**Fowey Primary School**

**Design and Technology Learning overview**

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|  | **Autumn 1.1** | **Autumn 1.2** | **Spring 2.1** | **Spring 2.2** | **Summer 3.1** | **Summer 3.2** |
| **EYFS** **Expressive Arts and Design**  | All about me  Using pencils for drawing, and a range of tools to develop fine motor skills, the children will create self-portraits. They will use mirrors to notice facial details and use different textures and materials to represent these in a portrait. Using a range of mark making techniques including a paintbrush, fingers and other mark making tools, the children will create a silhouette painting of a ‘sign of Autumn’. They will explore and notice using their senses to inspire the use of colour in their painting.     | Food and Celebrations  I can explore and play with a range of materials, including glue, glitter and chalk, the children will create firework pictures. They will explore colours and texture through choice of materials used.  The children will explore manipulating different materials using their hands and interact with small tools to develop control and confidence with fine motor movements through manipulating and shaping clay diya lamps and building a junk modelled house for Stick Man. The children will use scissors to make snips and explore shape when designing Christmas cards. Children will continue to develop using a range of mark making techniques including a paintbrush, fingers and other mark making tools to add detail to their Christmas cards.    | People who help us  The children will work to express their ideas using a range of art forms including Winter themed collages, working both independently and collaboratively. The children will practice weaving techniques to design a woven emergency vehicle, creating a checkered pattern. The children will explore how to use scissors more confidently when creating emergency worker hats out of paper plates.    | Journeys and adventures The children will revisit and use key materials, including paper, cardboard, glue, tape and craft items to junk model vehicles designed for adventures e.g., campervans and rockets. The children will create space pictures, inspired by Van Gogh ‘A Starry Night’. The children will use a variety of tools collaboratively to create a role play castle, added to and improved on a weekly basis.    | Looking after our world  The children will continue to explore a range of mark making techniques including fingers and paint brushes to create butterfly and ladybird art, involving symmetry. The children will use tools and a variety of attaching techniques to build a paper plate caterpillar. The children can reflect and respond to art in my own way, talking about what they see and sharing likes and dislikes. They will revisit showing accuracy and care when drawing freely in play-based learning.    | Seaside and Water  The children will revisit manipulating different materials to make things for a desired effect or outcome using their hands and different tools, experimenting with colour, design, and texture to make clay marine creatures. The children will create a sea scape using shade and shadow inspired by Monet. The children will join materials and work in 2D and 3D to represent ideas, using a variety of tools and techniques to create sea creatures explaining the process before making improvements. They will build on these skills by creating a boat using chosen resources that can float across a ‘role play sea’.    |
| **Year 1/2** | Art Unit | Art Unit | **Cooking and nutrition** Balanced diet Opportunities for children to learn about the importance of a balanced diet and use that knowledge to create a tasty wrap. | **Textiles** Pouches Learn how to sew a running stitch ready to design, make and decorate a pouch using a template. |  | **Mechanical systems and structures** Structures: Baby Bear’s chair Explore stability and methods to strengthen structures, to understand Baby Bear’s chair weaknesses and develop an improved solution for him to use. Mechanisms: Making a moving monster Explore levers, linkages and pivots through existing products and experimentation, use this research to construct and assemble a moving monster.  |
| **Year 3** |  |  | **Cooking and nutrition** Eating seasonally Nutrition unit including opportunities for children to learn about seasonal foods and create a seasonal food tart. | **Textiles** Cross-stitch and appliqué Learn and apply two new sewing techniques – cross-stitch and appliqué. Utilise these new skills to design and make a cushion or Egyptian collar. |  | **Mechanical systems and structures** Mechanical systems: Pneumatic toys Explore pneumatic systems, then apply this understanding to design and make a pneumatic toy including thumbnail sketches and exploded diagrams. Structures: Constructing a castle Identify and learn about the key features of a castle, before designing and making a recycled-material castle (structure).  |
| **Year 4** |  |  | **Cooking and nutrition** Adapting a recipe nutrition unit including opportunities for children to learn a basic biscuits recipe and adapt it to suit a target audience | **Textiles**  Fastenings Analyse and evaluate a range of existing fastenings, then devise a list of design criteria to design, generate templates and make a fabric book sleeve. |    | **Mechanical systems and structures** Mechanical systems: Making a slingshot car Using a range of materials, design and make a car with a working slingshot mechanism and house the mechanism using a range of nets. Structure: Pavilions Investigate and model frame structures to improve their stability, then apply this research to design and create a stable, decorated pavilion.   |
| **Year 5** |  |  | **Cooking and nutrition** Developing a recipe cooking and nutrition unit including opportunities for children to learn a simple bolognese recipe and adapt it to improve nutritional content | **Textiles**Stuffed toys Design a stuffed toy and make decisions on materials, decorations and attachments (appendages), after learning how to sew a blanket stitch. |  | **Mechanical systems and structures (8 lessons)** Structure: Bridges Test and analyse various types of bridge to determine their strength and stability. Explore material properties and sources, before marking, sawing and assembling a wooden truss bridge.  Mechanical systems: Pop-up book Create a functional four-page pop-up storybook design, using lever, sliders, layers and spacers to create paper-based mechanisms.  |
| **Year 6** |  |  | **Cooking and nutrition** Come dine with me cooking and nutrition unit including optional opportunities to supplement the ‘Come dine with me’ project with learning about the basic tastes and complementary flavours. | **Textiles** Waistcoats Using a combination of textiles skills such as attaching fastenings, appliqué and decorative stitches, children design, assemble and decorate a waistcoat for a chosen purpose | .  | **Mechanical systems and structures**Mechanical systems: Automata toys Develop a functional automata window display, to meet the requirements in a design brief. Explore and create cam, follower and axle mechanisms to mimic different movements.  Structures: Playgrounds Research existing playground equipment and their different forms, before designing and developing a range of apparatus to meet a list of specified design criteria.  |