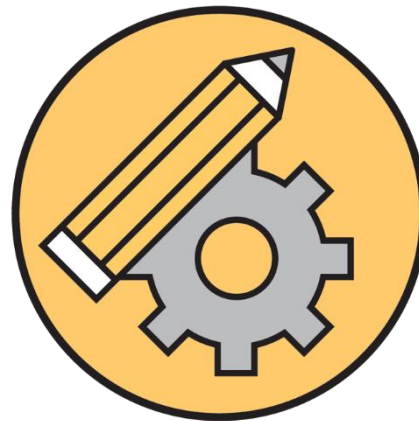




Abbot Alphege Academy



Design and Technology Curriculum

Our Intent for Design and Technology at Abbot Alphege Academy

At Abbot Alphege Academy, our intention is to inspire children's fascination with designing and making. Our curriculum aims to inspire children to be innovative and creative thinkers who have an appreciation for the product design cycle through ideation, creation and evaluation. We want our children to develop the confidence to be risk takers in DT, through drafting design ideas and concepts, modelling and testing, and to be reflective learners who evaluate their own work and the work of others.

Through our curriculum, supported by the Kapow Scheme Units of Work, we aim to build an awareness of the impact of design and technology on our lives and encourage children to become resourceful, enterprising citizens which will have the skills to contribute to the future of design and technology.



Design and Technology Overview

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
EYFS		Food: Soup		Structures: Junk Modelling		Textiles: Bookmarks
Y 1/2 A			Structures: Houses (Great Fire of London)	Mechanisms: Making a Moving Toy		Food: World foods/design a snack
Y1/2 B		Textiles: Design and make our class flag	Structures: Bridges		Food: sandwiches with seasonal ingredients	
Y3/4 A			Mechanisms: Making a Slingshot Car			Textiles: Egyptian Collars
Y3/4 B			Food: Eating seasonally	Structures: Pavilions		
Y5/6 A				Structures: Bridges	Mechanisms: Pop up Books	Food: What could be healthier?
Y5/6 B	Textiles: Waistcoats			Food: Come Dine with Me		

Progression of Content

		EYFS	Year 1 Year 2	Year 3 Year 4	Year 5 Year 6
Food	Knowledge	Learn new vocabulary; use new vocabulary throughout the day; know and talk about the different factors that support their overall health and wellbeing: healthy eating.	<p>To understand the difference between fruits and vegetables;</p> <p>To understand that some foods typically known as vegetables are actually fruits (e.g. cucumber);</p> <p>To know that a blender is a machine which mixes ingredients together into a smooth liquid;</p> <p>To know that a fruit has seeds and a vegetable does not;</p> <p>To know that fruits grow on trees or vines;</p> <p>To understand that different fruits and vegetables come from different countries;</p> <p>To know that vegetables can grow either above or below ground;</p> <p>To know that vegetables can come from different parts of the plant.</p> <p>To know that 'diet' means the food and drink that a person or animal usually eats;</p> <p>To understand what makes a balanced diet;</p> <p>To know where to find the nutritional information on packaging;</p> <p>To know that the five main food groups are: Carbohydrates, fruits and vegetables, protein, dairy and foods high in fat and sugar;</p> <p>To understand that I should eat a range of different foods from each food group, and roughly how much of each food group;</p> <p>To know that nutrients are substances in food that all living things need to make energy, grow and develop;</p>	<p>To consolidate knowledge from Year 1 and 2 work on food about food groups and balanced diets;</p> <p>To know that not all fruits and vegetables can be grown in the UK;</p> <p>To know that climate affects food growth;</p> <p>To know that vegetables and fruit grow in certain seasons;</p> <p>To know that cooking instructions are known as a 'recipe';</p> <p>To know that 'ingredients' means the items in a mixture or recipe;</p> <p>To know that imported food is food that has been brought into the country.</p>	<p>To understand where meat comes from – learning that beef is from cattle and how beef is reared and processed, including key welfare issues;</p> <p>To know that I can adapt a recipe to make it healthier by substituting ingredients;</p> <p>To know that I can use a nutritional calculator to see how healthy a food option is;</p> <p>To understand that 'cross contamination' means that bacteria and germs have been passed onto ready-to-eat foods and it happens when these foods mix with raw meat or unclean objects.</p> <p>To know that 'flavour' is how a food or drink tastes;</p> <p>To know that many countries have 'national dishes' which are recipes associated with that country;</p> <p>To know that 'processed food' means food that has been put through multiple changes in a factory;</p> <p>To understand that it is important to wash fruit and vegetable before eating to remove any dirt and insecticides;</p> <p>To understand what happens to a certain food before it appears on the supermarket shelf (Farm to Fork).</p>



