

The Meadows Primary School
Design and Technology Policy

"Tell me and I forget, teach me and I may remember, involve me and I learn." - Benjamin Franklin

Rationale

Design and technology is an inspiring, creative and practical subject. Using 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. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing, literacy skills and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology products, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth, and well-being of the nation.

In essence Design and Technology is making something, for someone for some purpose.

Aims

In teaching Design and Technology, we aim to always develop something real and relevant for a specified purpose. In doing this we aim to:

- To foster enjoyment, satisfaction and purpose in designing and making.
- To develop imaginative thinking in children and to enable them to critically evaluate their own and other people's products, discussing what they like and dislike when designing and making.
- To develop children's analytical and communication skills, by enabling them to talk about how things work, and to draw and model their ideas.
- To encourage children to select appropriate tools and techniques for making a product, whilst following safe procedures.
- To develop a growth mindset when it comes to their Design and Technology products, aiming to achieve the highest quality product and demonstrating great resilience and motivation in their work.
- To develop an understanding of technological processes and products, their manufacture and their contribution to our society.
- To create employable, creative and innovative workers of the future.
- To develop the cross-curricular use of design and technology in other subjects.

Our aim is to provide good quality learning experiences for all pupils. In Design and Technology this includes:

- The provision of appropriate resources.
- The encouragement of pupils to be independent in their learning.
- The teaching of a range of practical and intellectual skills.
- Involvement in cross-curricular design and make projects.
- Opportunities to take part in activities hosted by local secondary schools, e.g. food technology.
- The provision of extra-curricular clubs, relating to design and technology e.g. food technology.
- The celebration of achievement whilst maintaining the highest possible expectations.

The Meadows Primary School
Design and Technology Policy

Teaching and learning style

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 Design and Technology. Teachers ensure that the children apply their knowledge and understanding when developing ideas, planning and making products, and then evaluating them. We do this through a mixture of whole-class teaching and individual or group activities. Within lessons, we give children 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.

In all classes, there are children of differing ability. We recognise this fact and provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this through a range of strategies:

- Setting common tasks that are open-ended and can have a variety of results.
- Setting tasks of increasing difficulty where not all children complete all tasks.
- Providing a range of challenges through the provision of different resources.
- Using additional adults to support the work of individual children or small groups.

Curriculum Planning

We carry out the curriculum planning in Design and Technology in three phases: long, medium and short term. The long-term plan maps out the strands covered in each term during the key stage. Our medium term plans give details of each unit of work for each term. This includes a purpose for the product, cross-curricular links and objectives linked to: Investigative and Evaluative Activities (IEAs), Focused Tasks (FTs) and Design, Make and Evaluate Assignment (DMEAs) which are progressive through the unit.

We plan the activities in Design and technology so that they build upon prior learning and skills of the children. We give children of all abilities the opportunity to develop their skills, knowledge and understanding and we also build planned progression into the scheme of work, so that the children are increasingly challenged as they move through the school.

The planning will be completed through a cross curricular approach ensuring the DT has a link to the topic being studied. Teachers will give each DT theme a purpose.

Each topic will need to be reviewed, informally by the teachers and TA's within the year group to ascertain the enjoyment had by the children, the effectiveness of developing skills and the quality of purpose.

The Foundation Stage

We encourage the development of skills; knowledge and understanding that help reception children make sense of their world as an integral part of the school's work. We relate the development of the children's knowledge and understanding of the world to the objectives set out in the Early Learning Goals. These early experiences include asking questions about how things work, investigating and using a variety of construction kits, materials, tools and products, developing making skills and handling appropriate tools and construction material safely and with increasing control. These activities, indoors and outdoors, attract the children's interest and curiosity.

The Meadows Primary School
Design and Technology Policy

Key Stage 1

During KS1, pupils are provided opportunities for:

- Physical modelling of materials and components.
- Oral communication of what they plan to do, are doing and have done.
- Retrospective drawing of what they have made (including some detail and labelling).
- Identifying and naming common tools and materials used in designing and making.
- Simple descriptions of the process of designing and making and explanations of why they have made certain decisions.

Lower Key Stage 2 (Year 3/4)

At this stage most pupils will:

- Prospective graphical communication through sketches to show simple ideas and know these work.
- Be able to express clearly the purpose of the product and will be able to label sketches and start to use colour to communicate their ideas more effectively.
- Follow simple plans and sequences through flow diagrams.
- Adjust their designs through modelling and making.
- Combine and shape materials to create products which meet their intentions.

