

## Design and Technology Curriculum Plan

EYFS

Autumn 1				<p>To explore school grounds and go blackberry picking.</p> <p>To make and eat Blackberry crumble and name the different ingredients</p>	<p>To make a hand shaped cookie- decorate with jelly lips.</p>	<p>Weigh ingredients for soup. <b>Which one is heavier or lighter? How do we know?</b></p>	
Autumn 2	<p>To make chocolate sparklers using melted chocolate and sprinklers. <b>How do you melt the chocolate?</b></p> <p>To explore the changes that happen to popcorn when it is heated, using their senses.</p>	<p>Ingredients in Kipper's Birthday to make a birthday cake.</p>	<p>To make Diwali sweets.</p>	<p>To taste the different crisps. <b>What is the crispiest crisp?</b></p>			
Spring 1							
Spring 2	<p>To make a paper aeroplane. <b>How far does it go?</b></p> <p>To design and create a hot air balloon for topic book cover.</p>	<p>To make simple paper aeroplanes / kites. <b>What do you need to do to make it fly?</b></p>			<p>To make a paper boat and test to see if it floats. <b>What do you notice? What could you change next time?</b></p>		
Summer 1		<p>To sew a spider's web. <b>How do you hold the needle?</b></p>					

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<b>Summer 2</b>				<p>To use large construction and build a boat.</p> <p><b>How many children can you fit inside it?</b></p> <p>Explore and investigate materials to see which are waterproof.</p> <p><b>Which material would make best boat?</b></p>			
<b>Year 1</b>							
<b>Autumn 1</b>							
<b>Autumn 2</b>	To visit the park to look at play equipment to inform research and planning to make their own model.	To use small construction toys and shape recognition to model a play park.	To design a piece of playground equipment for the Gruffalo's child.	To use sheet materials to fold, tear, cut paper, join edges and use a ruler to make a piece of playground equipment for the Gruffalo's child.	To use sheet materials to fold, tear, cut paper, join edges and use a ruler to make a piece of playground equipment for the Gruffalo's child.	To evaluate our playground equipment.	
<b>Spring 1</b>	<p>To develop their design ideas through planning, discussion, observation and drawing.</p> <p>To plan our ideas for our moving clown.</p> <p><b>What parts do we need?</b></p> <p><b>What are we going to use to make our clown move?</b></p>	<p>To start creating our parts for our moving clown.</p> <p>To design and create a clown face.</p> <p>To design and create Arms and legs for our clown.</p> <p>To use split pins to assemble our moving clown.</p>	<p>To evaluate against their design criteria. Write an evaluation.</p> <p>How does your moving clown look in comparison to our design?</p> <p><b>What works well with my moving clown?</b></p> <p><b>What could I improve if I was to make the clown again?</b></p>				

