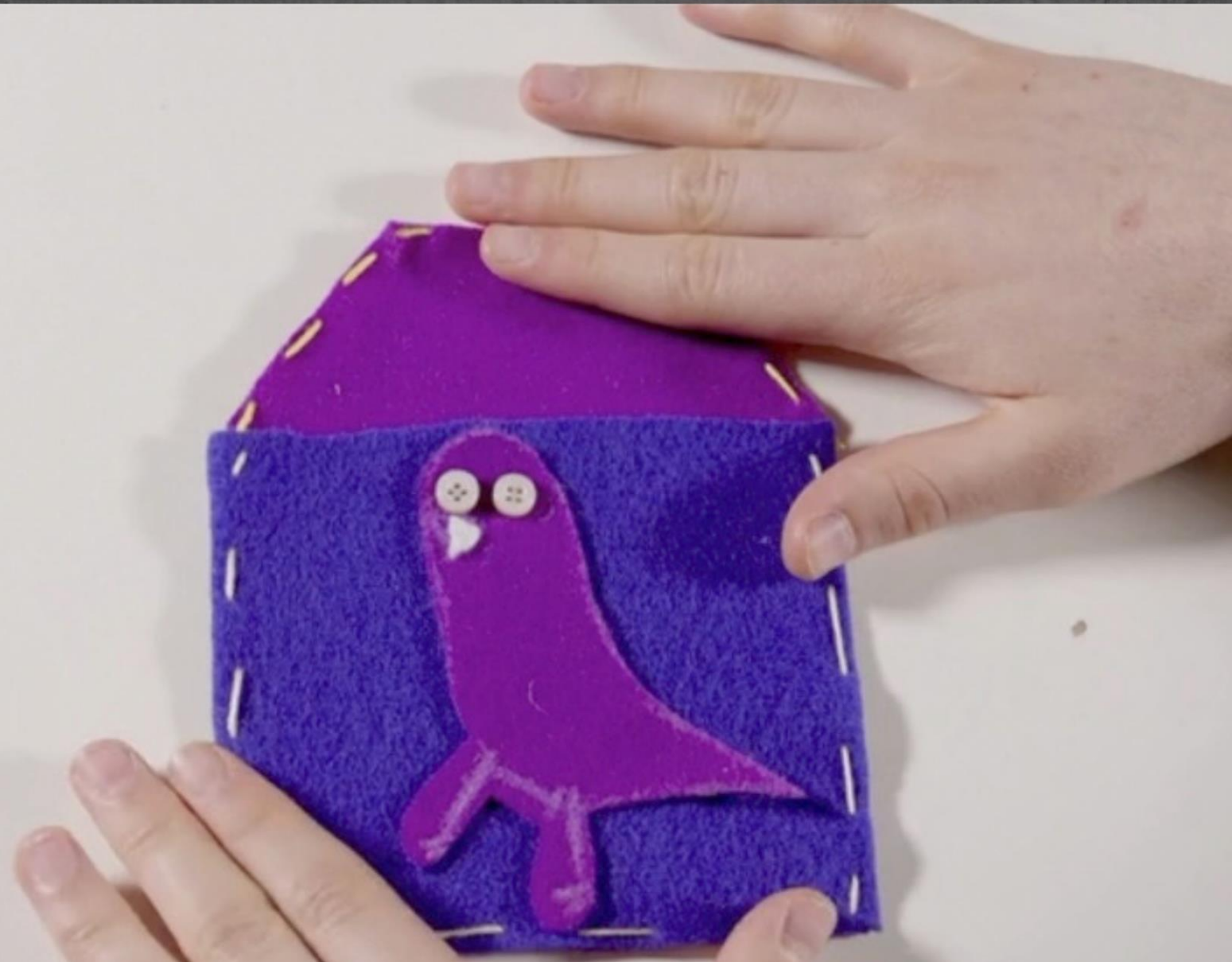




# DESIGN TECHNOLOGY@ FENISCOWLES

Long Term Curriculum Plan



At Feniscowles our whole school intention is that children receive a design and technology curriculum which allows them to exercise their creativity through designing and making. The children are taught to combine their designing and making skills with knowledge and understanding in order to create a product. Skills are taught progressively to ensure that all children are able to learn and practice in order to develop as they move through the school.

There is a separate document for EYFS and also overviews for each module (available on website).

