.g. seesaw.	cross – sectional diagrams. Knowledge: To know what an annotated sketch and a cross-sectional diagram is. To know how to use simple computer programmes, e.g. paint.		
<ul style="list-style-type: none"> Make suitable choices from a wider range of tools and unfamiliar materials to plan out the main stages of using them. 	<p>Year 1- to use a range of simple tools, e.g. Glue Cello tape, masking tape, cutting, tearing, joining, cardboard, paper, card, junk modelling.</p> <p>Year 2- Choose appropriate tools, equipment, techniques and materials from a wide range – scoring, measuring, stapling, simple slots, finishing, folding, curling.</p>	<p>Questions: How do I make a bat cave? Why did you choose to use those tools? Can you show me how you used those tools? Why did you choose those materials to make your bat cave?</p> <p>Skills: Select appropriate tools based on their properties, e.g. glue gun, stapling Select appropriate materials and know how they are going to use them, e.g. lolly sticks, fabrics. To design a plan of how to use them accurately and safely. Plan the order of their work before starting.</p> <p>Knowledge: Understand how to use a range of tools safely, e.g. stapler, hot glue gun, cello tape dispenser</p> <p>To understand the purpose of the tools and how to use them.</p>		<p>Suitable Tools Materials Plan Stages Glue gun Stapler Lolly sticks Fabrics Cello tape dispenser</p>
<p>Make</p> <ul style="list-style-type: none"> Use a wider variety of ingredients and techniques to prepare and combine 	<p>Year 1- Use simple tools to prepare food, e.g. forks, small knives and spoons.</p> <p>Year 2- Use a wider range</p>	<p>Questions: How do I make fish cakes? What ingredients did you use in your fish cake? What techniques did you use to prepare those ingredients safely?</p>		<p>Ingredients Techniques Safely Cutting Slicing Peeling</p>

<p>ingredients safely.</p> <p><u>Food to make:</u> <u>Fish cakes</u></p>	<p>of cookery techniques to prepare food safely, e.g. knives, forks, spoons, cheese grater and chopping boards.</p>	<p>Skills: Prepare ingredients safely and hygienically. Know how to use techniques to prepare ingredients, e.g. cutting, slicing, peeling, chopping, grating, spreading and mixing independently. Combine ingredients together using these techniques.</p> <p>Knowledge: How to use a range of techniques to prepare ingredients for a fish cake, e.g. cutting, slicing, peeling, chopping, grating, spreading and mixing when making your fish cakes.</p>		<p>Chopping Grating Spreading Mixing Fish cakes</p>
<ul style="list-style-type: none"> Safely measure, make out, cut, assemble and join with some accuracy. 	<p>Year 1- use simple tools to cut, join and combine materials safely, e.g. cutting / gluing, tearing and joining. Year 2- Safely measure, mark out, cut and shape materials and components using a range of tools, e.g. cutting, gluing (PVA), simple slots and measuring, scoring using scissors and a scoring board.</p>	<p>Questions: Can you demonstrate how you measure, cut, assemble and join with some accuracy?</p> <p>Skills: Cut materials safely and with more accuracy by selecting appropriate tools, e.g. scoring knives / scissors. Select appropriate joining techniques, e.g. glue gun / stapler / cello tape.</p> <p>Knowledge: I can cut, assemble and join with some accuracy when making a bat cave.</p>		<p>Measure Cut Assemble Join Accuracy Safely Scoring board Scoring knives Scissors Glue gun Stapler Cello tape</p>
<ul style="list-style-type: none"> Strengthen frames using diagonal struts. 	<p>Year 1- Use structures exploring how they can be made stronger, stiffer and more stable. Year 2- investigate different techniques for</p>	<p>Questions: How have you used a diagonal strut to strengthen your bat cave's frame?</p> <p>Skills: To use a diagonal strut effectively when making a bat cave.</p>		<p>Strengthen Frame Diagonal strut Bat cave</p>

	stiffening, e.g. stapling.	<p>Knowledge:</p> <p>Understand what a diagonal strut is and how it can be used.</p> <p>Understand how to use a diagonal strut to strengthen a frame/structure.</p>		
<p>Evaluate</p> <ul style="list-style-type: none"> Investigate and analyse existing products and those he/she has made, considering a wide range of factors. 	<p>Year 2- Design purposeful, functional, appealing products for themselves and others based on a design criteria.</p>	<p>Questions:</p> <p>Using your knowledge of a wide range of factors can you analyse your product? E.g. your design criteria, knowledge of existing products (bat cave toys) and your annotated sketches.</p> <p>Skills:</p> <p>Consider a wide range of factors, e.g. audience (who is your bat cave for.. children/ adults?) and function of the product when making a bat cave.</p> <p>Knowledge:</p> <p>Understand a range of factors that could support / hinder their structure</p> <p>Understand why these factors might support/hinder their structure.</p>		<p>Investigate</p> <p>Analyse</p> <p>Factors</p> <p>Evaluate</p> <p>Improve</p> <p>Audience</p> <p>Function</p>
<p>Technical knowledge</p> <ul style="list-style-type: none"> Talk about the different food groups and name food from each group. 	<p>Year 1- looking at healthy foods that they eat – fruit and vegetables.</p> <p>Year 2- Understand the need for a variety of food in a diet.</p>	<p>Questions:</p> <p>Can you name a range of foods from each food group?</p> <p>Can you name the different food groups?</p> <p>Skills:</p> <p>Discuss foods from each group.</p> <p>Knowledge:</p> <p>Discuss the eat well plate and understand</p>		<p>Food groups</p> <p>carbohydrates,</p> <p>protein,</p> <p>fats,</p> <p>dairy,</p> <p>fruit and vegetables</p> <p>The eat well plate</p>