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<b>Spring 2</b>	<p>To select and use different ingredients according to their characteristics.</p> <p>To understand where food comes from looking at the UK- cooking an English Breakfast. <b>What food would be included in a traditional English Breakfast?</b> <b>What do we need to do before we handle food?</b></p>	<p>To select and use different ingredients according to their characteristics.</p> <p>To understand where food comes from looking at France- tasting a French continental breakfast. <b>What food would be included in a French continental breakfast?</b> <b>Which breakfast is sweet? Which breakfast is savoury?</b> <b>Comparing English and French breakfasts.</b></p>	<p>To understand that there is a wide variety of fruit and vegetables available which can be grouped and individually named.</p> <p>To use the basic principles of a healthy and varied diet to prepare dishes by making healthy fruit smoothies. <b>What do we mean by Healthy?</b> <b>What foods do you think are Healthy?</b> <b>What foods do you think are unhealthy?</b></p>	<p>To cook and follow instructions to make Vegetable Samosas. To select from and use a range of tools and equipment to perform practical tasks.</p> <p>To understand where food comes from looking at Indian food. <b>Why do we need to follow instructions?</b> <b>What other foods come from India?</b></p>	<p>To understand where food comes from looking at Italian Food by making pizzas. <b>What other foods come from Italy?</b></p>	<p>To know about basic food handling, hygienic practices and personal hygiene, including how to control risk by following simple instructions</p> <p>To understand where food comes from looking at Chinese Food-Making Spring Rolls. <b>How can we be safe when we are in the kitchen?</b> <b>What other foods come from China?</b></p>	<p>To select and use different ingredients according to their characteristics.</p> <p>To understand where food comes from looking at the UK- cooking an English Breakfast. <b>What food would be included in a traditional English Breakfast?</b> <b>What do we need to do before we handle food?</b></p>
<b>Summer 1</b>							
<b>Summer 2</b>	<p>To design purposeful, functional, appealing products (a beach bag) for themselves based on design criteria. To generate, develop, model and communicate their ideas through talking, drawing and templates. To select from and use a range of tools and equipment to perform practical tasks, cutting, shaping, joining and finishing. To select from and use a wide range of materials, including fabric, and haberdashery, according to their characteristics. To explore and evaluate a range of existing products. To plan, draw and list materials appropriate for decorating a beach bag To choose appropriate sequins, beads and techniques to apply to fabric.</p>						<p>To evaluate their ideas and products against design criteria.</p>
<b>Year 2</b>							
<b>Autumn 1</b>							
<b>Autumn 2</b>	<p>* To explore and evaluate existing products (moving books).</p>	<p>To explore and make paper hinges.</p>	<p>To explore and make lever mechanisms.</p>	<p>To explore and make wheel mechanisms.</p>	<p>To apply skills learnt to design a template for a moving picture</p>	<p>To make a moving picture using a chosen mechanisms</p>	<p>To evaluate finished product against design criteria.</p>
<b>Spring 1</b>							

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<b>Spring 2</b>	<p>To investigate the features of a variety of vehicles? <b>Why do vehicles have wheels?</b> <b>Do they all have the same number and sizes of wheels? Why?</b> <b>Why are wheels different shapes?</b></p>	<p>To investigate the features of moon buggies.  To create simple drawings and label parts. <b>Which features would you include if you were designing a moon buggy? Why?</b></p>	<p>To join materials in temporary and permanent ways.  To investigate different techniques for assembling axels and wheels. <b>Which ways of joining are the strongest?</b> <b>Which ones are you going to use and why?</b></p>	<p>To identify a purpose for what they are making. <b>Who is going to use this? What is it for?</b>  To create a design for a moon buggy including design criteria. <b>What will you need?</b> <b>What materials will work well for this?</b> <b>How much do you need? What else can you use?</b></p>	<p>To make a moon buggy selecting appropriate tools and materials. <b>What steps are you going to take to build your buggy?</b> <b>Is there anything in your plan you need to change? Why?</b></p>	<p>To evaluate their finished product suggesting improvements. <b>What would you do differently next time?</b> <b>Have you met your design goals?</b></p>
<b>Summer 1</b>	<p>To evaluate a range of different products (bunting). To design a flag for bunting. <b>How are the designs the same/different?</b> <b>Which do you like the best why? Which one would you use for the King? Why? Who is the bunting for? What will you need to include in your design so the person will like it?</b></p>	<p>To use a variety of tools and a template to cut fabric. <b>What materials are used to make this bunting? Why? How will we create our own bunting flag?</b></p>	<p>To use tools to join two pieces of fabric (stitching). <b>How will we join two pieces of fabric? What different ways are there?</b></p>	<p>To select from a range of fabrics to decorate their bunting. To use a wide range of tools to join fabric to make their bunting. <b>What fabrics would be good for creating bunting? Why? What makes them good?</b> <b>What things will you need to change as you</b></p>	<p>To evaluate a finished product. <b>What would you do differently next time?</b></p>	
<b>Summer 2</b>						

