Cavendish Church of England Primary School

Design & Technology Policy

Signed on behalf of the Governing Body	
Signed: Headteacher	
Date:	Autumn 2020
Date to be Reviewed:	Autumn 2022

Challenge, Creativity, Compassion: Create a pure heart in me – Psalm 51:10

Our Vision

In our school our Christian vision shapes all we do.

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Our School Vision Statement reflects this commitment as children and staff are taught to challenge inequality, prejudice, bullying and harm; to respond with compassion and sensitivity to individual need and to respect the rights of all individuals to be safe and nurtured within God's world.

We encourage children to respond creatively to internal and external challenges in life, with compassion for others, including consideration for creation and the planet itself. Thus we show how to live justly and with a pure heart, reflecting the teachings of Jesus and God's love within our school environment.

Intent

At Cavendish Church of England Primary school our design and technology curriculum encourages children to use their creativity and imagination, to design and make products that solve real and relevant problems within a variety of contexts. The children will be taught to combine their designing and making skills with knowledge and understanding in order to design and make their own products. They will learn how to use problem-solving to overcome any challenges that arise in the making of their products and develop self-evaluation skills. Children are encouraged to work both independently and as part of a team to design, build and evaluate. This requires children to show compassion for others' ideas and products, developing the skill of providing constructive and positive feedback. Consideration of the use and renewability of resources supports children's developing respect and compassion for the environment.

Implementation

Teachers will provide hands on learning experiences where children have the opportunity to design, create and evaluate their own products. Design and technology units are taught as a block unit using a cross curricular approach linked to topic themes to provide a meaningful experience. Each unit is taught in half termly blocks and taught across the three key stages (KS1, LKS2, UKS2). Teachers follow a two year rolling curriculum to enable all children to engage in all learning units.

The design and technology curriculum is implemented through:

- A stand-alone DT day where children design, make and evaluate their own product.
- Access to existing products to evaluate and to support ideas.
- Access and opportunities to use different types of equipment.
- A clear and effective teaching sequence that supports progression.
- Lessons that incorporate skills from prior learning to enable children to apply these skills and develop them further. (See progression maps)
- Key vocabulary introduced at different stages of learning and used in conversation.
- A cooking afternoon each half term in small groups to make and evaluate a food product linked with class topic.
- In Early years children engage in the following activities; junk modelling, construction play, cooking and craft activities, linking to KUW, CD (creative arts and design) and PD.

Impact

Teaching Design and Technology as whole day and half day lessons allows children to fully immerse themselves in the design and making of products. It allows children the time to overcome challenges and amend their products.

The impact of the design and technology curriculum will be measured through:

- Formative assessment against subject statements on Target Tracker.

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- Pupil discussions on evaluation of products.
- Practical discussion and evaluation of how their product works enables application of scientific and mathematical understanding.

Enrichment

The school engages in house enrichment activities each term. Design and technology based activities are a part of these enrichment activities and are applied in a cross curricular approach. Children also have opportunities to develop their design and technology skills during our annual Science week and when visiting Science fairs at secondary schools.

Our extensive cooking programme supports children's understanding not only of specific skills and techniques, but also of food sources and contribution of diet towards a healthy lifestyle. This forms part of our OneLife Healthy Schools Gold Award.

Through our forest schools programme, each child has the opportunity to apply design and technology skills in a natural setting. Activities are child led but the forest school progression map indicates specific areas of development such as tool use, applied craft, shelter building, knots, fire making and cooking.

Cultural capital

Within our design and technology curriculum, all children are given the opportunity to make and try a variety of foods from around the world as well as understanding the importance and relevance of specific foods to different people and the role food plays as part of religious and cultural festivals. Children will practice their individual liberty through giving personal opinions on foods whilst at the same time show respect for food from other cultures. All children are given the opportunity to work with a range of different equipment and will learn about significant people in the world of design and technology. By linking design projects to topic areas children are encouraged to consider different challenges around the world and across history, e.g. shelter building, water conservation, preserving resources and recycling.

The design and technology curriculum promotes the school's Christian ethos as it allows children to express their creativity and overcome challenges in the process of design and making. It is also important for children to practice the value of compassion in design and technology as it is an area where children will be providing constructive feedback t their peers.

Inclusion

We support children of all abilities and backgrounds in our curriculum. Children on the SEND register are supported through scaffolded learning activities. These could include adult support, peer support, support in using equipment and support in the design phase. AGT children are supported through open ended tasks where deeper thinking, problem solving and decision making is required. Whilst an annual contribution is requested to cover food ingredients, no child is excluded from the DT curriculum due to an inability to pay. Children with additional physical needs, such as mobility or dyspraxia or being left handed are given additional support and where appropriate adjusted equipment to facilitate inclusion.

Cross curricular links
English :

Oral discussion, applied reasoning, analysis and evaluation skills are used to create and reflect on each project.

Maths:

Application of number, nets, shape ad 3D models in design and building. Practical use of measure and capacity in cooking.

Science:

Application of scientific knowledge, for example properties of materials to inform product choices.

Application of Biology in plant and animal food choices. Dissection of fish in trout fish cake recipe.

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Application of Chemistry in baking e.g. use of raising agents, how ingredients combine together. Impact of heat.

Application of Physics, impact of heat in cooking, how to construct and make moving parts. Kinetic and physical energy.

Topic, History, Geography:

All cooking is linked to topic areas e.g. WW2 ration recipe, food eaten in Ancient Greece, Victorian Christmas Pudding, exotic fruits. Design projects also linked to topic areas ie 3D representation of the rainforest layers and WW2 Anderson shelter

The impact of design and technology is considered from an historical perspective, eg, influence of classical architecture on rebuilding of London after the fire of 1666; the importance of RADAR in WW2; comparative study of design features of Spitfire and Messerschmitt in studying the Battle of Britain; impact of technology advances in Victorian Britain and subsequent social and health implications.

Computing:

Role of computing and software in design. Application of automated movement of beebots. Role of computing in visual design and graphics.

RE:

Role of food to support religious festivals, 3D construction to aid understanding of aspects of religion e.g. religious texts construction of Torah scrolls, Sikh Gurdwara. Visits to religious buildings for architectural and constructional application e.g. Cambridge Mosque

Arts:

Design is integrally linked to the arts. Schools Arts Award programme encourages children to consider aesthetics in their own design and execution of products and materials. Applied arts include sewing, craft, clay and construction.