

Design and Technology – Y3 KAPOW 2024

<p align="center"><u>Honesty</u></p> <p>Learning to communicate with confidence Asking for help when necessary Receiving criticism kindly</p>	<p align="center"><u>Love</u></p> <p>Offering to help Giving praise to self and others</p>	<p align="center"><u>Forgiveness</u></p> <p>Being able to accept kind criticism Learn to be patient when sharing</p>	<p align="center"><u>Respect</u></p> <p>Appreciating the efforts of others Looking after equipment, materials, the classroom environment and each other's work</p>	<p align="center"><u>Cultural Capital Opportunities</u></p> <p>Investigating products in the school environment, the locality and at home Learning about the impact of nutrition on health Learn about significant designers who have shaped the locality, the UK and the world- Learning where food comes from Learning to use unfamiliar equipment and materials</p>		
<p align="center"><u>Love Of Language</u></p> <p><u>Reading:</u> Reading technical and other key vocabulary Reading instructions Reading age appropriate information about designers and products Reading peers' writing</p> <p><u>Listening:</u> Listening to instructions Listening to video clips Listening to partners and team members</p> <p><u>Speaking:</u> Communicating with partners and team members Asking questions Using technical and other key vocabulary Describing and explaining ideas, decisions and opinions</p> <p><u>Writing:</u> Labelling drawings Writing technical and other key vocabulary Writing instructions Writing product evaluations</p>	<p align="center"><u>Aspirations</u></p> <p>Identify the ways a product will meet the design criteria Identify the positive effect the product will have on the intended user Self-evaluate their use of equipment and skills and set their own targets for improvement</p>	<p align="center"><u>Bringing Learning To Life</u></p> <p>Evaluating a variety of existing products Visits to the locality to investigate products Teacher to bring in photos for children to sort. Practical use of a range of techniques and materials Making products that function and are appealing</p>	<p align="center"><u>Emotional Well-Being</u></p> <p>Learning to be supportive and cooperative Being proud of what they have accomplished</p>	<p align="center"><u>Resilience</u></p> <p>Being willing to take risks Persevering with new techniques and equipment Know that practise brings improvement</p>	<p align="center"><u>Valuing Our Diversity</u></p> <p>Learning about foods from around the world Finding out about and valuing people's preferences</p>	<p align="center"><u>Respect and Responsibility</u></p> <p>Listening to safety instructions and using equipment with care Looking after equipment, materials, the classroom / local environment and each other's work Giving praise (to self as well as others) Giving criticism kindly Accept kind criticism Asking for help when necessary Offer to help Learn to be patient when sharing</p>

