Design Technology

Statement

Intent

At Cummersdale School we believe that Design Technology is an inspiring, rigorous and practical subject. Design and Technology encourages children to think creatively; to solve problems both as an individual and as a member of a team. At Cummersdale we encourage children to use their imagination to design and make products to solve real and relevant problems. We coherently plan sequenced lessons to help ensure full coverage of knowledge, understanding and skills required in the National Curriculum, considering their own and others' needs, wants and values. It is our aim to create strong cross curricular links with other subjects, such as Mathematics, Science, Computing, and Art. We want Design and Technology to prepare our children, to give them the opportunities, responsibilities, and experiences they need to be successful in later life.

Implementation:

Design and Technology is a crucial part of school life and learning and it is for this reason that as a school we are dedicated to the teaching and delivery of a high-quality Design and Technology curriculum. This is implemented through many cross-curricular links with maths, science, computing and art. Furthermore, as a school we deliver stand alone Design and Technology projects through the use of the Kapow Primary Design and Technology schemes of work. The reflect the national curriculums target strands of: Design, make, evaluate, technical knowledge and cooking and nutrition through their own 6 strands consisting of:

- Mechanisms
- Structures
- Textiles
- Cooking and Nutrition (Food)
- Electrical systems (KS2)
- Digital World (KS2)

Their spiral curriculum model allows revisiting of key areas again and again throughout the children's journey through the school years; building on complexity and previous knowledge.

The teaching of Design and technology will be implemented through:

- A well thought out, whole school, yearly overview of the DT curriculum which allows for progression across year groups in all areas of DT (Six strands of Kapow primary)
- Well planned and resourced projects providing children with a hands-on and enriching experience
- A range of skills being taught ensuring that children are aware of health and safety issues related to the tasks undertaken
- Teachers are given flexibility to plan for Design and Technology across the curriculum with the teaching of DT as a block of lessons, following a Kapow scheme of work.
- Each project from Year 1 to Year 6 addresses the principles of designing, making, and evaluating and incorporating relevant technical knowledge and understanding in relevant contexts.
- Key skills are mapped across the whole school ensuring progression. Design Technology lessons are taught in rotation with Art, half termly.
- Pupils being introduced to specific professionals or world famous designers, chefs, nutritionists, etc.

Early Years Foundation Stage

Early Years Foundation Stage During the EYFS pupils explore and use a variety of media and materials through a combination of child initiated and adult directed activities. They have the opportunities to learn to:

- Use different media and materials to express their own idea
- Use what they have learnt about media and materials in original ways, thinking about form, function and purpose.
- Make plans and construct with a purpose in mind using a variety of resources.
- Develop skills to use simple tools and techniques appropriately, effectively and safely • Select appropriate resources for a product and adapt their work where necessary.
- Cook and prepare food adhering to good health and hygiene routines.

Each class has carried out notable work in Design and Technology as follows:

Reception: Throughout the Reception year children are exposed to a variety of materials which they can use to junk model based on the topic of the term. Alongside this discrete lessons will be taught focussing on specific skills. Children are able to bring a story to life; The Gingerbread Man book is recreated with moving characters. As we move through the year and the children see their fruit and vegetables growing we look into healthy diets and have a focus on food technology with tasty treats such as smoothies and focaccia faces. As summer starts, Reception looks at structures creating boats that float and create sea creatures for an underwater scene.

Year 1 and 2: As part of our seaside and textiles topics the children made felt fish by sewing the edges and then decorating them to create a lovely classroom display. When we studied castles the class made 3D models of castles and investigated folding techniques with moving parts. In design and technology the children have created books based on Humpty Dumpty with moving parts.We do a lot of work on food and have made some tasty things such as ’moon rock buns’ for our space topic.

Year 3 and 4: The children have created sling-shot cars and evaluated their performances based on the design used and mechanics. Using knowledge and investigations into materials, children created a sports trophy to present for their sports tournament. Through our science topic of Light, and after reading Lemony Snicket’s ‘The Dark’, the children created a working torch with a switch. Looking at chemical reactions to create working volcanos and investigating which fizzy drink created the most volatile eruption was a big hit with the children.

Year 5 and 6: By year 5 and 6 the children are ready to be introduced to the more complex concepts of the D&T curriculum. They create and design gingerbread houses. The children study the ingredients of a simple biscuit recipe, in depth, to learn the role of each ingredient. We look into the science of baking and how each ingredient works together to create the characteristics of a biscuit that we all know and love. They also have the opportunity to create a model Berlin Wall. By working to a brief, the children are able to focus on using the materials they have been given to create a functional and visually interesting final product.

Impact

The impact of Cummersdales DT curriculum will be constantly monitored through both formative and summative assessment opportunities. The Kapow units of work, when accessed, all have end of unit quizzes and knowledge catchers which can be used at the start and end of a unit.

After the implementation, cummersdale school pupils should leave school equipped with a range of skills to enable them to succeed in their secondary education and be innovative and resourceful members of society. Children will show a great enjoyment and confidence in Design and Technology that they will then apply to other areas of the curriculum. Through the carefully planned and implemented learning activities, the pupils develop the technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world.

Curriculum Map

Cycle A	Autumn	Spring	Summer 1
Reception	Mechanics - moving stories/puppets	Food where does it come from - healthy balanced diets	Textiles - under the sea Structures - boats
Year 1 and 2	Mechanics - moving monsters Food a balanced diet	Mechanisms Windmills/Moving books	Food - Fruit and Vegetables
Year 3 and 4	Electrical systems - Torches	Mechanical systems - Pneumatic toy	Structures - Constructing a Sports Stadium
Year 5 and 6	Escaping over the Berlin Wall	Electric Greetings Cards	Healthy Eating- seasonal foods

Cycle B	Autumn 1	Spring	Summer
Reception	Mechanics - moving stories/puppets	Food where does it come from - healthy balanced diets	Textiles - under the sea
Year 1 and 2	Textiles Mechanisms Fairgrounds	Textiles - Puppets Structures - Chairs	Mechanisms Wheels and axles
Year 3 and 4	Mechanical systems - Slingshot cars	Food - Adapting a Food Recipe	Textiles - Cushions
Year 5 and 6	Gingerbread Houses	Textiles - Designing a Waistcoat	Structures - Bridges