			<p>To know that 'ingredients' means the items in a mixture or recipe;</p> <p>To know that I should only have a maximum of five teaspoons of sugar a day to stay healthy;</p> <p>To know that many food and drinks we do not expect to contain sugar do; we call these 'hidden sugars'.</p>		
Skills	<p>Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary; Manage their own basic hygiene and personal needs, including...understanding the importance of healthy food choices; Explore the natural world around them, making observations and drawing pictures of animals and plants.</p>	<p>Design a snack or smoothie packaging by hand or on software;</p> <p>Chop fruit and vegetables safely to make a snack or a smoothie;</p> <p>Identify if a food is a fruit or a vegetable;</p> <p>Learn where and how fruits and vegetables grow;</p> <p>Taste and evaluate different food combinations;</p> <p>Describe appearance, smell and taste;</p> <p>Suggest information to be included on packaging.</p> <p>Design a health sandwich, using seasonal ingredients, based on a food combination which works well together;</p> <p>Slice food safely using the bridge or claw grip;</p> <p>Construct a sandwich that meets a design brief;</p> <p>Describe the taste, texture and smell of fruit and vegetables;</p> <p>Taste test food combinations and final products;</p> <p>Describe information that should be included on a label;</p> <p>Evaluate which grip was most effective.</p>	<p>Create a healthy and nutritious recipe for a savoury tart using seasonal ingredients, considering the taste, texture, smell and appearance of the dish;</p> <p>Know how to prepare themselves and a workspace to cook safely in, learning the basic rules to avoid food contamination;</p> <p>Follow the instructions within a recipe;</p> <p>Slice food safely using the bridge or claw grip with increasing effectiveness;</p> <p>Establish and use design criteria to help test and review dishes;</p> <p>Describe the benefits of seasonal fruits and vegetables and the impact on the environment;</p> <p>Suggest points for improvement when making a seasonal tart.</p>	<p>Adapt a traditional recipe, understanding that the nutritional value of a recipe alters if you remove, substitute or add additional ingredients;</p> <p>Write an amended method for a recipe to incorporate the relevant changes to ingredients;</p> <p>Design appealing packaging to reflect a recipe;</p> <p>Cut and prepare recipes safely;</p> <p>Use equipment safely, including knives, hot pans and hobs;</p> <p>Know how to avoid cross-contamination;</p> <p>Follow a step-by-step method carefully to make a recipe;</p> <p>Identify the nutritional differences between different products and recipes;</p> <p>Identify and describe healthy benefits of food groups;</p> <p>Write a recipe, explaining the key steps, method and ingredients;</p> <p>Include facts and drawings from research undertaken;</p> <p>Follow a recipe, including using the correct quantities of each ingredient;</p> <p>Adapt a recipe based on research;</p> <p>Work to a given timescale;</p>	



					<p>Working safely and hygienically with independence;</p> <p>Evaluate a recipe, considering: taste, smell, texture and origin of the food group;</p> <p>Taste test and score final products;</p> <p>Suggest and write up points of improvements in productions;</p> <p>Evaluate health and safety in production to minimise cross contamination.</p>
Structures	Knowledge		<p>Understand that the shape of materials can be changed to improve the strength and stiffness of structures;</p> <p>Understand that different structures are used for different purposes;</p> <p>Understand the differences in the strength of differently shaped structures;</p> <p>Know that a structure is something that has been made and put together;</p> <p>To know that shapes and structures with wide, flat bases or legs are the most stable;</p> <p>To understand that the shape of a structure affects its strength;</p> <p>To know that materials can be manipulated to improve strength and stiffness;</p> <p>To know that a structure is something which has been formed or made from parts;</p> <p>To know that a 'stable' structure is one which is firmly fixed and unlikely to change or move;</p> <p>To know that a 'strong' structure is one which does not break easily;</p> <p>To know that a 'stiff' structure or material is one which does not bend easily.</p>	<p>To understand what a frame structure is;</p> <p>To know that a 'free-standing' structure is one that can stand on its own;</p> <p>To know that a pavilion is a decorative building or structure for leisure activities;</p> <p>To know that classing can be applied to structures for different effects;</p> <p>To know that aesthetics are how a product looks.</p>	<p>To understand some different ways to reinforce structures;</p> <p>To understand how triangles can be used to reinforce bridges;</p> <p>To know that properties are words that describe the form and function of materials;</p> <p>To understand why material selection is important based on their properties;</p> <p>To understand the material (functional and aesthetic) properties of wood.</p>