Year Group	AUTUMN	SPRING	SUMMER
Year 1	<u>Structures</u>  <u>Constructing windmills</u>  Inspired by the song, 'Mouse in a windmill', children design, decorate and build a windmill for their mouse client to live in, developing an understanding of different types of windmill, how they work and their key features.	<u>Textiles</u>  <u>Puppets</u>  Children explore different ways of joining fabrics before creating their own hand puppets based upon characters from a well-known fairytale.	<u>Food</u>  <u>Fruit and vegetables</u>  Children handle and explore fruits and vegetables and how to identify which category they fall into, before undertaking taste testing to establish their chosen ingredients for the smoothie they will make and design packaging for.
Year 2	<u>Structures</u>  <u>Baby Bear's chair</u>  Using the tale of Goldilocks and the Three Bears as inspiration, children help poor Baby Bear by making him a brand new chair. When designing the chair, they consider his needs and what he likes and explore ways of building it so that it is a strong and	<u>Mechanisms</u>  <u>Fairground wheel</u>  This unit brings together the children's knowledge of structures and mechanisms. They design and create their own Ferris wheels, considering how the different components fit together so that their wheels rotate and their structures stand freely. Pupils select	<u>Mechanisms</u>  <u>Making a moving monster</u>  After learning the terms; pivot, lever and linkage, children set to designing a monster that will move using a linkage mechanism. After practicing making linkages of different types and varying the materials they use, children can also bring their monster to life with the gift of movement.

	stable structure and doesn't break again!	appropriate materials and develop their cutting and joining skills to create a final product.	
Year 3	<u>Textiles</u>  <u>Cushions</u>  Having already learnt the basics of sewing and decorating fabric in earlier years, this topic offers extra challenge by introducing two new skills to their repertoire; cross stitch and applique. After learning these techniques, they apply their knowledge to the design, decoration and assembly of their very own cushions.	<u>Structures</u>  <u>Constructing a castle</u>  Learning about the features of a castle, children design and make one of their own. They will also be using configurations of handmade nets and recycled materials to make towers and turrets and constructing a base to secure them	<u>Food</u>  <u>Eating seasonally</u>  Children discover when and where fruits and vegetables are grown and also learn about seasonality in the UK. They will also learn about the relationship between the colours of fruits and vegetables by making three dishes using seasonal ingredients.
			<u>Digital World</u>  <u>Electronic charm</u>  Children design, code, make and promote a Micro:bit electronic charm to use in low-light conditions, developing their understanding of programming to monitor and control their products.
Year 4	<u>Structures</u>  <u>Pavilions</u>  Pupils explore pavilion structures, learning about what they are used for and investigating how to create	<u>Mechanisms</u>  <u>Making a slingshot car</u>  Children transform lollipop sticks, wheels, dowel and straws onto a moving car. They will be using a glue	<u>Electrical systems</u>  <u>Torches</u>  In this topic, children apply their scientific understanding of electrical systems to create a torch made from

	strong and stable structures before also creating their own pavilions complete with cladding.	gun to construct the materials, making the launch mechanism, designing and also making the vehicle using nets and assembling these to the chassis.	<p>easily available materials and objects. They will also design and evaluate their product against set design criteria.</p> <p><u>Digital World</u></p> <p><u>Mindful moments timer</u></p> <p>Children design, program, prototype and brand a Micro:bit mindful moments timer, to a specified amount of minutes. They carry out research existing product analysis to determine how a programmable product may be used to aid a mindfulness moment.</p>
	<p><u>Electrical systems</u></p> <p><u>Electronic greetings cards</u></p> <p>This unit builds on pupils' knowledge of how to incorporate electrical circuits into products from Y4. Children explore how circuits can be adapted to suit different purposes, explore series circuits and recreate one using conductive adhesive tape. They then apply this knowledge to design and create an electronic greeting card.</p>	<p><u>Mechanical systems</u></p> <p><u>Making a pop-up book.</u></p> <p>After choosing a simple story or nursery rhyme, children a four page pop-up storybook design. They will add accompanying captions, incorporating a range of mechanisms and decorative features, including structures, levers, sliders, layers and spacers.</p>	<p><u>Food</u></p> <p><u>What could be healthier?</u></p> <p>Focusing on nutrition, children research and modify a traditional bolognaise sauce to make it healthier. They will cook their new and improved versions, making appropriate packaging and also learn about the ethical considerations of farming cattle.</p> <p><u>Digital World</u></p> <p><u>Monitoring devices</u></p>
Year 5			

			Applying Computing knowledge and understanding to program a Micro:bit animal monitoring device that will support animal care and alert their owners when the temperature is not optimal using sound and an LED. Children develop the CAD skills by learning how to navigate the Tinkercad interface and essential tools to combine multiple objects.
Year 6	<u>Textiles</u>  <u>Waistcoats</u>  Using the skills they have developed over the past few years, children select fabrics, use templates, pin, decorate and stitch to create a waistcoat for a person or purpose of their choosing.	<u>Structures</u>  <u>Playgrounds</u>  This topic draws upon pupils' skills and knowledge of structures, challenging them to design and create a model of a new playground featuring five apparatus, made from three different structures. Creating a footprint as the base, pupils can practise visualizing objects in plan view and also get creative with their use of natural features and cladding for their structures.	<u>Digital World</u>  <u>Navigating the world</u>  Children program a navigational tool to produce a multifunctional device for trekkers. They combine 3D objects to form a complete product in CAD3D modelling software. The unit accumulates with a pitch to share and 'sell' the children's final product concepts and programs to the Adventure Awaits company guest panel.