



Whiston Willis Primary Academy

Design and Technology



Lead Responsibility	Hayley Hemnell	Approved By Governors	
Implementation date	March 2021	Review date	February 2022

MISSION STATEMENT

Our school is a safe, happy and inclusive place where everybody is valued, treated equally, respected and where difference is celebrated.

We believe that all members of our School community should reach their full potential academically, socially and emotionally.

We are committed to ensuring that every child is prepared for their future lives as responsible citizens with a strong moral purpose.

Learning is a lifelong journey and we strive for all children to enjoy learning; leading to independent, motivated 'Lifelong Learners' who are prepared to face the modern day wider world with enthusiasm.

Vision and Aims

At Whiston Willis, we want to encourage an openness and flexibility of mind, so as to meet new challenges and problems. Design and Technology is about providing opportunities for our children to develop their capability. By combining their design and making skills with knowledge and understanding they will learn to create quality products. Our children are encouraged to be creative and innovative, and are actively encouraged to think about important issues such as sustainability and enterprise.

Our Design and Technology education involves two important elements- learning about the designed and made world and how things work as well as learning to design and make functional products for particular purposes and users. By taking part in an inspiring and rigorous practical subject, our children should be able to use their creativity, imagination and social skills to design and make products that solve real and relevant problems in a variety of contexts. Our children will also get the opportunity to develop the life skills and knowledge associated with healthy living, food nutrition and cookery. Our Design and Technology curriculum will bring learning to life.

As a school and with accordance with the National Curriculum's expectations, we aim to ensure that all pupils:

- Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world.
- Build and apply a repertoire of knowledge, understanding and skills in order for pupils to design and make high quality prototypes and products for a wide range of users.
- Critique, evaluate and test their ideas and products and the work of others.
- Understand and apply the principles of nutrition and learn how to cook.

Planning and Delivery

EYFS

The new EYFS framework clearly identifies and strengthens the role of design and technology. D & T is specifically named in the area of 'Expressive Arts and Design'. It makes an important contribution to children's development in all seven areas of learning. Designing typically involves talk and physically arranging materials and components; children might draw their ideas before they make if they wish to. Children can design as they make. In EYFS designing and making is fluid. Children need to be given opportunities to make their own choices/decisions and to discuss the reasons for these. Children can draw what they have made.

At Whiston Willis, children in EYFS are taught procedures for safety and hygiene. They are able to develop practical skills and techniques using a range of materials (food, textiles and construction materials.) Our children develop their knowledge and understanding in relation to mechanisms, structures, working with food and textiles. They can explore and use a range of construction kits within continuous provision. We encourage children to ask questions about existing products. There are opportunities for children to explore the designed and made world through the indoor and outdoor environment and role play. Children are encouraged to learn and use appropriate technical vocabulary linked to all their design and technology activity.

Projects on a Page:

At Whiston Willis, all teachers are to follow the scheme of work 'Projects on a Page'. Key Stage 1 have a total of five projects to complete over a two year cycle. Key stage 2 have a total of 6 projects to complete over a two year cycle. Each project has been mapped out over the course of two years making links with other curriculum subjects and topics.

Key Stage 1

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts.

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

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts.

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.

Assessing, Reporting and Recording

Each project is to be completed in Design and Technology books with all aspects of the project documented, from the investigative and Evaluative Activities (IEAs), followed by the Focussed tasks (FTs) to the Design, make and Evaluative activities (DMEAs). Children are encouraged to evaluate their work throughout the whole process making modifications and changes to their designs.

After each project, teachers will assess children's learning against specific criteria for all parts of the project. These assessment grids will be given to the subject lead to identify strengths and areas to improve upon. Subject leader is to support teachers in acquiring their subject knowledge and how to deliver the project. Regular CPD with each phase prior to teaching the project will be given to share good practice, learn new skills and share expectations of how the project should be presented.

Subject lead will provide support to staff, monitor pupil progress through discussions with children and regularly monitor the work in DT books.

EQUALITY IMPACT STATEMENT:

Under the Equality Act 2010, we have a duty not to discriminate against any person based on 'protected characteristics'.

This policy has been equality impact assessed and we believe that it is in line with the Equality Act 2010 as it is fair, it does not prioritise or disadvantage any pupil and it helps to promote equality at Whiston Willis.

MONITORING:

The practical application of this policy will be reviewed by subject leaders in consultation with the curriculum lead within school regularly. The effectiveness of the policy is demonstrated through subject leadership reports to governors which include impact statements on outcomes for pupils and the quality of teaching and learning.

The policy document will be reviewed by the subject leader and curriculum leader annually or earlier if required.