



DESIGN AND TECHNOLOGY POLICY

Our Vision

At Willaston Church of England Primary School it is the school's intention to prepare pupils to participate in tomorrow's rapidly changing technologies. Through design and technology children will learn to think and intervene creatively to improve quality of life. The subject calls for pupils to become autonomous and creative problem solvers, as individuals and members of a team. They must look for needs, wants and opportunities and respond to them by developing a range of ideas and making products and systems. This will combine practical skills with an understanding of aesthetics, social and environmental issues, function and industrial practices. As they do so, they reflect on and evaluate present and past design and technology, its uses and effects. Through design and technology, all pupils can become discriminating and informed users of products, and become innovators.

Our Values:

To promote lifelong learning and equip children with the skills, knowledge and understanding to make informed choices about important things in their lives through our school values of:

- Respect – by recognizing children learn in different ways and providing opportunities for children to learn through a variety of different tasks and in a range of different situations and environments.
- Compassion – by considering the needs of the individual child. To boost self-confidence and self-esteem making sure children feel good about their achievements.
- Creation – by creating opportunities for encouraging children to be creative in their response to tasks. Understanding that we are all unique and that we use our knowledge and skills for good.
- Perseverance – to acknowledge through praise where children have not given up even when things seem difficult, and when children have improved their work.
- Service – by building trusting relationships with children as we serve to help them to improve their work.

Aims

Through design and technology we aim to provide experiences relevant to the children with continuity, support and extension to lead them to develop skills and understanding for the rapidly changing modern world.

The national curriculum for design and technology aims 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
- to design and make high-quality prototypes and products for a wide range of user's 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.

Specific aims that will be employed are:

- to develop imaginative thinking in children and to enable them to talk about what they like and dislike when designing and making;
- to enable children to think and talk about how things work, and to draw and model their ideas;
- to encourage children to select appropriate tools and techniques to make quality products, whilst following safe procedures;
- to use and explore a range of materials, resources and equipment;
- to explore attitudes towards the made world and how we live and work within it;
- to develop an understanding of technological processes, products, their manufacture and their contribution to our society;
- to use the internet to explore ideas and already made products;
- to foster enjoyment, satisfaction and purpose in designing and making things;

Teaching and Learning

Early Years Foundation Stage (Reception)

We encourage the development of skills; knowledge and understanding that help Reception children make sense of their world. We relate this development to the objectives set out in the "Development Matters".

This forms the foundations for later work in design and technology. These early experiences include asking questions about how things work, investigating and using a variety of construction materials, tools and products, developing making skills and handling appropriate tools and construction materials safely and with increasing control.

We provide a range of experiences that encourage exploration, observation, problem solving, critical thinking, discussion and decision making. These

activities take place both indoors and outdoors, and are designed to arouse the children's interest and curiosity.

Activities and opportunities are planned where children can learn through talk, play and their own life experiences. The learning environment is such that it stimulates children's curiosity about the world around them.

Children in the Foundation Stage will experience a variety of activities including:

- Choosing and exploring a variety of materials such as fabric, card, paper, wood, boxes etc.
- Learning how to use scissors safely and correctly,
- Exploring a variety of joining techniques such as PVA glue, Pritt stick, masking tape, elastic bands, sellotape, split pins, paper clips and string to join materials together,
- Taking part in both cooking and non-cook food activities, learning about the importance of food hygiene,
- Having opportunities to explore creating models using a wide range of construction kits that fit together in a variety of different ways,
- Having opportunities to talk about and explain how they will/have made their model and to discuss what they like/dislike about it,

Key Stage 1

Pupils are encouraged to think imaginatively and creatively, in order to design and make. They should work in a range of different contexts for example school, home, outdoors.

They learn how to design and make safely and use ICT as part of their designing and making. They learn how to build structures and explore ways to make them stronger, more robust and stable. They also explore different mechanisms (levers, sliders, wheels and axles) in their products.

Children may work in pairs and small groups for some activities.

Key Stage 2

During Key Stage 2, pupils work on their own and as part of a team on a range of designing and making activities. They research and develop design criteria. They plan what has to be done and identify what works well (evaluating) and what could be improved in their own and other people's designs. They draw on knowledge of electrical systems to incorporate switches, buzzers, bulbs and motors into their design.

They apply their knowledge of computing to program, monitor and control products.