		<p>what this is and what it means.</p> <p>Name the five food groups.</p> <p>Know a range of food that is needed for a varied and balanced diet (previous knowledge from Year 2)</p>		
<ul style="list-style-type: none"> Understand that food has to be caught. 	<p>Year 1- understand that some fruit is grown under the ground both in the UK and outside the UK, e.g. berries/avocado/peaches.</p> <p>Year 2- understand that fruit and vegetables are grown, e.g. underground/on a tree, both in the UK and outside the UK, e.g. apples/onions/carrots.</p>	<p>Questions:</p> <p>Can you explain which types of food are caught? E.g. fish is caught from the sea.</p> <p>Skills:</p> <p>Demonstrate their understanding that food, such as fish, is caught.</p> <p>Knowledge:</p> <p>Understand that fish is caught in order to be eaten.</p>		<p>Food</p> <p>Grown</p> <p>Caught</p> <p>Europe</p> <p>World</p> <p>Fish</p> <p>Sea</p>
<ul style="list-style-type: none"> Understand how mechanical systems such as levers and linkages or pneumatic systems create movement. <p>See the below link for the expectation of how to make/use levers and linkages: Levers and Linkages - YouTube</p>	<p>Year 2- Explore and use mechanisms, e.g. wheels and axles, to make a cart.</p>	<p>Questions:</p> <p>Can you demonstrate, either verbally or using an annotated sketch, how a mechanical system using levers and linkages creates movement?</p> <p>Skills:</p> <p>Use scientific knowledge of forces to explain how mechanical systems create movement.</p> <p>To use a lever and linkage to create movement using <u>a minimum of 3 parts- see link on the left for expectations.</u></p> <p>Knowledge:</p> <p>To understand what a lever/linkages or pneumatic system is and how this creates movement.</p>		<p>Mechanical systems</p> <p>Levers</p> <p>Linkages</p> <p>Movement</p> <p>Split pins</p>

Year 4	Rockin' Rainforest	Willy Wonkas wonderful world of chocolate	Rotten Romans	Groovy Greeks	Whodunnit?	Around the world	D&T Week
NC Objective	Previous knowledge	Questions, knowledge and skills			Date Covered	Vocabulary	
<p>Design</p> <ul style="list-style-type: none"> Use knowledge of existing products to design a functional and appealing product for a particular purpose and audience. <p><u>Alastair Humphreys- Blogger</u></p> <p><u>Activity for DT Week:</u> <u>Raft house for a rainforest</u></p>	<p>Year 3- Use knowledge of existing products, (bat cave toys) to design his/her own functional product to make a bat cave.</p>	<p>Questions: How do you make a raft house for the rainforest? How have you designed your product so that it is functional and appealing to a particular audience and purpose? (e.g. people who live on a raft house)</p> <p>Skills: Generate a raft house, considering the purposes/audience they are designing for. Know what a raft house is and its purpose.</p> <div data-bbox="860 786 1072 948" style="text-align: center;">  </div> <p style="text-align: center;">Example of expectation of a raft</p> <p>Knowledge: Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, based on their knowledge. Understand their target audience- people who live in a raft house. Use their knowledge of real life rafts to design their own raft including a bottom and a roof.</p>				<p>Functional Appealing Purpose Audience Raft house</p>	
<ul style="list-style-type: none"> Create designs using exploded diagrams. 	<p>Year 2- Create designs using annotated sketches, cross-sectional diagrams and simple computer programmes-</p>	<p>Questions: Can you explain your design of a raft house using an exploded diagram?</p> <p>Skills: Make labelled drawings, labelling specific parts. To use an exploded diagram effectively.</p> <p>Knowledge: Understand what an exploded diagram is.</p>				<p>Exploded diagrams Designs Raft house</p>	

	<p>Paint.</p> <p>Year 3- Understand how to use mechanical systems such as levels, linkages or pneumatic systems create movements- use split pins.</p>	<p>Understand how to use an exploded diagram to create their raft house.</p>		
<p>Make</p> <ul style="list-style-type: none"> Use techniques which require more accuracy to cut, shape, join and finish his/her work e.g. cutting internal shapes, slots into frameworks. <p>Linked to the art progression map- Groovy Geeks</p>	<p>Year 2- Safely measure, mark out, cut and shape materials and components using a range of tools- stapler, wheels and axles, simple slots, scissors, ruler, scoring boards.</p> <p>Materials – Cardboard, junk modelling,</p> <p>Year 3- Safely measure, make out, cut, assemble and join with some accuracy-</p>	<p>Questions:</p> <p>How can internal shapes be used within your raft house to build the roof?</p> <p>How can you use a raft house using slotted cardboard? See example of how to use slots in your raft house framework</p> 		<p>Techniques</p> <p>Accuracy</p> <p>Cut</p> <p>Shape</p> <p>Join finish</p> <p>Internal shapes</p> <p>Framework</p> <p>Slots</p> <p>Scoring</p> <p>Scoring board</p> <p>Scoring knife</p>
<p>Skills:</p> <p>To use internal shapes to build your raft house.</p> <p>To use slots in cardboard to build your raft house</p> <p>Join and combine materials accurately to make your raft house.</p> <p>Scoring for the slots using scoring knives and boards.</p> <p>Knowledge:</p> <p>Understand how to use internal shapes that slot</p>				