	Skills	<p>Develop small motor skills so that they can use a range of tools competently, safely and confidently.</p> <p>Explore, use and refine a variety of artistic effects to express ideas and feelings.</p>	<p>Learn the importance of a clear design criteria;</p> <p>Include individual preferences and requirements in a design;</p> <p>Make stable structures from card, tape and glue;</p> <p>Learn how to turn 2D nets into 3D structures;</p> <p>Follow instructions to cut and assemble the supporting structure of a house.</p> <p>Generate and communicate ideas using sketching and modelling;</p> <p>Learn about different types of structures, found in the natural world and in everyday objects;</p> <p>Make a structure according to design criteria;</p> <p>Create joints and structures from paper/card and tape;</p> <p>Build a strong and stiff structure by folding paper;</p> <p>Explore the features of structures;</p> <p>Compare the stability of different shapes;</p> <p>Test the strength of their own structures;</p> <p>Identify the weakest part of a structure;</p> <p>Evaluate the strength, stiffness and stability of their own structure.</p>	<p>Design a stable pavilion structure that is aesthetically pleasing and selecting materials to create a desired effect;</p> <p>Building frame structures designed to support weight;</p> <p>Create a range of different shaped frame structures;</p> <p>Make a variety of free-standing frame structures of different shapes and sizes;</p> <p>Selecting appropriate materials to build a strong structure and for the cladding;</p> <p>Reinforce corners to strengthen a structure;</p> <p>Create a design in accordance with a plan;</p> <p>Learn to create different textural effects with materials.</p>	<p>Design a stable structure that is able to support weight;</p> <p>Create a frame structure with focus on triangulation;</p> <p>Make a range of different shaped beam bridges;</p> <p>Use triangles to create truss bridges that span a given distance and support a load;</p> <p>Build a wooden bridge structure;</p> <p>Independently measure and mark wood accurately;</p> <p>Select appropriate tools and equipment for particular tasks;</p> <p>Use the correct techniques to saw safely;</p> <p>Identify where a structure needs reinforcement and using card corners for support;</p> <p>Explain why selecting appropriate materials is an important part of the design process;</p> <p>Understand basic wood functional properties;</p> <p>Adapt and improve own bridge structure by identifying points of weakness and reinforcing them as necessary;</p> <p>Suggest points for improvements for own bridges and those designed by others.</p>
Mechanisms	Knowledge		<p>To know that mechanisms are a collection of moving parts that work together as a machine to produce movement;</p> <p>To know that there is always an input and an output in a mechanism;</p>	<p>To understand that all moving things have kinetic energy;</p> <p>To understand that kinetic energy is the energy something (object/person) has by being in motion;</p>	<p>To know that mechanisms control movement;</p> <p>To understand that mechanisms can be used to change one kind of motion into another;</p>