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## Year 3

<b>Autumn 1</b>	<p>To investigate and evaluate products with lever and linkage systems.</p> <p>To investigate and evaluate products with lever and linkage systems.</p>	To explore a range of levers and linkages and explain how they work.	To explore a range of pop-ups and explain how they work.	To plan a book with moving parts and pop-ups.	To measure, mark and cut materials accurately.	To construct a range of levers, linkages and pop-ups.	To evaluate finished products and identify areas that have been successful and any areas where improvements or modifications can be made.
<b>Autumn 2</b>	<p>To analyse the taste of an existing pizza.</p> <p><i>What do you like/dislike about the pizza?</i></p> <p><i>How would you describe the taste?</i></p> <p><i>What ingredients can you taste/see?</i></p> <p><i>Is it balanced?</i></p>	<p>To investigate the ingredients from a range of existing pizzas.</p> <p><i>How is pizza made?</i></p> <p><i>Where does X come from?</i></p> <p><i>Which food group does X fit into?</i></p> <p><i>How is X processed?</i></p>	<p>To analyse the taste and texture of pizza toppings.</p> <p><i>What words would you use to describe the taste?</i></p> <p><i>What words would you use to describe the texture/feel?</i></p> <p><i>How does cooking change the taste and texture?</i></p>	<p>To plan a healthy, balanced pizza.</p> <p><i>How much would your ingredients cost to buy?</i></p> <p><i>Is your pizza balanced?</i></p> <p><i>Which topping fits into X food group?</i></p> <p><i>What equipment will you need?</i></p>	<p>To work safely and hygienically to make a pizza.</p> <p><i>How can we make sure we work safely?</i></p> <p><i>What does it mean to be hygienic in the kitchen?</i></p> <p><i>Why is it important to consider safety and hygiene when cooking?</i></p>	<p>To evaluate a pizza.</p> <p><i>What did you like/dislike about your pizza? Why?</i></p> <p><i>How did cooking change the taste of the toppings?</i></p> <p><i>Did you encounter any problems?</i></p> <p><i>What would you change next time?</i></p>	
<b>Spring 1</b>	<p>To research existing robots and their uses.</p> <p>To evaluate the designs of existing robots.</p>	To explore how air pressure can be used to control movement.	To design, plan and label a robot with a pneumatic feature.	To measure, mark out, cut and shape materials and join them carefully and accurately.	To measure, mark out, cut and shape materials and join them carefully and accurately.	To use finishing techniques to strengthen and improve the appearance of a product.	To evaluate work, considering its quality and whether it is fit for purpose.
<b>Spring 2</b>	To investigate and analyse existing textiles products.	To explore and develop a range of techniques for joining fabrics.	To use research to inform the design of a textiles product.	To select and use appropriate stitches to join fabrics accurately.	To select and use different stitches to embellish a textile product.	To evaluate ideas and products against design criteria and consider the views of others to improve work.	