	<p>stapler, hot glue gun and cello tape dispenser.</p> <p>Materials- lolly sticks / fabrics.</p>	<p>into frameworks and what these are.</p> <p>Understand what accuracy means.</p>		
<ul style="list-style-type: none"> Apply techniques he/she has learnt to strengthen structures and explore his/her own ideas. <p>Linked to the art progression map- Groovy Geeks</p>	<p>Year 1- Use structure explore how they can be made stronger, stiffer and more stable when making an aeroplane</p> <p>Year 2- Investigate different techniques for stiffening when making a cart- stapling.</p> <p>Year 3- Strengthen frames using diagonal struts when making a bat cave.</p>	<p>Questions:</p> <p>How can you strengthen your structure?</p> <p>Can you experiment using different techniques to make your structure stronger?</p> <hr/> <p>Skills:</p> <p>Understand how to use internal shapes and slotted frameworks (see previous objective) to make your raft house strong.</p> <p>Apply previously learnt techniques from Year 1-3, e.g. diagonal struts to help strengthen your raft house.</p> <hr/> <p>Knowledge:</p> <p>Use their previous knowledge of diagonal struts to strengthen a structure.</p> <p>Use their knowledge and understanding of slotted frameworks and internal shapes.</p>		<p>Techniques</p> <p>Strengthen Structures</p> <p>Diagonal struts</p> <p>Slotted frameworks</p> <p>Internal shapes</p>
<p>Evaluate</p> <ul style="list-style-type: none"> Consider how existing products and his/her own finished products might be improved and how well they meet the needs of the 	<p>Year 2- evaluate and assess products they have made.</p> <p>Year 3- Investigate</p>	<p>Questions:</p> <p>How can your raft house be improved to meet the needs of the intended user? (people who live on a raft house?)</p> <hr/> <p>Skills:</p> <p>Evaluate their product both during and at the end with support from their peers.</p>		<p>Products</p> <p>Existing</p> <p>Improved</p> <p>Needs</p> <p>Intended user</p>

intended user.	and analyse products	<p>Consider the view of others (intended user) to improve their raft house. Resilience to improve their own work.</p> <p>Knowledge: Understand a range of existing products, e.g. pictures of real life raft houses. Understand who their intended user is – people who live on a raft house.</p>		
<p>Technical Knowledge</p> <ul style="list-style-type: none"> Understand what makes a healthy and balanced diet and that different foods and drinks provide different substances the body needs to be healthy and active. 	<p>Year 1- begins to discuss healthy foods. Year 2- understand the need for a varied diet. Year 3- talk about different food groups – learn about the eat well plate and name a food from each group.</p>	<p>Questions: What substances do different foods and drinks provide the body with, in order for it to healthy and active?</p> <p>Skills: Use their knowledge of the eat well plate to understand what makes a healthy and balance diet</p> <p>Knowledge: Understand food and drink supply the body with a range of substances and nutrients the body needs, e.g. energy, nutrients, vitamins, calcium, healthy strong bones, fibre. Understand the impact of the different food groups, e.g. carbohydrates give you energy.</p>		<p>Healthy Balanced Diet Foods Drinks Substances Healthy Active Water Fibre Nutrients Eat well plate Energy</p>
<ul style="list-style-type: none"> Understand seasonality and the advantages of eating seasonal and locally produced food. 	<p>Year 1- understand that some fruits are grown underground. (UK and non UK) Year 2- understand fruit and</p>	<p>Questions: What different foods can you get during different seasons? What are the advantages of eating locally produced foods?</p> <p>Skills: To be able to discuss with a group of peers the different foods available in the different seasons. To be able to answer questions on the importance</p>		<p>Seasonality Local Food</p>

<ul style="list-style-type: none"> Understand how a variety of ingredients are grown, caught and reared. 	<p>vegetables are grown underground or on a tree (UK and non UK) Year 3- understand how food is caught – such as fish.</p> <p>Year 1- understand that some fruits are grown underground. (UK and non UK) Year 2- understand fruit and vegetables are grown underground or on a tree (UK and non UK) Year 3- understand how food is caught – such as fish.</p>	<p>of eating seasonally.</p> <p>Knowledge: Understand key vocabulary, e.g. seasonality Know that seasons may affect the food available.</p> <p>Questions: What types of food are reared? E.g. milk and eggs. When making an omelette which ingredients are reared?</p> <p>Skills: To understand what reared means</p> <p>Knowledge: To know that some foods are reared, e.g. eggs and milk. To use eggs and milk to make an omelette. Recap their previous knowledge of foods that are grown and caught, e.g. fish.</p>		<p>Reared Milk Eggs Omelette</p>
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<ul style="list-style-type: none"> Read and follow recipes which involve several processes, skills and techniques. <p><u>Food to make:</u> <u>Omelette</u></p>	<p>New objective- following a recipe.</p> <p>Year 1- make fruit rumblers</p> <p>Year 2- pitta bread pizzas</p> <p>Year 3- fish cakes</p>	<p>Questions: Can you follow a recipe using different processes, skills and techniques to make an omelette? E.g. whisking, stirring, mixing, combining, pouring.</p> <p>Skills: To follow a recipe accurately</p> <p>Knowledge: Know what a recipe is and how to follow one. To know why it is important to read a recipe carefully and follow all of the instructions.</p>		<p>Recipe Ingredients Method Techniques Equipment Processes Skills Techniques Stirring Mixing Combining Whisking Pouring.</p>
<ul style="list-style-type: none"> Use his/her knowledge of techniques and the functional and aesthetic qualities of a wide range of materials to plan how to use them. 	<p>Year 1- combine materials safely- cardboard, junk modelling, card, paper.</p> <p>Year 2- Choose a range of materials- cardboard, junk modelling, card, paper.</p> <p>Year 2-</p> <p>Year 3- make suitable choices of</p>	<p>Questions: Can you distinguish between different materials and techniques, that you are going to use to make your raft house, based on their functional and aesthetic qualities?</p> <p>Skills: To be able to use different materials and techniques with increasing accuracy.</p> <p>Knowledge: Understand what functional and aesthetic qualities are and how to use materials to create this. Know that materials have both functional properties and aesthetic qualities.</p>		<p>Techniques Functional Aesthetic Qualities Materials Plan</p>