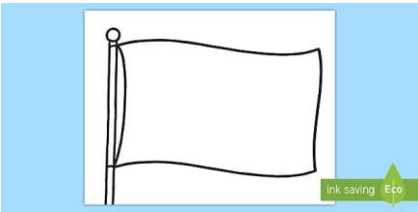
			<p>To know that an input is the energy that is used to start something working;</p> <p>To know that an output is the movement that happens as a result of the input;</p> <p>To know that a lever is something that turns on a pivot;</p> <p>To know that a linkage mechanism is made up of a series of levers</p>	<p>To know that sur resistance is the level of drag on an object as it is forced through the air;</p> <p>To understand that the shape of a moving object will affect how it moves due to air resistance.</p>	<p>To understand how to use sliders, pivots and folds to create paper-based mechanisms;</p> <p>To know that a design brief is a description of what I am going to design and make;</p> <p>To know that designers often want to hide mechanisms to make a product more aesthetically pleasing.</p>
	Skills		<p>Create a design criteria for a moving toy as a class;</p> <p>Design a moving toy for a specific audience in accordance with a design criteria;</p> <p>Make linkages using card for levers and split pins for pivots;</p> <p>Experiment with linkages adjusting the widths, lengths and thicknesses of card used;</p> <p>Cut and assemble components neatly;</p> <p>Evaluate own designs against design criteria;</p> <p>Use peer feedback to modify a final design.</p>	<p>Design a shape that reduces air resistance;</p> <p>Draw a net to create a structure from;</p> <p>Choose shapes that increase or decrease speed as a result of air resistance;</p> <p>Personalise a design;</p> <p>Measure, mark, cut and assemble with increasing accuracy;</p> <p>Make a model based on a chosen design;</p> <p>Evaluate the speed of a final product based on: the effect of shape on speed and the accuracy of workmanship on performance.</p>	<p>Design a pop-up book which uses a mixture of structures and mechanisms;</p> <p>Name each mechanism input and output accurately;</p> <p>Storyboarding ideas for a book;</p> <p>Following a design brief to make a pop-up book, neatly and with a focus on accuracy;</p> <p>Making mechanisms and/or structures using sliders, pivots and folds to produce movement;</p> <p>Using layers and spacers to hide the workings of mechanical parts for an aesthetically pleasing result;</p> <p>Evaluating the work of others and receiving feedback on own work;</p> <p>Suggesting points for improvement.</p>
Textiles	Knowledge		<p>To know that sewing is a method of joining fabric;</p> <p>To know that different stitches can be used when sewing;</p> <p>To understand the importance of tying a knot after sewing the final stitch;</p> <p>To know that a thimble can be used to protect my fingers when sewing.</p>	<p>To know that applique is a way of mending or decorating a textile by applying smaller pieces of fabric;</p> <p>To understand that a product's function relies on material choices;</p> <p>To identify and explain some materials and explain their aesthetic and/or function properties.</p>	<p>To understand that it is important to design clothing with the client/target customer in mind;</p> <p>To know that using a template (or clothing patters) helps to accurately mark out a design on fabric;</p> <p>To understand the importance of consistently sized stitches.</p>


	Skills	Develop their small motor skills so that they can use a range of tools competently, safely and confidently	<p>Design a flag; Select and cut fabrics for sewing; Decorate a flag using fabric glue or running stitch; Thread a needle; Sew running stitch, with evenly spaced, neat, even stitches to join fabric; Neatly pin and cut fabric using a template; Troubleshoot scenarios posed by teacher; Evaluate the quality of the stitching on others' work; Discuss as a class, the success of their stitching against the success criteria; Identify aspects of their peers' work that they particularly like and why.</p>	<p>Design and make a template for an Egyptian Collar and apply individual design criteria; Follow the design criteria to create an Egyptian collar; Select and cut fabric with ease using fabric scissors; Thread needles with greater independence; Tie knots with greater independence; Sew cross stitch to decorate or secure fabric; Decorate fabric using applique (or other embellishments), ribbon and pinking scissors; Evaluate end product.</p>	<p>Design a waistcoat in accordance with a specification and design criteria to fit a specific theme; Annotate designs; Use a template when pinning panels onto fabric; Mark and cut fabric accurately, in accordance with a design; Sew a strong running stitch, making small, neat stitches and following the edge; Tie strong knots; Decorate a waistcoat, attaching objects using thread and adding a secure fastening; Learn different decorative stitches; Sew accurately with even regularity of stitches; Evaluating work continually as it is created.</p>
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Subject:			
Year	Knowledge <i>Focus on the actual KNOWLEDGE you are teaching the children, and make sure that this relates to NC requirements</i>	Skills <i>Think about new skills the children will be learning, and already learnt skills being used in a new context</i>	Vocabulary (Tier 3 academic language) <i>This could be new vocabulary or revisiting vocabulary the children already know and using it in a new context</i>
Reception	Kapow Unit of work Food: Soup 	<p style="text-align: center;">EYFS Outcomes</p> <ul style="list-style-type: none"> • Learn new vocabulary. • Use new vocabulary throughout the day. • ELG: Speaking: Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary. <p>Personal, social and emotional development</p> <ul style="list-style-type: none"> • Know and talk about the different factors that support their overall health and wellbeing: healthy eating. • ELG: Managing self: Manage their own basic hygiene and personal needs, including...understanding the importance of healthy food choices <p>Understanding the world</p> <ul style="list-style-type: none"> • Explore the natural world around them. • ELG: The Natural World: Explore the natural world around them, making observations and drawing pictures of animals and plants. <p>Characteristics of effective learning > Playing and exploring</p>	
	Structures: Junk Modelling 	<p>Physical development</p> <ul style="list-style-type: none"> • Develop small motor skills so that they can use a range of tools competently, safely and confidently. • <u>ELG: Fine Motor Skills:</u> Use a range of small tools, including scissors, paint brushes and cutlery. <p>Expressive arts and design</p> <ul style="list-style-type: none"> • Explore, use and refine a variety of artistic effects to express ideas and feelings. • <u>ELG: Creating with Materials:</u> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. <p>Characteristics of effective learning</p> <ul style="list-style-type: none"> • Playing and exploring. • Active learning. 	


