

# DESIGN AND TECHNOLOGY

## CURRICULUM STATEMENT.

### Curriculum Intent.

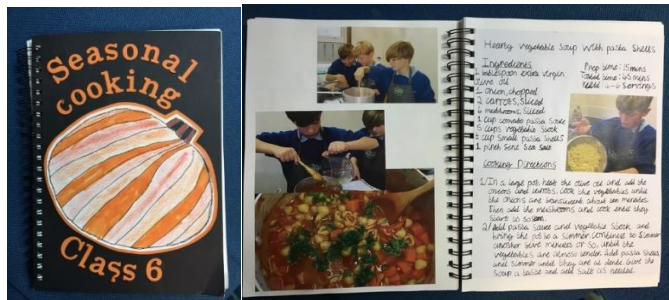
At Churchill C.E.V.C. Primary School we want all children to realise the impact that both good and bad design plays in their day to day life. We aim to inspire a love of learning in this subject area, encouraged by an understanding of the everyday importance DT has within our lives. Through our curriculum provision we want them to learn how to design and make products that solve real and relevant problems within a variety of contexts, including our school community and wider local area. Lessons will build upon children's curiosity of the world and embrace their inquisitive nature in everyday problems or challenges. We will encourage children to be imaginative and inventive, consider their own and others' needs, wants and values and have the ability to investigate, evaluate and assess both their own and existing products. The curriculum will draw upon children's everyday interests and experiences and build on existing knowledge. Children understand that in the design process they will undoubtedly face challenges, but this is an integral part of solutions being developed. As they engage in this learning process they will be encouraged by our four key attitudes for life: be ready, be resilient, be responsible and be respectful. Children will be confident that it is safe to make mistakes and see these as an important part of learning in DT.

# Curriculum Implementation.

Our school has recently adopted the 'Projects on a Page' scheme of work, produced by 'The Design and Technology Association'. This was chosen because it allows us the flexibility to tailor each of the Design, Make and Evaluate Assignments, enabling us to respond to the current interests of our children, and provides us with the ability to deliver relevant and exciting design lessons which can be linked to class topics and/or immediate or wider community needs. At Churchill we are lucky enough to be near to the great historical city of Bristol and so are able to visit important structures like Isambard Kingdom Brunel's Clifton Suspension Bridge or view the impressive design and engineering of the Severn Bridges which link England to Wales. The local science museum, 'We The Curious,' is another favourite for classes to explore offering many examples of how types of mechanisms work. Our rural location also means that we are near a number of working farms. Lower Stock Farm in a nearby village provides a superb facility which enables a class of thirty to use a purpose built kitchen. This has been an invaluable resource for us when teaching children how to design and produce healthy meals and it has been instrumental in us gaining our 'Healthy Schools Award'. Year 6 children have also used it to take part in the local Rotary Club's 'Young Chef Competition'.



A healthy, nutritionally balanced two course meal designed, produced and beautifully presented for the Rotary Club 'Young Chef Competition'.



A cook book of recipe, which included the use of seasonal produce, designed and ultimately made at Lower Stock Farm.

Working together to make the recipes at the farm kitchen.

Our school is also fortunate to have it's own small, well resourced children's kitchen which is regularly used by all classes for a number of food related topics alongside making biscuits to sell at the Christmas Fair and preparing and cooking donated vegetables for our shared community Harvest lunch. All teachers have access to resources, including appropriate tools and safety equipment, required for the children to develop their cutting and joining skills. These are stored in a locked trolley and are available for every child to use under adult supervision.

Whilst the staff at Churchill have a wealth of ideas and enthusiasm for teaching and delivering high quality D and T lessons, the scheme offers a broad, balanced, structured and useful framework for us to follow. It ensures that we are moving the children's learning forward by providing a clear progression of the knowledge, skills and understanding required by the National Curriculum.

### **EYFS Provision.**

In line with quality Early Years Provision we respond and react on a daily basis to the interests and needs of the youngest children in our school, therefore we have not adopted a published scheme of work for Design and Technology.

