

# Sherwood Primary School

## Design & Technology Policy



January 2022

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### Sherwood Curriculum Rationale

We aim to provide a creative, vocabulary rich curriculum that inspires and challenges our children, in preparation for life in a culturally diverse and ever-changing world. High expectations, inclusive approaches and excellent teaching will form the basis of all our work. Our children will have the opportunity to read widely, explore, ask questions and become knowledgeable, independent learners. Our Curriculum will prepare our children for life-long learning.

Inspire • Explore • Achieve

### Sherwood Values

Teaching and Learning at Sherwood Primary School is underpinned by six core values.

The 6 Sherwood Core-Values are:

- Honesty
- Perseverance
- Respect
- Adventurous
- Aspiration
- Independence

Alongside our core values, we also promote the fundamental British values of democracy, the rule of law, individual liberty, mutual respect and tolerance of those with different faiths and beliefs across the curriculum.

### Equality

At Sherwood, we believe that equality should permeate every aspect of School life and is the responsibility of every member of our School Community.

Every member of our School Community should feel safe, secure, valued and of equal worth. We are committed to ensuring equality of education and opportunity for all pupils; irrespective of race, gender, gender variance, disability, belief, religion socio-economic background or sexual orientation.

It is our aim to understand and tackle the different barriers which could lead to unequal outcomes for different groups of pupils in School. The Equality Act provides a framework to support our commitment to valuing diversity, tackling discrimination, promoting equality and fostering good relationships between people. It is our aim to celebrate and value the equal opportunity achievements and strengths of all members of our School Community.

## Purpose of study

Design and technology allows pupils to use creativity and imagination. Pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. Collaborative work in Design and Technology develops mutual respect for the different groups' opinions, beliefs and abilities of others. In addition, children develop a respect for the environment, for their own health and safety and that of others. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. We value these opportunities at Sherwood.

## Rationale

All school policies form a corporate, public and accountable statement of intent. As a primary school it is very important to create an agreed whole school approach of which staff, children, parents, governors and other agencies have a clear understanding. This policy is the formal statement of intent for Design and Technology.

It reflects the essential part that Design and Technology plays in the education of our pupils. It is important that a positive attitude towards Design and Technology is encouraged amongst all our pupils in order to nurture self-confidence and a sense of achievement. The policy also facilitates how we, as a school, meet the legal requirements of the National Curriculum.

## Scope

This statement of policy relates to all pupils, staff, parents and governors of Sherwood Primary School. The age range of pupils from 4-11 must be acknowledged in the creation of policy and the development of the Design and Technology curriculum.

## Principles

The principles of Sherwood Primary School for Design and Technology are:

- policy and provision are evaluated and reviewed regularly.
- resources and equipment are planned, budgeted for and detailed when appropriate
- the governing body of Sherwood Primary School discharge their statutory responsibility with regard to Design and Technology
- cross curricular links will be highlighted where appropriate

- planning of Design and Technology ensures continuity and progression across all year groups and key stages

## Aims

The aim of design and technology at Sherwood School is to enable children to develop the creative, technical and practical expertise needed to perform everyday tasks confidently and prepares our children to deal with tomorrow's rapidly changing world. We also aim to provide a stimulating environment and adequate resources so that pupils can develop their design and technology skills to their full potential which allows them to 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 users.

All children will be given the opportunity to:

- To develop imaginative thinking and to enable them to talk about what they like and dislike when designing and making;
- To think and talk about how things work, and to draw and model their ideas;
- 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 develop an iterative process in the making of a product;
- 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;

## Provision

Pupils are provided with a variety of opportunities to develop and extend their Design and Technology skills throughout each phase of education.

The teaching of Design and Technology at Sherwood Primary School provides opportunities for:

- group work
- paired work
- whole class teaching
- individual work

Pupils engage in:

- practical and investigational work
- designing
- making
- problem solving
- evaluating
- technical knowledge

At Sherwood Primary School we recognise the importance of Design and Technology and the role it plays in the development of skills through collaborative working and problem-solving, and knowledge in design, materials, structures, mechanism and electrical control. Design and Technology contributes to many subjects and it is important the children are given opportunities to apply and use these skills in real contexts.

We strive to set work that motivates, encourages and challenges the pupils and encourages them to talk about what they have been doing.

## Early Years

During the foundation stage we encourage the development of skills, knowledge and understanding that help young children make sense of the world. We relate the development of children's knowledge and understanding of the world to the objectives set out in the Early Learning Goals. This learning 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 kits, materials and suitable tools. Children have opportunities to develop making skills, handling appropriate tools and construction materials safely and with increasing control. In order to boost their confidence, the children should be encouraged to develop their own creative ideas and imagination, especially in role-play.

## Key Stage 1

During Key Stage 1, pupils learn to think imaginatively and talk about what they like and dislike when designing and making. They build on their early childhood experiences of investigating objects around them. They explore how familiar things work and talk about, draw and model their ideas. They learn how to design and make things safely and start to use ICT as part of their design and making.