	<p>Textiles: Bookmarks</p> 	<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. • ELG: Fine Motor Skills: Use a range of small tools, including scissors, paint brushes and cutlery. <p>Expressive arts and design</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>Characteristics of effective learning</p> <ul style="list-style-type: none"> > Playing and exploring > Active learning 	
<p>Year 1 and Year 2</p>	<p>Structures and houses linked to The Great Fire of London</p> <ul style="list-style-type: none"> • Understand that the shape of materials can be changed to improve the strength and stiffness of structures; • Understand that different structures are used for different purposes; • Understand the differences in the strength of differently shaped structures; • Know that a structure is something that has been made and put together. <p>NB link to Kapow unit 'Windmills'.</p>	<ul style="list-style-type: none"> • Learn the importance of a clear design criteria; • Include individual preferences and requirements in a design; • Make stable structures from card, tape and glue; • Learn how to turn 2D nets into 3D structures; • Follow instructions to cut and assemble the supporting structure of a house. 	<p>Design</p> <p>Design criteria</p> <p>Model</p> <p>Net</p> <p>Packaging</p> <p>Structure</p> <p>Template</p> <p>Unstable</p> <p>Stable</p> <p>Strong</p> <p>Weak</p> 



<p>Mechanisms: Moving Toys</p> <ul style="list-style-type: none"> • To know that mechanisms are a collection of moving parts that work together as a machine to produce movement; • To know that there is always an input and an output in a mechanism; • To know that an input is the energy that is used to start something working; • To know that an output is the movement that happens as a result of the input; • To know that a lever is something that turns on a pivot; • To know that a linkage mechanism is made up of a series of levers. <p>NB link to Kapow unit 'Moving Monsters'</p>	<ul style="list-style-type: none"> • Create a design criteria for a moving toy as a class; • Design a moving toy for a specific audience in accordance with a design criteria; • Make linkages using card for levers and split pins for pivots; • Experiment with linkages adjusting the widths, lengths and thicknesses of card used; • Cut and assemble components neatly; • Evaluate own designs against design criteria; • Use peer feedback to modify a final design. 	<p>Axle Design criteria Input Linkage Mechanical Output Pivot wheel</p> 
<p>Food: World Foods/Design a snack or smoothie</p> <ul style="list-style-type: none"> • To understand the difference between fruits and vegetables; • To understand that some foods typically known as vegetables are actually fruits (e.g. cucumber); • To know that a blender is a machine which mixes ingredients together into a smooth liquid; • To know that a fruit has seeds and a vegetable does not; • To know that fruits grow on trees or vines; 	<ul style="list-style-type: none"> • Design a snack or smoothie packaging by hand or on software; • Chop fruit and vegetables safely to make a snack or a smoothie; • Identify if a food is a fruit or a vegetable; • Learn where and how fruits and vegetables grow; • Taste and evaluate different food combinations; • Describe appearance, smell and taste; 	<p>Fruit Vegetable Seed Leaf Root Stem Smoothie Healthy Carton Package Design Flavour Peel Slice</p> 