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<b>Summer 1</b>							
<b>Summer 2</b>	<p>To use construction apparatus to create a stable wide based structure.</p> <p><b>How can you make sure that the structure is stable? What shapes do we know that work as strong structures? How could we apply what we have learnt to our woodwork?</b></p>	<p>To design a stable wide based structure.</p> <p>To accurately label a design</p> <p><b>What do you need to make your product? How can you ensure it will be fit for purpose?</b></p>	<p>To select from and use a range of tools to measure and cut accurately.</p> <p><b>What unit of measure will you use? Why is X tool most suitable for cutting? How can we stay safe when using a saw?</b></p>		<p>To use a range of tools to join materials.</p> <p>To evaluate a final product against design criteria.</p> <p><b>What joining material will provide strength? What feedback can you give to X about their structure?</b></p>	<p>To use a range of tools to join materials.</p> <p>To evaluate a final product against design criteria.</p> <p><b>What joining material will provide strength? What feedback can you give to X about their structure?</b></p>	
<b>Year 4</b>							
<b>Autumn 1</b>							
<b>Autumn 2</b>	To learn how to sew cross-stitch and appliqué	To learn how to sew cross-stitch and appliqué	To design a cuddly toy and its template	To decorate fabric using appliqué and cross stitch	To decorate fabric using appliqué and cross stitch	To assemble your toy and evaluate its effectiveness	To assemble your toy and evaluate its effectiveness
<b>Spring 1</b>			<p>To accurately measure using a ruler.</p> <p>To accurately cut paper to a required length to create a paper prototype.</p>	<p>To use a saw safely to cut wood.</p> <p>To accurately measure and cut wood.</p>	To assemble a jinx frame, understanding where it needs to be reinforced to make it stronger.	<p>To understand the importance of a stable structure and the shapes used for this.</p> <p>To evaluate their finished piece of work suggesting improvements and evaluating what they did well.</p>	
<b>Spring 2</b>							
<b>Summer 1</b>	<p>To research different boxes.</p> <p>Research the key</p>		<p>To design a box for chocolates.</p> <p>Use my knowledge of</p>		<p>To make and design the nets and assemble our boxes</p>	<p>To Evaluate our boxes.</p> <p>To reflect on the purpose of our product.</p>	

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	features, materials and purpose of various boxes. Understand key vocabulary. Draw a labelled diagram of 2 boxes - thinking about nets, tabs, folds, materials and purpose. Discuss why our box needs to open and close		boxes and nets to support the design of my box. Choose appropriate tabs to secure my box. Think about how the box will open and close.  Draw and design my box which will hold chocolates.			To evaluate what went well with our models. To identify areas which can be improved and adapt our products.	
<b>Summer 2</b>	<b>(Food tasting during Greek Day)</b>  Feta  Taramaslata  Flatbreads  Humus	Food- To understand that our food is produced in lots of different countries around the world. To understand seasonality in the UK.		Food- To discuss seasonal foods and discuss how ingredients are grown, reared, caught and processed.	Food- To understand the type of food that was available to the Ancient Greeks and how it was produced <b>(Food tasting during Greek Day)</b>	LO: To make flatbreads and humus.	LO: To make and share Gyros and have a leaving Year 4 Picnic on the field.
<b>Year 5</b>							
<b>Autumn 1</b>	To investigate and research a variety of different money containers.	To practise different stitching techniques discussing whether they would be used for decoration or for attached fabrics together.	To develop multiple designs for a money container.	To create a detailed sketch for a money container, including thinking about the order in which tasks need to be completed.	To use different decorative stitches to decorate textiles.	To use appropriate stitches to attach fabric together.	To evaluate a finished product, discussing whether it fits the design brief.
<b>Autumn 2</b>	To use appropriate functional stitches to attach fabric together and appropriate decorate stitches to decorate a textiles product.	To understand the different ways that internal shapes can be cut into paper and card.  To understand the safety aspects of	To accurately measure and cut internal shapes into paper and card using a cutting wheel. To accurately measure and cut internal shapes into paper				