What will they learn?		In what order?			End points
Key Concepts	Key Skills	Autumn	Spring	Summer	
<p>Design:</p> <ul style="list-style-type: none"> Design purposeful, functional, appealing products for themselves and other users based on design criteria. Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. <p>Make:</p> <ul style="list-style-type: none"> Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. <p>Evaluate:</p> <ul style="list-style-type: none"> Explore and evaluate a 	<p>Structures:</p> <p>Build structures such as windmills and chairs, exploring how they can be made stronger, stiffer and more stable. Recognise areas of weakness through trial and error.</p> <p>Mechanisms:</p> <p>Introduce and explore simple mechanisms, such as sliders, wheels and axles in their designs. Recognise where mechanisms such as these exist in toys and other familiar products.</p> <p>Textiles:</p> <p>Explore different methods of joining fabrics and experiment to determine the pros and cons of each technique. KS2 only* Create functional electrical products that use series circuits,</p> <p>Cooking and Nutrition:</p> <p>Learn about the basic rules of a healthy and varied diet to create dishes. Understand where food comes from, for example plants and animals.</p>	<p>Cross stitch and appliqué (4 lessons)</p> <p>Cushions</p> <p>Introduce two new skills to add to the pupils' repertoire: cross stitch and appliqué. Pupils apply their knowledge to the design, decoration and assembly of their own cushions</p> <p>Electric poster (4 lessons)</p> <p>An introduction to information design and electrical systems, pupils create an electric poster using a basic circuit to develop a museum display about The Romans.</p>	<p>Mechanical systems</p> <p>Pneumatic toys (4 lessons)</p> <p>Design and create a toy with a pneumatic system, learning how trapped air can be used to create a product with moving parts. Pupils are introduced to thumbnail sketches and exploded diagrams.</p> <p>Wearable technology (4 lessons)</p> <p>Design, code and promote a piece of wearable technology to use in low light conditions, developing their understanding of programming to monitor and control products to solve a design scenario.</p>	<p>Cooking and Nutrition</p> <p>Eating seasonally (6 lessons)</p> <p>Pupils discover when and where fruits and vegetables are grown and learn about seasonality in the UK. They respond to a design brief to design a seasonal food tart using ingredients harvested in the UK in May and June.</p> <p>Structrues:</p> <p>Constructing a castle (4 lessons)</p> <p>Learning about the features of a castle, pupils design and make one of their own. They will also be using configurations of handmade nets and recycled materials to make towers and turrets before constructing a stable base.</p>	<p>Autumn:</p> <p>Textiles: Cushions</p> <ul style="list-style-type: none"> Use a cross-stitch to join two pieces of fabric together. Design and cut the template for a cushion. Use cross-stitch and appliqué to decorate a cushion face. Make a cushion that includes appliqué and cross-stitch <p>Electrical Systems: Electric poster</p> <ul style="list-style-type: none"> Explain what information design is and understand its impact, considering what could happen if we had no signage, posters or written communication in public places of interest. Research and choose a specific topic on which to base their initial poster ideas. Roughly sketch four initial poster ideas, where a bulb will be located for each idea. Review their initial ideas against the design criteria and peer feedback, developing a final design. Assemble an electric poster, including a functional, simple circuit with a bulb and a battery, following a demonstration. <p>Spring:</p> <p>Mechanical Systems: Pneumatic toys</p> <ul style="list-style-type: none"> Draw accurate diagrams with correct labels, arrows and explanations.

<p>range of existing products.</p> <ul style="list-style-type: none"> Evaluate their ideas and products against design criteria. <p>Technical Knowledge:</p> <ul style="list-style-type: none"> Build structures, exploring how they can be made stronger, stiffer and more stable. Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products Understands where food comes from. 					<ul style="list-style-type: none"> Identify five appropriate design criteria. Communicate ideas using thumbnail sketches and an exploded diagram. Select appropriate equipment and materials to build a working pneumatic system. Assemble their pneumatic system within the housing to create the desired motion. <p>Digital world: Wearable technology</p> <ul style="list-style-type: none"> Give a brief explanation of the digital revolution and remember key examples. Write a program that initiates a flashing LED panel, or another pattern, on the Micro:bit when a button is pressed. Identify errors, if testing is unsuccessful, by comparing their code to a correct example. Suggest key features for a pouch, with some consideration for the overall theme and the user. Follow basic design requirements using computer-aided design, drawing at least one shape with a text box and bright colours, following a demonstration. <p>Summer:</p> <p>Cooking and Nutrition: Eating seasonally</p> <ul style="list-style-type: none"> Explain that fruits and vegetables grow in different countries based on their climates. Understand that seasonal fruits and vegetables grow in a given season. Understand that eating seasonal fruit and vegetables
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					<p>positively affects the environment.</p> <ul style="list-style-type: none">• Design a tart recipe using seasonal ingredients. <p>Structures: Constructing a castle</p> <ul style="list-style-type: none">• Draw and label a simple castle that includes the most common features.• Design a castle with key features which satisfy a given purpose.• Score or cut along lines on the net of a 2D shape.• Use glue to securely assemble geometric shapes to build a complex structure.• Evaluate their work by answering simple questions.
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