<ul style="list-style-type: none"> To understand that different fruits and vegetables come from different countries; To know that vegetables can grow either above or below ground; To know that vegetables can come from different parts of the plant. <p>NB link to Kapow unit 'Fruit and vegetables'</p>	<ul style="list-style-type: none"> Suggest information to be included on packaging. 	
<p>Sewing Textiles: Design and make a class flag</p> <ul style="list-style-type: none"> To know that sewing is a method of joining fabric; To know that different stitches can be used when sewing; To understand the importance of tying a knot after sewing the final stitch; To know that a thimble can be used to protect my fingers when sewing. <p>NB link to Kapow unit 'Pouches'</p> 	<ul style="list-style-type: none"> Design a flag; Select and cut fabrics for sewing; Decorate a flag using fabric glue or running stitch; Thread a needle; Sew running stitch, with evenly spaced, neat, even stitches to join fabric; Neatly pin and cut fabric using a template; Troubleshoot scenarios posed by teacher; Evaluate the quality of the stitching on others' work; Discuss as a class, the success of their stitching against the success criteria; Identify aspects of their peers' work that they particularly like and why. 	<p>Decorate Fabric Fabric glue Knot Needle Needle threader Running stitch Sew Template Thread</p>
<p>Structure: Bridges</p>	<ul style="list-style-type: none"> Generate and communicate ideas using sketching and modelling; 	<p>Design criteria Man-made Natural</p>



<ul style="list-style-type: none"> • To know that shapes and structures with wide, flat bases or legs are the most stable; • To understand that the shape of a structure affects its strength; • To know that materials can be manipulated to improve strength and stiffness; • To know that a structure is something which has been formed or made from parts; • To know that a 'stable' structure is one which is firmly fixed and unlikely to change or move; • To know that a 'strong' structure is one which does not break easily; • To know that a 'stiff' structure or material is one which does not bend easily. <p>NB link to Kapow unit 'Baby Bear's Chair'</p>	<ul style="list-style-type: none"> • Learn about different types of structures, found in the natural world and in everyday objects; • Make a structure according to design criteria; • Create joints and structures from paper/card and tape; • Build a strong and stiff structure by folding paper; • Explore the features of structures; • Compare the stability of different shapes; • Test the strength of their own structures; • Identify the weakest part of a structure; • Evaluate the strength, stiffness and stability of their own structure. 	<p>Properties Structure Stable Shape Model Test</p> 
<p>Food: Sandwiches and seasonal ingredients</p> <ul style="list-style-type: none"> • To know that 'diet' means the food and drink that a person or animal usually eats; • To understand what makes a balanced diet; • To know where to find the nutritional information on packaging; • To know that the five main food groups are: Carbohydrates, fruits and 	<ul style="list-style-type: none"> • Design a health sandwich, using seasonal ingredients, based on a food combination which works well together; • Slice food safely using the bridge or claw grip; • Construct a sandwich that meets a design brief; • Describe the taste, texture and smell of fruit and vegetables; 	<p>Balanced diet Balance Carbohydrate Dairy Fruit Ingredients Oils Sugar Protein Vegetable</p>


	<p>vegetables, protein, dairy and foods high in fat and sugar;</p> <ul style="list-style-type: none"> • To understand that I should eat a range of different foods from each food group, and roughly how much of each food group; • To know that nutrients are substances in food that all living things need to make energy, grow and develop; • To know that 'ingredients' means the items in a mixture or recipe; • To know that I should only have a maximum of five teaspoons of sugar a day to stay healthy; • To know that many food and drinks we do not expect to contain sugar do; we call these 'hidden sugars'. • <p>NB link to Kapow unit 'A balanced Diet'</p>	<ul style="list-style-type: none"> • Taste test food combinations and final products; • Describe information that should be included on a label; • Evaluate which grip was most effective. 	<p>Design criteria</p>
<p>Year 3 and Year 4</p>	<p>Mechanisms: Slingshot car</p> <ul style="list-style-type: none"> • To understand that all moving things have kinetic energy; • To understand that kinetic energy is the energy something (object/person) has by being in motion; • To know that sur resistance is the level of drag on an object as it is forced through the air; 	<ul style="list-style-type: none"> • Design a shape that reduces air resistance; • Draw a net to create a structure from; • Choose shapes that increase or decrease speed as a result of air resistance; • Personalise a design; • Measure, mark, cut and assemble with increasing accuracy; • Make a model based on a chosen design; 	<p>Chassis Energy Kinetic Mechanism Air resistance Design Structure Graphics Research Model Template</p> 


