St John's Stonefold CE Primary School, Rising Bridge

Whole School Policy for Design and Technology	
Written By	**E A Dawson**
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Values:

Empathy Aspiration Generosity Love Endurance

Mission:

Rooted and Established in God's Love: Nurture, Grow, Fly (Ephesians 3:17)

Vision:

Our vision is to live and grow together as a loving church school family, who celebrate one another's individuality. Built upon our shared Christian values, St John's provides our children with excellent teaching of a bespoke and innovative curriculum, empowering them to flourish with the knowledge and skills for life.

From our vision, we inspire our children to have uncompromising aspirations and to thrive and succeed.

Curriculum Intent

The aim of teaching Design and Technology at St. John's Stonefold is to provide children with real life context for learning. Our curriculum provides challenge for all children. We aim to provide a broad and balanced curriculum that helps children to foster a love of DT. Through Design and Technology children are taught to develop their creative, technical, and practical expertise that inform their everyday lives and support them to participate successfully in the technological world. Teachers and staff work with children to help them develop skills, make prototypes and high-quality products. Additionally, children develop their knowledge of how to critique, evaluate, test their ideas and products and the work of others as they progress through school.

The main aims of this policy include:

- To stimulate curiosity in design.
- To do research on existing products/food items to inform choices in their own work.
- To engage children in the design process and how these contribute to design decisions.
- Secure knowledge of how to use relevant materials, equipment, tools and manufacturing methods and how they inform the design their product.
- To explore attitudes towards the made world and how we live and work within it.
- To develop an understanding of the concepts of taste, shape, space, colour, texture, pattern and function.
- To work with a wide variety of styles and forms of design from a range of periods and cultures.
- To promote spiritual development in a personal way through creative work.

Teaching and Learning Style

We encourage our children to develop their skills of research, observation and evaluation and to be involved in discussion. We use the environment, artefacts, the work of famous designers, and food items for observation and as a stimulus for their own work. Children should express and develop their own thoughts and feelings, which they can then use to create their own work using a wide variety of materials. We prioritise developing pupils' ability to design by providing them with knowledge and equipment to support in the application of their skills. Children should be made aware of concepts such as 'functionality' and 'aesthetics' and how these can inform their final design choice. Children are encouraged to work collaboratively and consider each individual child's ideas and needs. This teaches children the importance team work and communication.

Teachers should try and include the 6 DT principles in each project and make the children aware of these.

The Six DT Principles

User - Pupils should have a clear idea of who they are designing and making products for,

considering their needs, wants, values, interests and preferences. The intended users could be themselves or others, an imaginary or story-based character, a client, a consumer or specific target group.

Purpose - Pupils should be able to clearly communicate the purpose of the products they are designing and making. Each product they create should be designed to perform one or more defined tasks. Pupils' products should be evaluated through use.

Functionality - Pupils should design and make products that work/function effectively in order to fulfil users' needs, wants and purposes.

Design decisions - Pupils need opportunities to make their own design decisions. Making design decisions allows pupils to demonstrate their creative, technical and practical expertise, and draw on learning from other subjects.

Innovations - When designing and making, pupils need some scope to be original with their thinking. Projects that encourage innovation lead to a range of design ideas and products being developed and are characterised by engaging open-ended starting points for learning.

Authenticity - Pupils should design and make products that are believable, real and meaningful to themselves and others.

Implementation of the Curriculum

DT at Stonefold is taught through the school's thematic curriculum, which ensures that the material from the revised National Curriculum is taught in a lively and imaginative way. DT feeds into and influences other curriculum areas. Children are taught in whole class and small groups depending on the learning objective.

The curriculum is outlined as below:

Key stage 1

When designing and making, pupils should be taught to:

Design

- design purposeful, functional, appealing products for themselves and other users based on design criteria
- generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology

Make

- select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
- select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

Evaluate

- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria

Technical knowledge

- build structures, exploring how they can be made stronger, stiffer and more stable
- explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.

Key stage 2

When designing and making, pupils should be taught to:

Design

- use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
- generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

- select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
- select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

- investigate and analyse a range of existing products
- evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
- understand how key events and individuals in design and technology have helped shape the world.

Technical knowledge

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]
- understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
- apply their understanding of computing to program, monitor and control their products.

Cooking and nutrition

Pupils should be taught to:

Key stage 1

- use the basic principles of a healthy and varied diet to prepare dishes
- understand where food comes from.