	tools and materials and plan the main stages of using them- lollysticks, fabrics, split pins. Using a stapler, hot glue gun and cello tape dispenser.			
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Year 5	Ancient Egypt	Invaders and Traders	Narnia	Wonders of the Universe	Human Body	Innovative inventions	D&T Week
NC Objective	Previous Knowledge	Questions, knowledge and skills		Date Covered	Vocabulary		
<p>Design</p> <ul style="list-style-type: none"> Produce step by step plans to guide his/her making, demonstrating, that he/she can apply his/her knowledge of different materials, tools and techniques. <p><u>Activity for DT Week:</u> <u>Witches Sledge</u></p>	<p>Year 1- use pictures and words to make simple designs using cutting, tearing, joining (pritt stick and cello tape/masking tape). Using cardboard, paper, card and junk modelling,</p> <p>Year 2- use templates, mock ups and information/communication technology- e.g. seesaw. Using measuring, stapling, simple slots, finishing, folding, curling with junk modelling and cardboard. Tools used are scoring boards, scissors, rulers, wheels and axles.</p> <p>Year 3- create designs using annotated sketches, cross sectional diagrams and simple computer programmes, e.g. paint. Using lolly sticks and fabric, stapler, hot glue gun and cello tape dispenser. They also use levers and linkages and diagonal struts.</p> <p>Year 4- use exploded diagrams for their raft house. They used slots in</p>	<p>Questions:</p> <p>Can you create a step by step plan, independently, using your previous knowledge of different materials, tools and techniques to make a witches sledge? (see previous knowledge)</p> <p>Can you justify why you have chosen those materials, tools and techniques?</p> <hr/> <p>Skills:</p> <p>Generate ideas through brainstorming. Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggest alternative methods.</p> <p>Formulate step by step plans in order to create.</p> <p>Knowledge:</p> <p>Use their previous knowledge of tools, materials and techniques to produce a step by step guide to make a witches sledge independently.</p> <p>Understand how to brainstorm</p>			<p>Plans</p> <p>Demonstrating</p> <p>Knowledge</p> <p>Applying</p> <p>Materials</p> <p>Tools</p> <p>Techniques</p> <p>Justification</p>		

	framework s and internal shapes. The tools they used were scoring boards and scoring knives.			
Make <ul style="list-style-type: none"> Create prototypes to show his/her ideas. 	New objective.	Questions: Can you create a prototype your witches sledge and explain what a prototype is and why these are useful?		Prototypes Ideas
		Skills: Develop prototypes. Model their ideas using prototypes.		
<ul style="list-style-type: none"> Make careful and precise measurements so that joins, holes and openings are in exactly the right place. 	Year 1- cut and join using arrange of techniques, e.g. cutting, tearing and joining using pritt stick, cello tape and masking tape, to make aeroplanes and peg dolls. Year 2- measure, mark out cut and shape to make a cart using wheels and axles using PVA glue, scoring boards and scissors. Year 3- measure, make out, cut, assemble and join with some accuracy to make a bat cave using stapler, hot glue gun, cello tape dispenser. Year 4- use techniques that require more accuracy, e.g. cutting internal shapes to slot into the framework to	Questions: How can you ensure that you make precise and careful measurements using a ruler (cm or mm’s) or a protractor?		Careful Precise Measurements Joins Openings Holes Accuracy CM MM Protractor Ruler
		Skills: Measure and mark out accurately. Use mathematical knowledge.		
		Knowledge: Understand what a prototype is, their use and importance.		
		Knowledge: Understand key vocabulary to ensure the joins and holes are accurate and precise Learn how to make accurate and precise measurements- link to maths. Use mathematical knowledge of measuring.		

