



Southfields Primary School

Design and Technology Policy

Written by: Paul B

Date: July 2020

Last reviewed on: Summer 2022

Next review due by: Spring 2022

Statement of Intent

We embrace the world of Design and Technology at Southfields Primary School through our wider links to, and development of a Science, Technology, Engineering and Mathematical (STEM) curriculum. Design and Technology prepares children to deal with our rapidly changing world. It encourages children to become independent, creative problem solvers and thinkers as individuals and as part of a team. To ensure children make the necessary progress and are challenged appropriately, teachers plan engaging and inspiring practical activities that mean the children are working hands-on; these lessons link with Science, Engineering and Maths allowing children to reflect on and evaluate past and present technology, its uses and impacts. Our lessons aim to develop a child's social skills by working in teams and encourage resilience, determination, perseverance, communication, collaboration, questioning and problem solving. Pupils learn to question and discuss design and technological issues that may affect their own lives and lives of others in our society and in the future of the world.

Rationale

At Southfields Primary School, Design and Technology is a 'hands on' subject in which pupils have the experience of evaluating, designing and making products of a high standard. Design and Technology will encourage children to examine their environment, question the world and to think about why things work the way they do. Design and Technology prepares pupils to participate in tomorrow's life changing technologies. They develop their personal skills by working and planning together and independently. Pupils work co-operatively in pairs or groups and persevere when completing tasks. They develop self-motivation and self-evaluation skills and take pride and respect their own work and that of others.

Aims

At Southfields Primary School, we aim to:

- 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 talk about how things work, and to draw and model their ideas and to make improvements where necessary.
- To encourage children to select appropriate tools and techniques for making a product, whilst following safe procedures.

- Raise pupil awareness of existing products to assist them in generating their own ideas and to extend their understanding of the role of design in the 'real world' .
- Prepare pupils' to live and work in an increasingly technological society.
- Develop pupils ability to work individually as an effective team member.
- Develop pupils' understanding of health and safety matters around the subject of Design and Technology.

Objectives

At Southfields, through the study of Design and Technology children combine practical skills with an understanding of aesthetic, social and environmental issues. This allows them to reflect on and evaluate present and past design and technology, its uses and its impacts.

Design and Technology helps all children to become discriminating and informed consumers and potential innovators.

Children at Southfields, learn to produce practical solutions to real problems. Children develop technical understanding and making skills, learn about design methods and investigate their environment and the materials around them.

At Southfields, we use 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 Design and Technology, and teachers encourage children to use their knowledge and understanding when developing ideas, planning and making products and evaluating them.

Our school uses a balance of whole-class teaching and individual/group activities, giving children the opportunity to work on their own and to collaborate with others.

At Southfields, children are encouraged to listen to the ideas of others, and treat them with respect, to critically evaluate existing products, both their own work and those of others. They have the opportunity to use a wide range of materials and resources, including ICT.

Knowledge and Understanding In Foundation, Key Stage 1 and Key Stage 2 children will:

- Develop knowledge, skills and understanding.
- Use developing, planning and communicating ideas.
- Gain a knowledge and understanding of materials and components.
- Carry out focused practical tasks that develop a range of techniques, skills, processes and knowledge.
- Design and make assignments using a range of materials, including electrical and mechanical components, food, mouldable materials, stiff and flexible sheet materials, and textiles.

- Investigate and evaluate a range of familiar products, thinking about how they work, how they are used and the views of the people who use them.
- Allow constructive conversation and language interaction between.

Skills

Children learn how to draw on a developing repertoire of skills and knowledge, which will include:

- Learning how to work independently and collaboratively.
- Developing, planning and communicating ideas.
- Working with tools, equipment, materials and components to make quality products.
- Evaluating processes and products.
- Developing knowledge and understanding of materials and components.
- Learning the importance of health and safety.

At Southfields all children are encouraged to:

- Generate ideas through discussion and experimentation.
- Extend knowledge and understanding of a wide range of materials, including construction kits, textiles, food, wood, plastic, metals and reclaimed/junk materials.
- Work within groups and as individuals.
- Make use of drawings and models to communicate their ideas.
- Evaluate their work and identify strengths and weaknesses in a positive way.
- Experiment with simple components, mechanisms and structures.
- Learn about health and safety aspects when working with a variety of materials and tools.
- Consider risk to themselves and to others and build up a knowledge and understanding of the dangers inherent in certain products and tools.
- Experience Design and Technology through off-site visits, where practical, in order to see technology used in a real environment

Implementation

Management and Organisation

Design and Technology is a foundation subject in the National Curriculum. At Southfields Primary School, there is a scheme of work for the class teachers to follow, which has strong links to our STEM work. This will allow the children to acquire a broad base of knowledge and skills in a range of design and make activities.

Teaching and Learning **Foundation Stage and Key Stage 1**

In EYFS and Key Stage 1 the children learn how to think imaginatively and talk about what they like and dislike when designing and making. Pupils 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. Pupils learn how to design and make safely and could start to use ICT as part of their designing and making.

In EYFS, children learn the basic skills of Design and Technology, through their continuous provision and through Expressive Arts and Design and Physical development.