Key stage 2

- understand and apply the principles of a healthy and varied diet
- prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
- understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

Entitlement

All pupils are entitled to have access to the design and technology curriculum regardless of ability race, gender, cultural background or any physical or sensory disability.

Lancashire Guiding Principles for Primary Design & Technology states that design and technology should be taught a minimum of:
Key Stage 1 – 36 hours annually
Key Stage 2 – 36 hours annually

Planning

Design and technology is a foundation subject in the National Curriculum. To assist in short term planning our school uses the school progression map as a starting point to plan. Teachers then create a short term medium plan Our medium-term plans give details of each unit of work for each term. They identify learning objectives and outcomes for each unit, and ensure an appropriate balance and distribution of work across each term.

EYFS

In the Early Years Foundation Stage the focus is on independent learning through continuous provision with teacher input to promote skills and techniques new to the children.
We have a wide variety of construction kits which are always available for the children to access independently. In addition, we have junk modelling materials available and regular opportunities to use clay and do cooking.

A curriculum progression map is stored centrally on the teachers shared drive and can be accessed when needed.
The DT curriculum is taught in a four-year cycle and is based on the themes and topics below:

Year A

KS1:

Funny Bones

Up, Up and Away!

Our School

KS2:

Moving With the Times

To Infinity and Beyond!

This is Your Life

Year B

KS1:

Capital!

What is it like in the Amazon?

Toy Story

KS2:

Disasters and Triumphs

Food Glorious Food

Back to the Future

Year C

KS1:

Masterchef!

Let's Explore!

What a Wonderful World!

KS2:

Our Wonderful World

There's No Place Like Home

Masterpiece!

Year D

KS1:

Is Climate Cool?

Home Sweet Home!

Kings and Queens

KS2:

Crime and Punishment

World in Danger

Citius, Altius, Fortius

Contribution of DT to Other Subjects

English: Children are required to evaluate and discuss their products which means they need to articulate and compare their ideas and feedback with other peoples. DT will promote language by teaching pupils to justify and clarify their ideas and views.
Maths: In DT children will need to know the size and shape of the materials they are or want to use. This means they will sometimes make use of what they have learnt in their Maths lessons. Additionally, when pupils carry out investigations they will need to present and collect data to move forward.
History: designing and making clothing, jewellery, and settlements covered in the topics.
Geography: designing and making towns, cities or river scenes.

Equal Opportunities

We are an inclusive school that ensures all pupils are provided with equal learning opportunities regardless of their characteristics or backgrounds. Teachers adapt the delivery of the D&T curriculum based on the needs of the pupils in their class. In order to ensure pupils with SEND achieve to the best of their ability, teachers will adapt targets and the delivery of the curriculum for these pupils. We aim to maximise the use and benefits of DT as one of many resources to enable all pupils grow and flourish.

Health and Safety and Hygiene

Children maximise their learning experience by having full access to DT materials. Health and safety has been taken into account and is understood by staff as below:

- Teachers should test equipment before children are granted use of materials.
- Making the children aware of the possible risks associated with an activity.
- Students must obey safety rules and respond appropriately.
- When working with food all allergies and possible illnesses will be taken into account.
- When handling food children should be made aware of specific hygiene measures such as; washing hands, not sharing food and cleaning an area after use.

Resources

Resources are shared with art and are centrally stored in the Art room. They are ordered to suit the topics to be covered during that year.
We buy food items as they are needed throughout the year.

Impact of the Curriculum

How work is recorded:

Work should be recorded in class floor books and scrapbooks. Teachers are encouraged to take pictures to document learning. Teachers should be aware of photo consent when taking pictures of the children and their work.

How work is assessed:

We feel that the assessment of Design and Technology as a foundation subject should not be an onerous process. Therefore, we have created an assessment format that simplifies this process whilst also gathering all assessment data that is needed.

Please save this to the assessment folder in the 2021/22 area on shared drive.

Age Related and Above (with SEND marked)	Working Towards the Expected Level (with SEND marked)
Percentage of children:	Percentage of Children:

The Governing body:

Regular reports are made to the governors on the progress of DT provision. The policy will be reviewed every three years or in accordance with any changes to legal requirements.

Standards in the subject are monitored by:

- Discussions between teacher and pupil
- Evidence in floor books.
- Annual resource audit