	make a raft house using scoring boards and scoring knives.			
<ul style="list-style-type: none"> Build more complex 3D structures and apply his/her knowledge of strengthening techniques to make them stronger or more stable. 	<p>Year 1- explore how to make structures stronger, stiffer and more stable.</p> <p>Year 2- investigate different techniques for stiffening</p> <p>Year 3- use diagonal struts to strengthen.</p> <p>Year 4- using internal shapes and slotted frameworks.</p>	<p>Questions:</p> <p>Can you assemble a 3D structure using your previous knowledge of strengthening techniques? (see previous knowledge)</p> <p>Can you justify why you used those strengthening techniques to make your product stronger or more stable?</p>		<p>3D structures</p> <p>Build</p> <p>Strengthening Techniques</p> <p>Stronger</p> <p>Stable</p>
		<p>Skills:</p> <p>Build 3D structure that is strong and stable. Know how to reinforce and strengthen a 3D structure.</p> <p>Knowledge:</p> <p>To know what a 3D structure is and what strengthening techniques would be the most appropriate.</p>		
<p>Evaluate</p> <ul style="list-style-type: none"> Make detailed evaluations about existing products and his/her own considering the views of others to improve his/her work. 	<p>Year 2- evaluate and assess their own products and others when making a cart.</p> <p>Year 3- investigate and analyse their own and others products considering a wide range of factors when making a bat cave.</p> <p>Year 4- think about how their products and others can be improved and how well they meet the needs of the intended user when making a raft house.</p>	<p>Questions:</p> <p>Can you critique existing products, such as other sledges, considering the views of your peers? (peer evaluation)</p> <p>How can you use this critique to improve your witches sledge?</p>		<p>Evaluations</p> <p>Products</p> <p>Improve</p> <p>Detailed</p> <p>Views</p>
	<p>Skills:</p> <p>Evaluate their work and seek evaluation from their peers.</p> <p>Critically evaluate the design, manufacture and fitness for purpose.</p> <p>Think about the views of others, from their peer evaluations, in more detail and how they can use these views to improve their product.</p> <p>Knowledge:</p>			

		Understand who their target audience is Understand how to evaluate and criticise a product, existing or their own, effectively.		
Technical Knowledge <ul style="list-style-type: none"> Understand the main food groups and the different nutrients that are important for health. 	<p>Year 1- begin to discuss healthy foods that they eat at home fruit and vegetables.</p> <p>Year 2 – Look at a variety of fruit and vegetables and what is needed for a varied diet.</p> <p>Year 3- talk about the different food groups and the eat well plate – name food from each food group.</p> <p>Year 4- understand what makes a healthy balanced diet and what different substances provide us with, e.g. knowing that carbohydrates give us energy.</p>	<p>Questions: Can you use your knowledge of the main food groups to evaluate someone’s diet and suggest improvements?</p> <p>Skills: Use their knowledge of the food groups. Understand and name a range of nutrients that are needed for a healthy diet. Be able to evaluate confidently and suggest improvements. Being able to provide construct feedback.</p> <p>Knowledge: Use their previous knowledge to name the main food groups Understand what nutrients are and why they are important Understand what the main nutrients are and what they give us, e.g. protein, vitamins, calcium. Understand how to give feedback when evaluating.</p>		<p>Nutrients</p> <p>Food groups</p> <p>Health</p> <p>Lifestyle</p> <p>Eat Well Plate</p> <p>Vitamins</p> <p>Protein</p> <p>Calcium</p>
<ul style="list-style-type: none"> Understand how a variety of ingredients are grown, reared, and caught to make them safe and palatable/tasty to eat. 	<p>Year 1- say where some fruits come from and give examples of foods that are grown from the ground.</p> <p>Year 2- understand that fruit and vegetables can be grown either underground or in a tree.</p> <p>Year 3- look at how some foods are caught, e.g. fish.</p> <p>Year 4- understand</p>	<p>Questions: Can you explain how some ingredients are grown? E.g. wheat and corn. How are corn and wheat made safe and tasty to eat? –link to making bread.</p> <p>Skills: To understand that corn and wheat are grown to make bread.</p> <p>Knowledge:</p>		<p>Ingredients</p> <p>Grown</p> <p>Reared</p> <p>Caught</p> <p>Processed</p> <p>Safe</p> <p>Palatable</p> <p>Tasty</p> <p>Wheat</p> <p>Corn</p>

	seasonality and eating locally produced foods.	Understand how a variety of ingredients are grown, reared and caught. Understand key vocab, e.g. palatable. Grown, caught, and reared. Understand the process of food being grown, caught or reared to getting to the shop floor to be sold- bread.		
<ul style="list-style-type: none"> Select appropriate ingredients and use a wide range of techniques to combine them. <p><u>Food to make:</u> <u>Bread</u></p>	<p>Year 1- spoons, forks, knives to make fruit tumblers.</p> <p>Year 2- use a wide range of cookery techniques, e.g. cut, grate, measure, to make pitta pizza breads.</p> <p>Year 3- use a wider range of ingredients and techniques to prepare and combine ingredients, e.g. Cutting, slicing, peeling, chopping, grating, spreading to make fish cakes.</p> <p>Year 4- read and follow recipes to make an omelette using techniques such as whisking, stirring, mixing, combining, pouring.</p>	<p>Questions: How do you make bread? E.g. yeast. What cooking techniques have you used to make bread? E.g. kneading, baking.</p> <p>Skills: Demonstrate of a range of cooking techniques that you have learnt from previous year and also new techniques such as kneading and baking. Select appropriate ingredients. Select appropriate techniques, independently, to combine ingredients together based on prior and new techniques learnt.</p> <p>Knowledge: Use previous knowledge of techniques and select the most appropriate. To understand how to knead and bake bread. Understand why yeast is needed when making bread.</p>		<p>Ingredients</p> <p>Techniques</p> <p>Bread</p> <p>Kneading</p> <p>Baking</p> <p>Yeast</p>
<ul style="list-style-type: none"> Use his/her research into existing products and his/her market research to 	Year 3- use knowledge of existing products (bat cave toys) to design their own functional production-	<p>Questions: How can market research be useful when designing a witch's sledge? What did you find from your market</p>		<p>Research</p> <p>Market research</p> <p>Design</p> <p>Innovative</p>