Through a flexible curriculum, the school uses a variety of teaching and learning styles in design and technology lessons. The principal aim is to develop children's knowledge, skills and understanding in the subject. Teachers ensure that children apply their knowledge and understanding when developing ideas, during planning and making products and when evaluating them. This is done through a mixture of whole-class teaching and individual or

group activities. Within lessons, children are given the opportunity both to work on their own and to collaborate with others, listening to other children's ideas and treating these with respect. Children critically evaluate existing products, their own work and that of others. They have the opportunity to use a wide range of materials and resources, including ICT.

Cooking and Nutrition

As part of their work with food, children will be taught how to cook and apply the principles of nutrition and healthy eating, opening the door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables children to feed themselves and others affordably and well, now and in later life.

In Key Stage 1, children will be taught to:

- Use the basic principles of a healthy and varied diet to prepare dishes;
- Understand where food comes from.

In Key Stage 2, children will be taught to:

- 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.

Cross-curricular links

English - Design and Technology contributes to the teaching of Literacy by providing valuable opportunities to reinforce prior learning. Discussion, drama and role-play are important ways for the children to develop an understanding that people have different views about design and technology. The evaluation of products requires children to articulate their ideas and to compare and contrast their views with those of other people. Through discussion, children learn to justify their own views and clarify their design ideas.

Maths – In design and technology, children learn to measure and use equipment correctly, generate nets of shapes in order to create packaging and weigh and measure accurately. They will also learn about size and shape and make “real” use of their mathematical knowledge in order to be creative and practical in their designs and modelling.

Science – Science helps in design and technology, looking at and drawing electrical circuits. It also helps children to think about using materials to create structures which can withstand a force.

ICT - Information and Communication Technology (ICT) enhances the teaching of design and technology, wherever appropriate, in all key stages. Children may use software to enhance their skills in designing and making things. Younger children are able to use simple software to enhance their learning. Older children use an ICT control program (LEGO WeDo) to control mechanisms and to get them to move in different ways. The children also use ICT to collect information and to present their designs through a range of design and presentation software.

Personal, Social and Emotional Education (PSHE) – Design and technology contributes to the teaching of PSHE, encouraging children to develop a sense of responsibility in following safe procedures when making things. They also learn about health and healthy diets. Their work encourages them to set targets and meet deadlines. They will also learn how to prevent disease from spreading and about personal hygiene when working with food.

Teaching and learning

Design and Technology activities are taught in a variety of ways across school, we aim to allocate a minimum average of an hour a week for Art & Design and/or Design and Technology. Teachers may use this flexibly as necessary and may 'block' units of work where this works best.

Outdoor Learning

At Willaston CE Primary School we make use of learning outside the classroom experiences to enrich and develop children's learning wherever possible.

Continuity and Progression

Continuity is achieved through medium and short term planning by ensuring that previously learnt skills are built on and a common and consistent language is used. To ensure progression we use National Curriculum for planning, ensure the technical knowledge is built on throughout the school years.

Equal Opportunities and Inclusion

Equality of opportunity at Willaston C of E means that all children, taking account of gender, age, ability, disability, ethnic origin, faith, culture, social circumstances and sexual orientation have full access to all the curricular, pastoral and social opportunities offered by the school.

In providing equality of opportunity consideration is given to:

- Ensuring that boys and girls are able to participate in the same curriculum.
- Taking account of the interests and concerns of boys and girls by using a range of activities and contexts for work and allowing a variety of interpretations and outcomes.
- Avoiding gender stereotyping when organising pupils into groups and assigning them to activities or organising access to resources
- Taking account of pupils' specific religious or cultural beliefs relating to the representation of ideas or experiences.
- Enabling the fullest possible participation of pupils with disabilities or particular medical needs, offering positive role models and making provision, where necessary, to facilitate access to activities with appropriate support, aids or adaptations.

Assessment, Record Keeping and Reporting

Assessment and record keeping will be kept by individual class teachers and be based on evidence gathered through discussion and observation of the pupil during the lesson and by the child's recording of the activities, e.g. planning, designing, and photographing practical activities. All levels are based upon teacher assessment. Progress over the past school year, along with effort and motivation, will be reported in the end of year pupil report.

Monitoring & Evaluation

The subject leader will monitor Design and Technology to ensure curriculum coverage and standards of teaching and learning through a variety of mechanisms: checking planning, learning walks, work scrutiny, pupil interviews and assessment data. The subject leader will also support colleagues in the teaching of design and technology through discussion and exchanging ideas.

Policy Review

This policy will be reviewed in line with the Curriculum policies review timetable.

Approved by Governors May 2020

A handwritten signature in black ink that reads "J. E. Hilditch". The signature is written in a cursive style with a large initial 'J' and 'H'.

Signed Chair of Governors