<ul style="list-style-type: none"> To understand that the shape of a moving object will affect how it moves due to air resistance. 	<ul style="list-style-type: none"> Evaluate the speed of a final product based on: the effect of shape on speed and the accuracy of workmanship on performance. 	
<p>Textiles: Egyptian Collars</p> <ul style="list-style-type: none"> To know that applique is a way of mending or decorating a textile by applying smaller pieces of fabric; To understand that a product's function relies on material choices; To identify and explain some materials and explain their aesthetic and/or function properties. 	<ul style="list-style-type: none"> Design and make a template for an Egyptian Collar and apply individual design criteria; Follow the design criteria to create an Egyptian collar; Select and cut fabric with ease using fabric scissors; Thread needles with greater independence; Tie knots with greater independence; Sew cross stitch to decorate or secure fabric; Decorate fabric using applique (or other embellishments), ribbon and pinking scissors; Evaluate end product. 	<p>Applique Cross-stitch Fabric Running stitch Patch Thread Embellish Template Cotton Silk Polyester Wrinkle Tear Water-resistant Breathable Matt Shiny Biodegradable pinking</p>
<p>Food: Eating Seasonally</p> <ul style="list-style-type: none"> To know that not all fruits and vegetables can be grown in the UK; To know that climate affects food growth; To know that vegetables and fruit grow in certain seasons; To know that cooking instructions are known as a 'recipe'; 	<ul style="list-style-type: none"> Create a healthy and nutritious recipe for a savoury tart using seasonal ingredients, considering the taste, texture, smell and appearance of the dish; Know how to prepare themselves and a workspace to cook safely in, learning the basic rules to avoid food contamination; 	<p>Climate Dry climate Mediterranean climate Temperate climate Polar climate Tropical climate Exported Imported Nationality Nutrients</p>

	<ul style="list-style-type: none"> To know that imported food is food that has been brought into the country. 	<ul style="list-style-type: none"> Follow the instructions within a recipe; Establish and use design criteria to help test and review dishes; Describe the benefits of seasonal fruits and vegetables and the impact on the environment; Suggest points for improvement when making a seasonal tart. 	Recipe Seasonal food Seasons
	<p>Structures: Pavilions</p> <ul style="list-style-type: none"> To understand what a frame structure is; To know that a 'free-standing' structure is one that can stand on its own; To know that a pavilion is a decorative building or structure for leisure activities; To know that cladding can be applied to structures for different effects; To know that aesthetics are how a product looks. 	<ul style="list-style-type: none"> Design a stable pavilion structure that is aesthetically pleasing and selecting materials to create a desired effect; Building frame structures designed to support weight; Create a range of different shaped frame structures; Make a variety of free-standing frame structures of different shapes and sizes; Selecting appropriate materials to build a strong structure and for the cladding; Reinforce corners to strengthen a structure; Create a design in accordance with a plan; Learn to create different textural effects with materials. 	Aesthetic Cladding Design criteria Evaluation Frame structure Function Inspiration Pavilion Reinforce Stable Structure Target audience Target customer Texture Theme
Year 5 and Year 6	<p>Structure: Bridges</p> <ul style="list-style-type: none"> To understand some different ways to reinforce structures; 	<ul style="list-style-type: none"> Design a stable structure that is able to support weight; 	Beam bridge Arch bridge Truss bridge

	<ul style="list-style-type: none"> • To understand how triangles can be used to reinforce bridges; • To know that properties are words that describe the form and function of materials; • To understand why material selection is important based on their properties; • To understand the material (functional and aesthetic) properties of wood. 	<ul style="list-style-type: none"> • Create a frame structure with focus on triangulation; • Make a range of different shaped beam bridges; • Use triangles to create truss bridges that span a given distance and support a load; • Build a wooden bridge structure; • Independently measure and mark wood accurately; • Select appropriate tools and equipment for particular tasks; • Use the correct techniques to saw safely; • Identify where a structure needs reinforcement and using card corners for support; • Explain why selecting appropriate materials is an important part of the design process; • Understand basic wood functional properties; • Adapt and improve own bridge structure by identifying points of weakness and reinforcing them as necessary; • Suggest points for improvements for own bridges and those designed by others. 	<p>Strength Technique Corrugation Lamination Stiffness Rigid Factors Stability Visual appeal Aesthetics Joints Mark out Hardwood Softwood Wood file/rasp Sandpaper/glasspaper Bench hook/vice Tenon saw/coping saw Assemble Material properties Reinforce Wood sourcing Evaluate Quality of finish Accuracy</p>
	<p>Mechanisms: Pop up Books</p> <ul style="list-style-type: none"> • To know that mechanisms control movement; 	<ul style="list-style-type: none"> • Design a pop-up book which uses a mixture of structures and mechanisms; 	<p>Design Input Motion</p>