inform the design of his/her product	making a bat cave.	research?				Products			
	needs of the intended user-making rafts houses for people who live on raft houses. Look at existing pictures of real life raft houses.	<p>Skills: Use results of research when developing design ideas to make an innovative product. Know how to conduct market research Use market research effectively</p> <p>Knowledge: Understand what market research is and how to conduct market research Know what innovative means.</p>			<ul style="list-style-type: none"> Understand how to use more complex mechanical and electrical systems. <p><u>Activity:</u> <u>Robots – building robots using instructions.</u> <u>See Wayne for the robots-</u></p>	<p>Year 2 – wheels and axles to make a cart. Year 3- Using levers and linkages (minimum of 3 parts) to make a moving product with split pins.</p>	<p>Questions: How did you build your robot?</p> <p>Skills: Use more complex mechanical and electrical systems, e.g. making a light bulb work using a simple electrical system. Following instructions to build a mechanical robot (mechanical system)</p> <p>Knowledge: Know how to mechanical and electrical systems accurately and safely. Know how much complex systems can be used to create functional products. Know how to read and follow instructions.</p>		<p>Complex Mechanical Electrical Systems Instructions</p>

Year 6	Vile Victorians <u>Main D&T Week for YR 6</u>	Extinct?	Voyages	Amazing Australia	Over The Top	Survival!	Whole school - D&T Week <u>Sewing Slippers</u>
NC Objective	Previous Knowledge	Questions, knowledge and skills			Date Covered	Vocabulary	
<p>Design</p> <ul style="list-style-type: none"> Generate, develop, model and communicate his/her ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer aided designs. <p><u>Activity for DT Week: Using the little bits / BBC micro bits to make a Victorian Street</u></p> <p><u>Tinkercad</u></p> <p><u>Can also be covered as an extra in summer 2 when Sewing slippers</u></p>	<p>Year 1- use pictures and words to make simple designs</p> <p>Year 2- use templates, mock ups and information/communication technology, e.g. seesaw.</p> <p>Year 3- create designs using annotated sketches, cross sectional diagrams and simple computer programmes - Paint.</p> <p>Year 4- use exploded diagrams.</p> <p>Year 5- produce step by step guide using previous knowledge from years 1-4.</p>	<p>Questions:</p> <p>Can you design and develop your slippers (and) your Victorian street and communicate your ideas through a discussion, annotated sketches, cross-sectional, exploded diagrams, prototypes, pattern pieces?</p> <p>Can you use a computer aided design (Tinkercad app) to design your Victorian street?</p>		<p>Discussion</p> <p>Annotated sketches</p> <p>Cross-sectional</p> <p>Exploded diagrams</p> <p>Prototypes</p> <p>Pattern pieces</p> <p>Computer aided design</p> <p>Designs</p> <p>Develop</p> <p>Tinkercad app</p>			
<p>Make</p> <ul style="list-style-type: none"> Research, plan and prepare and cook a savoury dish, 	<p>Year 1-. Use simple tools with help to prepare food safely. They use spoons, small knives and forks to make food tumblers.</p>	<p>Questions:</p> <p>Can you research, plan, prepare and cook a savoury dish, without a given recipe? E.g. soup.</p> <p>What ingredients and skills have you used?</p>		<p>Research</p> <p>Plan</p> <p>Prepare</p> <p>Cook</p> <p>Savoury dish</p>			

<p>applying his/her knowledge of ingredients and his/her technical skills.</p> <p><u>Food activity:</u> <u>Soup</u></p>	<p>Year 2- Use a wider range of cookery techniques to prepare food safely. They make pitta bread pizzas using chopping, grating, spreading, slicing, measuring.</p> <p>Year 3- Use a wider variety of ingredients and techniques to prepare and combine ingredients safely to make fish cakes. They use techniques such as cutting, slicing, peeling, chopping, grating, spreading and mixing</p> <p>Year 4- Read and follow recipes which involve several processes, skills and techniques to make an omelette. They use techniques such as whisking, stirring, mixing, combining, pouring.</p> <p>Year 5- Select appropriate ingredients and use a wide range of previously learnt techniques to combine them to make bread. They learn about kneading and baking.</p>	<p>Why?</p> <hr/> <p>Skills: How to prepare and cook a variety of savoury dishes safely and hygienically- soup. Use research to plan savoury dishes</p> <p>Knowledge: To be able to research, plan and cook a savoury dish (soup). To use their previous knowledge from other year groups to choose ingredients and technical skills they have learnt.</p>		<p>Ingredients Technical skills Soup</p>
<ul style="list-style-type: none"> • Use a wide range of methods to strengthen, stiffen 	<p>Year 1- explore how to make structures stronger, stiffer and more stable when making an aeroplane.</p>	<p>Questions: How can you ensure your Victorian Street (and) slippers are strong? How did you use these methods accurately?</p>		<p>Methods Strengthen Stiffen Reinforce</p>

