



Policy for Design Technology at Fallings Park



Whole School Vision

Fallings Park's curriculum is designed to enable all pupils to work towards our mission statement: *Learn Today For Tomorrow's Success*. As we want our children to thrive and contribute to both the school and local communities, our curriculum provides memorable, knowledge-rich learning experiences in every stage of school life, within and outside the classroom.

The primary focus of our curriculum is to provide a purpose and relevance to learning, whilst making connections between all subject areas. Our school intends to empower students to embrace every learning opportunity, achieve their personal best and build their social, emotional, mental and physical well-being through a wide variety of experiences. This will provide our children with the foundations to become curious and creative thinkers; respectful and reflective individuals and be self-motivated learners.

Intent

A high-quality Design Technology education should engage, inspire and challenge pupils, equipping them with the knowledge and skills to design, make and evaluate pieces of work as well as acquiring the technical knowledge they need. At Fallings Park Primary School we encourage children to use their creativity to design, make and evaluate products in a range of real life contexts. As pupils progress, they should be able to develop their skills in the different areas of Design Technology to gain a more thorough understanding of the designing, making and evaluating process. They should also know how specific individuals and historical events have been influenced by Design Technology. We aim to do this by exposing children to a range of architects, inventors, designers and engineers from both past and present and encourage children to reflect on purpose, effectiveness and achievements in order to inspire and motivate them to become innovators in the subject. We aim to, wherever possible, link work to other disciplines such as science and mathematics and plan for opportunities to work on STEM projects as part of their research.

At Fallings Park Primary School, we value Design Technology as an important part of the children's entitlement to a broad and balanced curriculum.

Through the programme pupils should have the opportunity to meet high quality outcomes through the following process:

- Planning, designing and drafting.
- Experimenting and making.
- Evaluating and improving.
- Acquiring technical knowledge.
- Developing understanding of food and nutrition.

Implementation

Through a variety of creative and practical activities, we teach the knowledge, understanding, skills and vocabulary needed to engage in the process of designing and making, while encouraging the children to carry out research and focused practical tasks and to learn from their mistakes and from each other.

Subject Leadership

Senior and Year Leaders take the lead in policy development, using enthusiasts and specialists where appropriate. This activity is coordinated by the Design Technology Team.

Our Design Technology coordinators are: Louisa Smith (teacher) and Leanne Bernard (teacher)

Senior Leaders, Year Leaders and subject enthusiasts support colleagues in the teaching of Design Technology Education. They monitor coverage and ensure quality teaching of Design Technology is taking place. They keep up to date with developments in Design Technology and disseminate information to colleagues as appropriate. Year Leaders track progress using TCAs in Design Technology and the milestones provide a break down for what each key stage should provide for children.

Organisation

- Children will complete projects each term for Design Technology where specific objectives will be covered, these will often be completed in a blocked form.
- Additional elements of Design Technology may be taught throughout our Cornerstones topics and cross curricular links will be found in other subject areas.
- Design Technology should be taught closely with Science and opportunities for cross curricular links are therefore evident in all year groups.

Planning

- The teaching and implementation of the Design Technology Curriculum at Fallings Park Primary School is based on the Cornerstones curriculum which is in line with the National Curriculum, ensuring a well-structured approach to this creative subject.
- Teachers aim to plan activities that build on pupils' prior knowledge and learning experiences and ensure an appropriate level of challenge through the STEM projects.
- The curriculum has been organised into milestones ensuring progression of skills and a wide range of teaching opportunities throughout designing, making and evaluating to enable children to acquire knowledge and understanding. Topics have been chosen and carefully placed in the long term plan to enable children to make links between areas of study across the curriculum.
- The children are taught Design Technology as part of their termly topic work which is taken from the cornerstones curriculum. More detail can be found in our Long Term plan.

- Children will be influenced by the work of a range of architects, inventors, designers and engineers. The projects covered will encompass a variety of contexts such as industry, enterprise, leisure and the wider community. Children will also be shown links between designers, engineers and scientists.
- Planning will be done in close link to the science curriculum to ensure cross curricular links where possible linking to the STEM projects. This is evident through the curriculum maps where cross curricular links have been identified.

Within the structure:

- Children are taught Design Technology as a whole class although activities may be scaffolded in order to allow all children to access the best Design Technology education.
 - Relevant discussion is encouraged throughout all areas of the designing, making and evaluating process to deepen understanding and promote questioning.
 - Children are encouraged to present their work in a variety of ways through the design, making and evaluating process which will be found in Learn Together exercise books as well as individual pieces or projects alongside these.
- Homework is encouraged through termly projects which mirrors the learning in our cornerstones curriculum.
 - Excellence in Design Technology is celebrated through:
 - Display, e.g. in classrooms, corridors and good work boards;
 - Presentation of certificates, e.g. awards assembly.
 - Sharing of work with other year groups allowing year groups and staff to see how Design Technology progresses throughout school.
 - Children's learn together books as well as individual pieces that have been created.
 - Cross curricular links with science to create projects that highlight aspects of both curriculums.