<ul style="list-style-type: none"> • To understand that mechanisms can be used to change one kind of motion into another; • To understand how to use sliders, pivots and folds to create paper-based mechanisms; • To know that a design brief is a description of what I am going to design and make; • To know that designers often want to hide mechanisms to make a product more aesthetically pleasing. 	<ul style="list-style-type: none"> • Name each mechanism input and output accurately; • Storyboarding ideas for a book; • Following a design brief to make a pop-up book, neatly and with a focus on accuracy; • Making mechanisms and/or structures using sliders, pivots and folds to produce movement; • Using layers and spacers to hide the workings of mechanical parts for an aesthetically pleasing result; • Evaluating the work of others and receiving feedback on own work; • Suggesting points for improvement. 	<p>Mechanism Criteria Research Reinforce Model</p> 
<p>Food: Healthy Eating</p> <ul style="list-style-type: none"> • To understand where meat comes from – learning that beef is from cattle and how beef is reared and processed, including key welfare issues; • To know that I can adapt a recipe to make it healthier by substituting ingredients; • To know that I can use a nutritional calculator to see how healthy a food option is; • To understand that ‘cross contamination’ means that bacteria and germs have been passed onto ready-to-eat foods and it happens when these foods mix with raw meat or unclean objects. 	<ul style="list-style-type: none"> • Adapt a traditional recipe, understanding that the nutritional value of a recipe alters if you remove, substitute or add additional ingredients; • Write an amended method for a recipe to incorporate the relevant changes to ingredients; • Design appealing packaging to reflect a recipe; • Cut and prepare recipes safely; • Use equipment safely, including knives, hot pans and hobs; • Know how to avoid cross-contamination; • Follow a step-by-step method carefully to make a recipe; 	<p>Beef Reared Processed Ethical Diet Ingredients Supermarket Farm Balanced</p> 

		<ul style="list-style-type: none"> Identify the nutritional differences between different products and recipes; Identify and describe healthy benefits of food groups. 	
	<p>Textiles: Waistcoats</p> <ul style="list-style-type: none"> To understand that it is important to design clothing with the client/target customer in mind; To know that using a template (or clothing patterns) helps to accurately mark out a design on fabric; To understand the importance of consistently sized stitches. 	<ul style="list-style-type: none"> Design a waistcoat in accordance with a specification and design criteria to fit a specific theme; Annotate designs; Use a template when pinning panels onto fabric; Mark and cut fabric accurately, in accordance with a design; Sew a strong running stitch, making small, neat stitches and following the edge; Tie strong knots; Decorate a waistcoat, attaching objects using thread and adding a secure fastening; Learn different decorative stitches; Sew accurately with even regularity of stitches; Evaluating work continually as it is created. 	<p>Annotate Decorate Design criteria Fabric Target customer Waistcoat Waterproof</p>
	<p>Food: Come Dine with Me</p> <ul style="list-style-type: none"> To know that 'flavour' is how a food or drink tastes; To know that many countries have 'national dishes' which are recipes associated with that country; 	<ul style="list-style-type: none"> Write a recipe, explaining the key steps, method and ingredients; Include facts and drawings from research undertaken; Follow a recipe, including using the correct quantities of each ingredient; 	<p>Equipment Flavours Ingredients Method Research Recipe</p>

	<ul style="list-style-type: none"> • To know that ‘processed food’ means food that has been put through multiple changes in a factory; • To understand that it is important to wash fruit and vegetable before eating to remove any dirt and insecticides; • To understand what happens to a certain food before it appears on the supermarket shelf (Farm to Fork). 	<ul style="list-style-type: none"> • Adapt a recipe based on research; • Work to a given timescale; • Working safely and hygienically with independence; • Evaluate a recipe, considering: taste, smell, texture and origin of the food group; • Taste test and score final products; • Suggest and write up points of improvements in productions; • Evaluate health and safety in production to minimise cross contamination. 	<p>Bridge method Cookbook Cross-contamination Farm to fork Preparation Storyboard</p> 
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