<p>and reinforce complex structures and can use them accurately and appropriately.</p>	<p>Year 2- investigate different techniques for stiffening, e.g. using stapling when making their cart Year 3- use diagonal struts when making their bat cave. Year 4- Use internal shapes and slotted frameworks to strengthen their raft house. Year 5- strengthen/stiffen and make complex 3D structures more stable when making their witches sledge.</p>	<p>E.g. diagonal struts / internal shapes / slots/ wood/ glue gun.</p> <p>Skills: Select appropriate methods and demonstrate a range of methods to strengthen, stiffen and reinforce a more complex structure. Demonstrate using these methods accurately.</p> <p>Knowledge: Use previous knowledge to strengthen structures with increasing accuracy and precision To use a saw to cut wood To use a glue gun to hold the wood together</p>		<p>Structures Complex Accurately Appropriately Diagonal struts Internal shapes Slots Framework Saw Wood Glue gun</p>
<p>Evaluate</p> <ul style="list-style-type: none"> Use his/her knowledge of famous designs to further explain the effectiveness of existing products and products he/she has made. <p><u>Websites to use for pictures:</u> <u>Friends of New Walk</u> <u>New Walk- Story of Leicester</u></p>	<p>Year 3- use knowledge of existing products to design their own functional product. They looked at bat cave toys to design their own bat cave. Year 4- consider how others and their own product can be improved to meet the needs of the intended user. They look at pictures of real life raft houses. Year 5- Look at real life sledges and how they can use this research to design their own sledge.</p>	<p>Questions: Using your knowledge of famous designs of Victorian houses/street, can you make an effective replication?</p> <p>Skills: Use google maps to look at New Walk Street in Leicester at the Victorian style houses. Evaluate their Victorian streets based on the designs you have looked at on google maps.</p> <p>Knowledge: To understand the effectiveness of these designs To know how to use google maps effectively. To know how to use their knowledge of Victorian streets/houses to make their own effective Victorian street.</p>		<p>Effective Products Evaluate Improve Victorian street Designs Google maps</p>
<p>Technical knowledge</p>	<p>Year 1- Talk about what he/she eats at home and</p>	<p>Questions: How do you plan a series of meals to ensure</p>		<p>Plan Healthy</p>

<ul style="list-style-type: none"> Confidently plan a series of healthy meals based on the principles of a healthy and varied diet. 	<p>begin to discuss what healthy foods are.</p> <p>Year 2- Understand the need for a variety of food in a diet- fruit and vegetables.</p> <p>Year 3- Talk about the different food groups and name food from each group.</p> <p>Year 4- Understand what makes a healthy and balanced diet and that different foods and drinks provide different substances the body needs to be healthy and active, e.g. carbohydrates give us energy.</p> <p>Year 5- Understand the main food groups and the different nutrients that are important for health, e.g. protein, calcium.</p>	<p>a healthy and varied diet? How is your dish part of a healthy and varied diet?</p> <hr/> <p>Skills: Create and refine recipes, including healthy seasonal ingredients, methods, cooking times and temperatures. Plan a range of healthy meals, based on a healthy balanced diet.</p> <p>Knowledge: Know how to plan a range of healthy meals, e.g. a week's worth of meals. Understand the eat well plate and what we need for a varied and balanced diet.</p>		<p>Meals Principles Varied Diet Eat well plate</p>
<ul style="list-style-type: none"> Use information on food labels to inform choices. 	<p>Year 2- Understand the need for a variety of food in a diet- fruit and vegetables.</p> <p>Year 3- Talk about the different food groups and name food from each group.</p> <p>Year 4 - Understand what makes a healthy and balanced diet and that different foods and drinks provide different</p>	<p>Questions: How can you use the information on a food label to make informed choices?</p> <hr/> <p>Skills: To use the information on food labels to decide where the product would fit (or not fit) within a varied healthy diet. Children to be able to explain their opinion to others across the class.</p> <p>Knowledge: To understand what food labels are and</p>		<p>Food Labels Choices Ingredients</p>

<ul style="list-style-type: none"> Understand how a variety of ingredients are grown, reared, and caught and processed. 	<p>substances the body needs to be healthy and active, e.g. carbohydrates give us energy.</p> <p>Year 5- Understand the main food groups and the different nutrients that are important for health, e.g. calcium, protein.</p> <p>Year 1- fruit that is grown underground</p> <p>Year 1- fruit and vegetables that are grown underground and on a tree.</p> <p>Year 3- foods that are caught, e.g. fish.</p> <p>Year 4- food that are reared- milk/eggs – omelette</p> <p>Year 5- food that are grown- wheat/corn- bread</p>	<p>what information they contain</p> <p>Read and understand food labels.</p> <p>Question: Can you say which foods are processed? E.g. ready meals / tinned soups.</p> <p>Skills: Understand how foods are processed.</p> <p>Knowledge: To understand that some foods are processed and how these are processed, e.g. soup / ready meals, ready for the shop floor. To understand how soup in a tin is processed/made. Know what processed means.</p>		<p>Processed Soup Ready meals</p>
<ul style="list-style-type: none"> Use research he/she has done into famous designers and inventors to inform the design of his/her own innovative products. <p><u>Use google maps to look at New Walk Street in Leicester.</u> <u>And</u></p>	<p><u>Taken from the art progression map and the designers/artists they look at from YR 1- YR 5:</u></p> <p>Year 1 - John Tenniel, CoCo Chanel, Monet, Yakovlev and Barma</p> <p>Year 2- Claude Oscar Monnet, Giuseppe Arcimboldo, Vincent Van Gough</p> <p>Year 3- Winslow Homer,</p>	<p>Questions: Can you use this research to design your own Victorian Street?</p> <p>Skills: To understand how to research To design an innovative and good quality product (Victorian street) based on research, such as google map pictures.</p> <p>Knowledge: Know what a Victorian street looks like and</p>		<p>Research Famous designers Inventors Innovative Products Google maps.</p>

