

Design & Technology Curriculum



<p>We support pupils to develop their artistic and cultural awareness, as well as their imagination and creativity, through both teacher-led instruction and through pupils' interactions with our learning environment and enrichment experiences. Objectives that would fall under the 'Design and Technology' disciplines are predominantly covered by the 'Creating with Materials' Early Learning Goal, but are also touched upon in other areas of learning, as well as in the Characteristics of Effective Learning.</p>				
Year Group	Term	HT2 DT	HT4 DT	HT6 DT
Year 1	Subject	Structures/Mechanisms: Making a Moving Story Book	Textiles: Puppets	Cook: Smoothies
	Unit	Cross-curricular link- Reading	Cross-curricular link- Science (Materials - HT1)	Cross-curricular link- Geography (Beside the Sea) and inline with trip to Brighton Beach to make food to bring for the trip
	Objectives	<ul style="list-style-type: none"> > Identify whether a mechanism is a side-to-side slider or an up-and-down slider and determine what movement the mechanism will make. > Clearly label drawings to show which parts of their design will move and in which direction. > Make a picture that meets the design criteria, with parts that move purposefully as planned. > Evaluate the main strengths and weaknesses of their design and suggest alterations. 	<ul style="list-style-type: none"> > Join fabrics together using pins, staples or glue. > Design a puppet and use a template. > Join their two puppets' faces together as one. > Decorate a puppet to match their design. 	<ul style="list-style-type: none"> > Describe fruits and vegetables and explain how to identify fruits. > Name a range of places that fruits and vegetables grow. > Describe basic characteristics of fruit and vegetables. > Prepare fruits and vegetables to make a smoothie.
Year 2	Term	HT2	HT4	HT5
	Unit	Structures/Mechanisms: Fairground Wheel Cross-curricular link- Science (use of materials)	Cook: Balanced Diet Cross-curricular link- PSHE (Healthy Me)	Textiles: Pouches Cross-curricular link- Science (Use of Materials) - HT2
	Objectives	<ul style="list-style-type: none"> > Describe how axles help wheels move a vehicle and design and label a working fairground wheel. > Evaluate different designs. > Describe the properties of different materials and select appropriate materials for the wheel. > Build a stable structure, test elements of the design and adapt the design as necessary. > Make the wheel rotate, evaluate a wheel mechanism and adapt it as necessary. > Recall that a survey is used to find out what people like, tally results and use the results to inform the design. > Add pods for the correct number of people and ensure that the pods stay upright when rotating around a fixed point. > Explain the decisions for the pod design. 	<ul style="list-style-type: none"> > Name the main food groups and identify foods that belong to each group. > Describe the taste, feel and smell of a given food. > Think of three different wrap ideas, considering flavour combinations. > Construct a wrap that meets the design brief and their plan. 	<ul style="list-style-type: none"> > Sew a running stitch with regular-sized stitches and understand that both ends must be knotted. > Prepare and cut fabric to make a pouch from a template. > Use a running stitch to join the two pieces of fabric together. > Decorate their pouch using the materials provided.
Year 3	Term	HT3	HT4	HT5
	Unit	Textiles: Egyptian Collars Cross-curricular link- History - Egyptians	Structures/Mechanisms: Pneumatic Toys Cross-curricular link- Science (Light and Shadow)	Cook: Easting Seasonally Cross-curricular link- Climate
	Objectives	<ul style="list-style-type: none"> > Demonstrate their ability to use cross-stitch as a decorative feature or to join two pieces of fabric together. > Develop appliqué designs based on design criteria. > Design, cut and shape their template for an usekh or wesekh collar with increasing accuracy. > Decorate their Egyptian collar using a variety of techniques, such as appliqué, cross-stitch, beads, buttons and pinking. > Measure and attach a ribbon with a running stitch. > Recognise different types and qualities of fabrics. > Explain the aesthetic and functional properties of some of their material choices. 	<ul style="list-style-type: none"> > Draw accurate diagrams with correct labels, arrows and explanations. > Correctly identify definitions for key terms. > Identify five appropriate design criteria. > Communicate two ideas using thumbnail sketches. > Communicate and develop one idea using 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. > Create a finished pneumatic toy that fulfills the design brief. 	<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 positively affects the environment. > Design a tart recipe using seasonal ingredients.
Year 4	Term	HT2	HT5	HT6
	Unit	Cook/Structures: Adapting Recipe/ Food Packaging Cross-curricular link- RE (Christianity- sell food at Jingle Mingle)	Textiles: Book Sleeve Cross-curricular link- Reading	Structures/Mechanisms: Switches Cross-curricular link- Science (Electricity)
	Objectives	<ul style="list-style-type: none"> > Describe features of biscuits using taste, texture and appearance. > Follow a recipe with support. > Use a budget to plan a recipe. > Adapt a recipe using additional ingredients. 	<ul style="list-style-type: none"> > Identify the features, benefits and disadvantages of a range of fastening types. > Write design criteria and design a sleeve that satisfies the criteria. > Make a template for their book sleeve. > Assemble their case using any stitch they are comfortable with. 	<ul style="list-style-type: none"> > Identify electrical products and explain why they are useful. > Help to make a working switch. > Identify the features of a torch and how it works. > Describe what makes a torch successful. > Create suitable designs that fit the success criteria and their own design criteria. > Create a functioning torch with a switch according to their design criteria.
Year 5	Term	HT2	HT4	HT6
	Unit	Build / Mechanical Systems: Gears and Pulleys Cross-curricular link- Science (Forces)	Textiles: Stuffed Toys Cross-curricular link- Science (Materials)	Build / Sew / Cook: Dragons' Den (Stall for Summer Fair) Cross-curricular link- Maths (financial literacy)
	Objectives	<ul style="list-style-type: none"> > Give examples of machines that use gears and/or pulleys. > Describe how gears and pulleys work and their purpose. > Design and make a gear and pulley system. > Write a problem statement. > Write questions for market research, provide feedback and research market competitors. > Write and use a design brief to guide design. > Evaluate a product against a set of design criteria, provide useful feedback and incorporate changes. > Draw and annotate an eco-gadget bike design. 	<ul style="list-style-type: none"> > Design a stuffed toy, considering the main component shapes of their toy. > Create an appropriate template for their stuffed toy. > Join two pieces of fabric using a blanket stitch. > Neatly cut out their fabric. > Use appliqué or decorative stitching to decorate the front of their stuffed toy. > Use blanket stitch to assemble their stuffed toy, repairing when needed. > Identify what worked well and areas for improvement. 	<ul style="list-style-type: none"> > Conduct market research into a different products > Evaluate a range of relevant products > Create prototypes of the product > Exploring pricing strategy of the product > Look at a marketing strategy for the product > Create a business proposal and plan > Pitch products to external visitors from local businesses > Identify what worked well and areas for improvement.
Year 6	Term	HT3	HT4	HT6
	Unit	Structures/Mechanisms: Frame Structures as WW2 shelters Cross-curricular link- History		Cook: Developing a Recipe Cross-curricular link - produce food for the graduation
	Objectives	<ul style="list-style-type: none"> > Research key events and individuals relevant to frame structures. > Formulate a plan with a step-by-step list of tasks and resources. > Use tools to accurately measure, mark out, cut, shape and join materials to make frameworks. > Use finishing techniques suitable for the product > To test the sturdiness and functionality of the shelter > Critically evaluate their products against a range of criteria. 		<ul style="list-style-type: none"> > Describe the process of beef production. > Research a traditional recipe and make changes to it. > Add nutritional value to a recipe by selecting ingredients. > Prepare and cook a meal for graduation.