Children are using Junk modelling, exploring how vehicles work, making cameras, exploring different materials and learning how to be creative and imaginative.

In Key Stage 1, Design and Technology is taught through our topics, each term.

Children use a variety of equipment and skills to design and create various items, such as vehicles, puppets, circuits etc.

Key Stage 2

In Key Stage 2 children 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 in a range of ways.

Children link their Design and Technology work to our STEM work and use our school GARK values to ensure that they develop the skills as well as a love of learning.

Knowledge and Understanding

In Foundation, Key Stage 1 and Key Stage 2 children will:

- Develop knowledge, skills and understanding.
- Use developing, planning and communicating ideas.
- Gain a knowledge and understanding of materials and components.
- Carry out focused practical tasks that develop a range of techniques, skills, processes and knowledge.
- Design and make assignments using a range of materials, including electrical and mechanical components, food, mouldable materials, stiff and flexible sheet materials, and textiles.
- Investigate and evaluate a range of familiar products, thinking about how they work, how they are used and the views of the people who use them.
- Allow constructive conversation and language interaction between.

Skills

Children learn how to draw on a developing repertoire of skills and knowledge, which will include:

- Learning how to work independently and collaboratively.
- Developing, planning and communicating ideas.
- Working with tools, equipment, materials and components to make quality products.
- Evaluating processes and products.
- Developing knowledge and understanding of materials and components.
- Learning the importance of health and safety.

Role of the Subject Leader

The Design and Technology co-ordinator will:

- Oversee the development of Design and Technology within the school.
- Provide guidance to individual members of staff.
- Develop, revise and evaluate the scheme of work.
- Work closely with our school Maths and Science co-ordinator to deliver our STEM work.
- To ensure the policy is implemented within the school.
- Monitor the teaching of Design Technology within the school through planning trawl, work trawl, pupil voice and teacher voice.
- Support colleagues in the delivery of Design Technology, providing and organising CPD training where appropriate.
- Liaise with outside agencies for additional Design and Technology experiences for children.
- Ensure that resources are relevant to topics and are accessible and available.

Monitoring and review:

The Subject Leader will monitor Design and Technology through the following:

- Monitoring planning
- Lesson observations
- Work scrutiny
- Pupil voice interview
- Assessment information.

Purchase new equipment and consumables. Monitoring and review:

The Subject Leader will monitor Design and Technology through the following:

- Monitoring planning
- Lesson observations
- Work scrutiny
- Pupil voice interview
- Assessment information.

Health and Safety

At Southfields, children will be given suitable instruction on the operation of all equipment before being allowed to work with it.

Children should be supervised in their use of equipment at all times.

Children should be taught to respect the equipment they are using and to keep it stored safely while not in use.

Children should be taught to recognise and consider hazards and risks and to take action to control these risks, having followed simple instructions.

Risk assessments will be carried out prior to children using tools e.g Saws, hammers , glue guns.

Food Hygiene

Children and staff will take care to undertake appropriate hand washing and other hygiene related activities prior to preparing food.

Children and staff working with food must wear aprons designated for cooking.

Painting equipment must not be washed up or used in the sink in the medical room.

All jewellery should be removed and hair tied back.

Glue Guns

Low temperature glue guns should only be used by an adult in Key Stage One and The Foundation Stage unless there is one-to-one supervision for a child.

Key Stage Two children should use low temperature glue guns under supervision in a designated work area, wearing safety goggles.

Craft Knives

Craft knives, quick cutters and rotary cutters should only be used by an adult/teacher in Key Stage One and the Foundation Stage.

Key Stage Two children may use cutting equipment under supervision, using a cutting mat and wearing safety goggles.

Sawing

Bench hooks and clamps must be used when sawing any material. Safety goggles must be worn and any loose items of clothing/hair must be tucked in.

Teaching and Learning

Design and Technology at all levels should be delivered using a variety of teaching styles in order to make the lessons suitable for all pupils regardless of ability, ethnicity or disability.

Teachers should include:

- Practical activities that allow pupils to work with a wide range of materials, components, tools and equipment.
- A balance between focused practical tasks structured to develop particular knowledge or skills and open ended design and make assignments which allow pupils to apply their knowledge and skills.
- Pupils to investigate, disassemble and evaluate existing products.
- Pupils to be stimulated by motivating tasks that are suitable for girls and boys of all backgrounds and interests.
- Pupils to record their work in a variety of ways including pictorially, written and photographically.
- Pupils to discuss, review and evaluate their own and others work.
- A balance between individual, group and class work.

- Pupils to develop responsibility for organising their own planning, recording and resources.

Equal Opportunities

All children, regardless of gender, race or learning needs will be given equal access to the Design and Technology curriculum.

The Design and Technology curriculum will be differentiated according to the needs of the children. If a child needs specialist hardware/peripherals in order to access the curriculum the school will source the appropriate equipment.

If a child is statemented and not able to access the curriculum at the same level as his/her peers then provision will be made for the child to access the curriculum at their own level. If a child is identified as having a gift or talent in this curriculum area, they will be challenged in their learning.