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	<p>To evaluate a finished product, discussing whether it fits the design brief.<sup>1</sup></p> <p><sup>1</sup> This objective is left over from the previous half term as not all children completed their Anglo-Saxon money containers</p>	using a paper cutting wheel to cut internal shapes.	and card using a cutting wheel.				
Spring 1							
Spring 2			<p>To compare different types of chocolate.</p> <p>To investigate different chocolate flavours.</p> <p>To investigate how chocolate is made.</p> <p><b>Where does chocolate come from (link to Mayans)?</b></p> <p><b>What is chocolate made from?</b></p>	<p>To design chocolates.</p> <p>To be able to describe how a product has been chilled and melted to change the raw ingredients.</p> <p><b>Which type of chocolate will you use? What taste are you wanting to create?</b></p>	<p>To create and evaluate the chocolate they have created.</p> <p><b>Was your chocolate popular?</b></p> <p><b>What could you do to improve the taste? Were your ingredients fair trade</b></p>		
Summer 1							
Summer 2		<p>To investigate how a variety of different fairground rides move. How does the ride turn? Can you see the mechanism that turns the ride? How are the components joined together? How does the motor work on the ride? How does the ride turn?</p>	<p>To investigate how materials can be joined together in various different ways (Focussed practical task).</p> <p><b>What is the best way of strengthening and reinforcing structures? What would be the best materials and</b></p>	<p>To create a design criteria for a new fairground ride.</p> <p><b>What are the important features of a fairground ride?</b></p> <p><b>Will the ride be stable when it is moving?</b></p> <p><b>Does the ride look good? Will people</b></p>	<p>To plan a new fairground ride to fulfil the design criteria.</p> <p><b>What kind of rotating ride can I make from your research?</b></p> <p><b>Can I create my ride using the equipment and time available?</b></p>	<p>To create a framework using a range of materials to support a mechanism</p>	



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			components to use to make a frame for a fairground ride? What different kinds of rotating parts could we have? How could we use this in a design for a fairground ride?	enjoy going on the ride?	Does my design fulfil the design criteria?		
Year 6							
Autumn 1						To understand seasonality and how it affected the lives of the romans.	To plan, prepare and cook a variety of savoury dishes using ingredients grown seasonally and used in Roman times.
Autumn 2	To use research and develop design criteria to inform the design of my vehicle. <i>Which design is most popular? Why do you think this is? What do the 'best' designs have in common? Which other products does the design remind you of?</i>	To generate and develop my ideas through discussion, annotated sketches computer-aided design <i>How can you ensure that your design is achievable?</i>	To select from and use a wider range of materials and components, including construction materials according to their functional properties <i>Which materials would be most suitable? Why? Why might X be unsuitable? What are the benefits/weaknesses of your chosen materials?</i>	To select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately <i>Which tools would be most suitable? Why? Why might X be unsuitable? What are the benefits of using your chosen tools? How will you ensure accuracy?</i>	To understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] <i>Where would be the most effective place to put X?</i>	To apply their understanding of how to strengthen, stiffen and reinforce more complex structures <i>How could you make your product better/stronger? How could you achieve this? Which materials and tools could help you to achieve this? Will you need to add or take something away?</i>	To evaluate a product against design criteria.
Spring 1							

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Spring 2							
Summer 1 Construction		<p>To investigate different materials used for air raid shelters.</p> <p>To explore how to join materials accurately.</p>	<p>To plan an air-raid shelter construction.</p> <p><b>What makes a successful shelter?</b></p> <p><b>What makes a successful construction?</b></p>	<p>To make an air-raid shelter construction, using a variety of materials and joining techniques.</p> <p><b>How can you join the materials effectively?</b></p>	<p>To make improvements to a construction.</p> <p><b>How could you improve your work or give advice to others to improve theirs?</b></p>	<p>To evaluate a shelter construction.</p> <p><b>Does the product meet the design criteria?</b></p> <p><b>What parts did you find easy/difficult?</b></p>	
Summer 1 Textiles	<p>To use research to inform the design of a textiles product.</p> <p>*To know that material was rationed in the war</p> <p>*To become familiar with the 'Make do and Mend' campaign.</p>	<p>To select from and use a wider range of textiles based on their functional qualities.</p> <p>*To select and use appropriate stitches to join fabrics accurately.</p> <p>*To use sewing skills to create a sock monkey.</p>	<p>To select from and use a wider range of textiles based on their functional qualities.</p> <p>*To select and use appropriate stitches to join fabrics accurately.</p> <p>*To use sewing skills to create a sock monkey.</p>				<p>To evaluate ideas and products against design criteria and consider the views of others to improve work.</p>
Summer 2							