The early learning goals for Expressive Arts and Design indicate what the children should know, understand and be able to do by the end of the reception year. Learning will be delivered by providing experiences and activities which will enable children to 'safely use and explore a variety of different materials, tools and techniques, experimenting with colour, design, texture, form and function' and 'use what they have learnt about media and materials in original ways , thinking about uses and purposes.'

Design and Technology can be interwoven through all six areas of the EYFS Framework. In order to prepare children for entering KS1 they should have experienced following:-

- Cutting Skills- e.g. using scissors to cut paper, knives to cut soft fruit.
- Joining Skills- e.g. using glue/tape/staples/hole punch and string to join a variety of materials.
- Creating flaps- e.g. folding paper and card

- Explore and use a construction kits to assemble a variety of imaginative and inventive creations.
- When making things say who and what their products are for .
- Draw what they have made, with some children drawing their ideas before they make.
- Learn procedures for safety and hygiene.
- Ask questions about a range of existing products.
- Exploring the designed and made world through the indoor and outdoor environment and through role play.

## **Key Stages 1 and 2**

At Churchill we aim to teach one D&T topic a term (3 a year)

Each D&T project will include three types of activity:-

- Investigative and Evaluative Activities (IEAs)
- Focused Tasks (FTs)
- Design , Make and Evaluate Assignment (DMEA)

Children will carry out the following aspects and focus areas of learning:-

### Key Stage 1

- Mechanisms- Sliders and Levers/Wheels and Axles
- Structures- Freestanding Structures
- Textiles- Templates and Joining Techniques
- Food- Preparing Fruit and Vegetables

### Lower Key Stage 2

- Mechanical Systems- Levers and Linkages/Pneumatics
- Structures- Shell Structures/ Shell Structures Using Computer Aided Design
- Textiles- 2-D Shape to 3-D Product
- Food- Healthy and Varied Diet
- Electrical Systems- Simple Programming and Control/ Simple Circuits and Switches.

### Upper Key Stage 2

- Mechanical Systems- Pulleys or Gears/Cams
- Structures- Frame Structures

- Textiles- Combining Different Fabric Shapes/Using Computer Aided Design in Textiles
- Food- Celebrating Culture and Seasonality
- Electrical Systems- More Complex Switches and Circuits/Monitoring and Control



Year 2 designed and made jungle animal hand puppets for their puppet show. The children investigated different types of puppets, drew their designs, explored ways to join pieces of fabric together and learnt how to sew, producing a quality final product.

## Assessment

Children's progress through the different aspects and focus areas of D&T taught each term will be formatively assessed by teachers. Teachers use the 'Key Learning in Design and Technology' section of the termly 'Project Planners' to focus their discussions with the children and inform their observations. The information gathered during the projects, whether verbal, written or photographed, about the performance of individual children and groups enables teachers to provide carefully tailored feedback, questioning, explanation and support. Any gaps in knowledge will be noted and fed into the planning for the next project.

## Impact

At Churchill C.E.V.C. Primary we want the children to leave with an understanding that design is all around them and has a constant impact on daily life and the wider world. The children at Churchill will have gained the resilience to take risks, ask questions, make mistakes and improve upon them. They will have developed the knowledge and understanding of a variety of products and materials to help them to solve practical problems in the future and will have gained some of the skills which they need to actually make their own designs. They will understand that the design process fulfils a particular need,

*"Design is as much a matter of finding problems as it is solving them." (Bryan Lawson, Author, Architect and Scholar)*

and that high quality design and technology can make an essential contribution to the creativity, culture, wealth and well being of society. They will make links and understand how their learning in other areas of the curriculum feeds into good design.

*"Design is where science and art break even." (Robin Mathew, Designer)*

As a 'Healthy School' we want our children to leave understanding the fundamental importance of and knowing how to produce, a healthy, nutritionally balanced meal to enable them to be the best they can be both physically and mentally as they grow.