Upper Key Stage 2 (Year 5/6)

By the end of Key Stage 2 pupils should be able to:

- Communicate their ideas and what they intend to make in written and graphical form, with most of the details shown.
- Reflect scale and proportion in their drawings, giving details of how parts work and how they fit together, complete with some dimensions.
- Sketch plans and elevations, use symbols and make technical drawings, e.g. draw a diagram of circuit.

At the higher levels pupils may:

- Use drawing conventions, illustrate through simple views and make written evaluative comments.
- Engage in more complex making, drawing upon a greater range of techniques to create quality products for different purposes.

Design and Technology and inclusion

We ensure that all children irrespective of their ability/disability have access to the Design and Technology curriculum. Through our teaching, we provide learning opportunities that enable all pupils to make progress and feel a sense of achievement. We do this by setting suitable learning challenges and responding to each child's individual needs. To reflect the diversity of our society, we ensure that children have access to the work of inventors, designers, engineers, artefacts and resources from a range of genders, ethnic backgrounds and cultures.

The Meadows Primary School
Design and Technology Policy

Assessment for Learning

Teachers assess work in Design and Technology by making observations of the children working during lessons. They record progress made against the learning objectives for that lesson. At the beginning of each unit of work, children will create an initial mind map of their knowledge about the product/strand.

At the end of a unit of work, children will also undertake a review of their work that focuses upon an evaluation of the finished product and an overview of the various tasks undertaken. In Key Stage Two the children use a star diagram to evaluate and focus on different aspects of their product. They look at the user, the purpose, the innovation, authenticity, functionality and the design decisions they made. Teachers make an annual assessment of progress for each child, as part of the annual report to parents. Each teacher passes this information on to the next teacher at the end of each year.

Due to the practical nature of Design and Technology, evidence of work undertaken by children can be in the form of teacher's notes or as a photographic record. Samples of the design process and end product are also valuable evidence. The Design and Technology subject coordinator can review evidence of the children's work in their individual portfolios.

Resources

Our school has a wide range of resources to support the teaching of Design and Technology across the school. Classrooms have a range of basic resources, with the more specialised equipment being kept in the stock cupboard or in the Key Stage 2 open area.

Health and safety

In this subject, the general teaching requirement for health and safety applies. We teach children how to follow proper procedures for handling tools, food safety and hygiene.

It is the teacher's responsibility to ensure a safe working environment and the safety of the teaching equipment should be reviewed regularly. All resources are located in the stock cupboard or in the Key Stage 2 open area. It is the responsibility of each class teacher to collect resources and then return them after use. If any resources become broken during use, the Design and Technology leader needs to be informed as soon as possible. Electrical equipment and knives should only be used under close supervision of the teacher or responsible adult together with the following tools, in general design and technology use:

Glue Guns	Circle Cutters	Drills
Craft Knives	Saws	Hammers
Bradawls	Drills	Rasps

When working with tools, equipment, materials in practical activities pupils should be taught:

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

The Meadows Primary School

Design and Technology Policy

The school is a member of the Design and Technology Association (DATA) which provides health and safety advice to schools. If ever in doubt about the health and safety implications of any activity they can be contacted to give up to date advice.

Design and Technology Policy Statement regarding the use of Food

When working with food:

- An adult will be required to supervise activities involving cooking and food handling/preparation.
- When undertaking food activities the appropriate Health and Safety Procedures must be adhered to.
- When working with food, all children should follow personal hygiene guidance (tie back hair, clean apron, use of blue plasters and washing hands)
- Teachers should check the dietary needs of the children in their class to identify any foods that should not be available to specific children, or groups of children.
- Any perishable food should be stored in a fridge.
- Only the equipment in the food cupboard, which is for food use only, should be used.
- Glass items should never be used.
- Ensure that the plastic work sheets, especially for use with food, cover the desk area. This sheet should be wiped down with a steriliser.
- Only use equipment set aside to use with food.
- Teachers taking part in any food activity should dress appropriately and follow the same procedures as the children with regard to any rules regarding personal hygiene.
- Ensure that all equipment is cleaned and put away in the food cupboard.
- Ensure that all children use their own equipment when tasting food.
- Certain spoons should be identified and used when placing food onto plates for children to taste food, teachers/TAs need to ensure children do not use their own.

Monitoring and review

The subject leader is responsible for:

- The monitoring of the standards of children's work. Photographic evidence can be used to support this.
- Providing support for colleagues in the teaching of Design and Technology.
- Renewing, updating and complementing the resources needed to deliver the Design and Technology curriculum.
- Monitoring whole school planning, to ensure progression and continuity.
- Keeping staff informed of developments or changes in the Design and Technology curriculum.
- Providing a strategic lead and direction for the subject across the whole school.