Pupils are taught in a class setting with scaffolding provided when needed.

In order for all children to access the Design Technology curriculum teachers are expected to think about the following:

- Setting common tasks that are open-ended and can have a variety of answers
- Setting tasks of increasing difficulty, where not all children can complete all tasks
- Providing a range of challenges through the provision of a variety of resources, individual, paired and group work
- Consulting with pupils about their needs and interests

Design Technology Coverage:

To make sure that the curriculum for Design Technology is broad and balanced it is split into three key areas of designing, making and evaluating, and separate objectives for KS1 and KS2.

Design

KS1

- 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

KS2

- use research and complete a design brief 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, labelled diagrams, prototypes and computer-aided designs.

Making

KS1

- 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

KS2

- 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.

Evaluating

KS1

- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria

KS2

- investigate and analyse a range of existing products
- evaluate their ideas and finished products against their design brief and complete an outside evaluation to compare their products whilst considering the views of others to improve their work in the future.
- understand how key events and individuals in design and technology have helped shape the world.

In addition to the designing, making and evaluating process teachers need to ensure technical knowledge, food and nutrition are taught through the Design Technology Curriculum.

Technical knowledge

KS1

- 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

KS2

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- understand and use mechanical systems in their products
- understand and use electrical systems in their products

- gain knowledge of a variety of cooking techniques such as chopping, grating and using a heat source.
- practise and use joining and sewing skills when working with textiles.

Food and Nutrition:

KSI

- use the basic principles of a healthy and varied diet to prepare dishes
- understand where food comes from

KS2

- Use the basic principles of nutrition to prepare and make dishes.
- Understand where food comes from.
- Understand the principles of a healthy and varied diet.
- Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

Resources

- Resources for Design Technology are stored centrally in the resources room. Appropriate resources are removed and placed in classrooms when required. Following use, they are then replaced centrally in the resources room.
- Central resources in Design Technology are the responsibility of the Design Technology Co-ordinators.

Impact

Children will:

- a) develop the creative, technical and practical expertise needed to perform tasks they will encounter in everyday life with confidence. This will allow them to participate successfully in an increasing technological world.
- b) Gain understanding of designing and making high quality prototypes and products for a wide audience and be able to evaluate and test their ideas and the work of others regarding the standard of finish and purpose.
- c) Broaden their vocabulary related to the subject and be able to use technical terms to describe the process of designing, making and evaluating within their projects.
- d) Understand and apply their nutritional knowledge to learn how to cook a variety of dishes.

Children learn how to be resilient, take risks and view their achievements with a sense of pride, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life, in their local community and the wider world.

Strategies for Assessment, Recording and Reporting

Success criteria's are to be given to all children at the beginning of the lesson and used by children and the teacher to assess progress at the end of each lesson as well as throughout using formative assessment.

Reporting in Design Technology to parents (this is done on a termly basis through Parents' Evenings and annually through a written report) will focus upon each child's:

- a) Attitudes to Design and Technology.
- b) Skills and targets attained within designing, making and evaluating.
- d) Milestone assessments are carried out termly on all children and are passed up year upon year.

Termly Curriculum Assessment and Milestones

Teachers will plan a series of progressive lessons using the Milestones ensuring differentiation of skills has been taught. By the end of each year group, pupils are expected to know, apply and understand the skills and processes specified in the relevant Age Related Expectations. Using these milestones differentiation according to the child's ability will allow children a secure understanding of the subject.

Assessment is input into Termly Curriculum Assessment spreadsheet (found on the Shared area) in order for teachers to plan for progression and monitor progress. These TCAs are passed to the next teaching team in order to ensure knowledge skills are built upon and not repeated.

Subject Leaders will use this data to track and monitor their subject over time and identify any issues that they need to action and will then review the impact this has had. This will ensure there is consistency across the school in the assessment of Design Technology.

Equal Opportunities

The teaching of Design and Technology closely follows the school's equal opportunity policy. Teachers are advised to carry out lessons that give all pupils access to a range of different learning styles. Written learning resources are carefully chosen so as to include all pupils. All pupils are encouraged to take part fully, in all Design and Technology lessons and projects across the school.

Health and Safety in Design and Technology.

- Use of materials, tools and techniques in accordance with health and safety requirements. Pupils should be under adult supervision when using potentially dangerous tools.
- Appropriate storage of tools and materials.
- Teaching pupils to recognise hazards in a range of products, activities and environments and take action to control the risks to themselves and others.