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 axels) in their products.

## Cooking and Nutrition

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

### Key Stage 1

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

## 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 think about what products are used for and the needs of the people who use them. They plan what has to be done and identify what works well and what could be improved in their own and other people's designs. They draw on knowledge and understanding from other areas of the curriculum and use computers using control technology, data bases, spreadsheets and design programs.

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

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Pupils should 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.

## Health and Safety

When working with tools, equipment and materials, in practical activities and in different environments, including those that are unfamiliar, pupils should be taught:

- About hazards, risks and risk control
- To recognise hazards, assess consequent risks and take steps to control the risks to themselves and others
- To use information to assess the immediate and cumulative risks
- To manage their environment to ensure the health & safety of themselves and others
- To explain the steps they take to control risks.

When teaching Design and Technology, Health & Safety issues must be taken into consideration.

- The children must be fully supervised, especially when using tools.
- All equipment will be stored safely and returned to the correct place at the end of each lesson.
- If using newspapers or magazines to protect tables care must be taken that inappropriate articles, or photographs cannot be seen by the children.
- Wood and other materials for design and technology should be bought from an educational supplier. Some woods have been treated and can be harmful to children
- The correct procedures and techniques must be shown to children before using any tools e.g. scissors, craft knives, glue guns

\* See Health and Safety policy for more information

## Assessment

In deciding on a pupils' level of attainment at the end of a key stage, teachers should judge which description best fits the pupil's performance. It is important in the assessment of Design and Technology that consideration is given to the processes undertaken, the end product and whether the child has achieved the set objective. Each class teacher is responsible for recording their pupil's progress against the objectives for each unit of work and National Curriculum level descriptions. Whether a pupil is below, in line or above expectations will be recorded at the end of each academic year and passed on to the next class teacher. Our assessing methods include the following as appropriate;

1. Looking at a child's recorded work i.e. model, photographs, written work.
2. Individual discussion.
3. Listening to the children's ideas as they discuss between themselves.
4. Group discussions in both planning and reporting back sessions.
5. Observing the children's skills in Design and Technology.
6. Record the progress that children make by assessing the children's work against the learning objectives for their lessons.

At the end of a unit of work, teachers make a judgement against the Key Learning Skills. Information about a child's progress in Design and Technology will be communicated to parents in their annual report.

## Role of Subject Leader

The Design and Technology Subject Leader is responsible for co-ordinating Design and Technology through the school. This includes:

- To advise and support staff in planning teaching and learning of design and technology.
- To monitor teachers' planning as part of on-going subject monitoring and evaluation of practice.
- To use feedback from monitoring to develop an action plan for Design and Technology with realistic and developmental targets.
- To continually audit, identify, purchase and organise all resources, ensuring they are readily available and well maintained.

- To ensure the use of Design and Technology in the curriculum is current.
- To promote Design and Technology throughout the school.

## Role of Class Teacher

- to ensure progression in the acquirement of Design and Technology skills with due regard to the National Curriculum for Design and Technology 2014
- to develop and update skills, knowledge and understanding of Design and Technology
- to keep appropriate on-going records
- to plan effectively for Design and Technology (with year group partners), liaising with Subject Leader when necessary
- to use the Kapow scheme of work and curriculum over view to keep their lessons lively, engaging and to deliver high-quality Design and Technology to inform parents of pupils' progress, achievements and attainment
- to plan for two Design and Technology days but allow for more time if needed for the children to become competent and master the skill being taught

## SEND

Two main areas where special needs pupils may encounter difficulty are communications and making things. Design and Technology offers the opportunity for children to achieve in a practical subject, as they are encouraged to communicate in a different way (not writing), for example use of tape recorder or camera. Children who are physically disabled in muscular control and coordination may have difficulty in using some tools. Other tools are provided where possible in consultation with support staff or an occupational therapist, or tasks are adapted so that the child can succeed. Sensitive grouping encourages shared expertise and this minimizes difficulties in specific areas.

## Monitoring

The Design and Technology Subject Leader is released from their classroom in order to work alongside other teachers. This time is used to monitor and evaluate the quality and standards of Design and Technology throughout the school and enables the Subject Leader to support teachers in their own classrooms. Opportunities for teachers to review the scheme, policy and published materials are given on a regular basis during staff meetings. Books, planning, displays and products made are regularly monitored.

## Governing Body Involvement

At Sherwood School we have an identified governor for Design and Technology. The nominated Governor for DT works alongside the Subject Leader to gain a deeper understanding of the Subject. Subject leaders are given time within their work plans to

discuss subject policies, strengths and weaknesses within the subject including overall standards, and action plans for school improvement. Governors, for their part, are encouraged to report the main points to the Curriculum and Standards Committee or the Full Governing Body.

Governors are invited to meet Subject Leaders termly and to report back to the Governing Body after each meeting with the Subject Leader.

## Approval

Approval date: January 2022

Review date: January 2024

Signed (Headteacher):

Signed (On behalf of the Governing Body):