<p><u>Websites to use for pictures:</u> <u>Friends of New Walk</u> <u>New Walk- Story of Leicester</u></p>	<p>Chris Sprouse, Auguste Rodin, Jim Kay Year 4- Megan Coyle, Andy Warhol Versuvius, Year 5- Ron McComb, Picasso</p> <p>Year 2- Evaluate and assess <u>existing products</u> and those that he/she has made using design criteria. Year 3- Investigate and analyse <u>existing products</u> (bat cave toys) and those he/she has made, considering a wide range of factors. Year 4 - Use knowledge of <u>existing products (pictures of real life raft houses)</u> to design a functional and appealing product for a particular purpose and audience. Year 5- Use his/her research into <u>existing products (real life sledges)</u> and his/her market research to inform the design of his/her innovative product.</p>	<p>the main features and how to use this knowledge to make their own Victorian street.</p>		
<ul style="list-style-type: none"> Apply his/her knowledge of materials/textiles and techniques to 	<p>Year 1- use pictures and words to make simple designs to make an aeroplane.</p>	<p>Questions: Can you use self-can you think about how you refined and reworked your slippers to improve its functional properties?</p>		<p>Materials Techniques Refine Rework</p>

<p>refine and rework his/her product to improve its functional properties and aesthetic qualities.</p> <p><u>Activity:</u> <u>Sewing slippers</u></p>	<p>Year 2- use templates, mock ups and information/communication technology, e.g. seesaw to make a cart.</p> <p>Year 3- create designs using annotated sketches, cross sectional diagrams and simple computer programmes, e.g. paint to make a bat cave.</p> <p>Year 4- use exploded diagram to make a raft house.</p> <p>Year 5- make step by step plans using knowledge of different materials and techniques to make a witches sledge.</p>	<p>Using self-evaluation, how have you refined and reworked your slippers to improve its aesthetic qualities?</p> <p>Skills: Be able to refine and rework their slippers to improve its functional and aesthetic qualities.</p> <p>Knowledge: Understand how to refine and rework. To understand what a functional properties and aesthetic qualities their slippers need. Understand how well products meet their intended purpose, e.g. wearing the slippers.</p>		<p>Improve Functional Properties Aesthetic Slippers Qualities</p>
<ul style="list-style-type: none"> Use technical knowledge and accurate skills to problem solve during the making process. <p><u>Also to be covered as an extra in summer 2 when Sewing slippers</u></p>	<p>Year 1- Select from and use a range of tools and equipment to perform practical tasks e.g. cutting, tearing, joining.</p> <p>Year 2- Choose appropriate tools, equipment, techniques and materials from a wide range, e.g. shaping, finishing, stapling, measuring, using simple slots, folding, curling.</p> <p>Year 3- Make suitable choices from a wider range of tools and unfamiliar materials to plan out the main stages of using them- using lolly sticks, split pins, fabrics, stapler, glue gun and cello tape dispenser.</p> <p>Year 4- Use techniques which require more accuracy to cut,</p>	<p>Questions: What potential issues might arise when making your Victorian street (and) your slippers - how would you go about solving these issues? What problems did you have to solve? How did you solve these?</p> <p>Skills: Demonstrate resourcefulness when tackling problems. To problem solve independently or in a small group To discuss how to solve a problem with a small group- e.g. share ideas.</p>		<p>Technical Knowledge Accurate Skills Problem solve Process</p>

	<p>shape, join and finish his/her work e.g. cutting internal shapes, slots into frameworks.</p> <p>Year 5- Make careful and precise measurements so that joins, holes and openings are in exactly the right place using a ruler (CMs and MM) and a protractor.</p>	<p>Knowledge:</p> <p>To understand how to problem solve in a range of ways.</p> <p>To understand that problems will arise and how to work as a team to solve these problems effectively.</p>		
<ul style="list-style-type: none"> Apply his/her understanding of computing to program, monitor and control his/her product. <p><u>Little bits kits / BBC micro bits- see Wayne.</u></p> <p><u>Tinkercad</u></p>	<p>Year 2- use communication technology , e.g. seesaw</p> <p>Year 3-create designs using simple computer based programmes- paint.</p>	<p>Questions:</p> <p>How can you program your Victorian street using the little bits / BBC micro bits?</p> <p>Skills:</p> <p>Understand how the Little bits / BBC micro bits work and how to use them effectively.</p> <p>Resilience</p> <p>Knowledge:</p> <p>Understand how to use computing to program, monitor and control their product.</p> <p>Know how to use the Little Bits and BBC micro bits correctly.</p> <p>Understand trial and error.</p>		<p>Computing</p> <p>Program</p> <p>Monitor</p> <p>Control</p> <p>Product</p> <p>Algorithm</p> <p>Little bits</p> <p>BBC Micro bits</p> <p>Tinkercad</p>