



FERNDALE PRIMARY
SCHOOL

Design & Technology Policy

2014



Why teach Design and Technology?

Design and technology prepares children to take part in the development of tomorrow's rapidly changing world. Creative thinking encourages children to make positive changes to their quality of life. The subject encourages children to become autonomous and creative problem-solvers, both as individuals and as part of a team. It enables them to identify needs and opportunities and to respond by developing ideas and eventually making products and systems.

Through the study of design and technology they combine practical skills with an understanding of aesthetic, social and environmental issues, as well as functions and industrial practices. 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.

Design and Technology Aims

The aims of design and technology 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 talk about how things work, and to draw and model their ideas.
- To develop their capability to create high quality products through combining their designing and making skills with knowledge and understanding.
- To encourage children to select appropriate tools and techniques for making a product, whilst following safe procedures.
- 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, and their manufacture, and their contribution to our society.
- Use the internet to explore ideas and already made products.
- To foster enjoyment, satisfaction and purpose in designing and making.

Planning of Design and Technology

Design and technology is a foundation subject in the National Curriculum. Our school uses the national scheme of work as the basis for its curriculum alongside the QCA document for Design and Technology.

We carry out the curriculum planning in design and technology in two phases; medium-term and short-term.

Our medium-term plans from the QCA document give details of each unit of work for each term. They identify learning objectives and outcomes for each unit, and ensure an appropriate balance and distribution of work across each term.



Class teachers complete a weekly plan for each design and technology lesson. These list the specific learning objectives for each lesson and detail how the lessons are to be taught. The class teacher keeps these individual plans, and the class teacher and subject leader often discuss them on an informal basis.

The activities in design and technology are planned so that they build upon the prior learning 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.

Cross-Curricular links

Literacy

Design and technology contributes to the teaching of Literacy in our school by providing valuable opportunities to reinforce what the children have been doing during their Literacy lessons. Discussion, drama and role-play are important ways that we now employ 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.

Numeracy

In Design and Technology we use Numeracy to help us create nets of shapes in order to create packaging. Numerical equipment is also used in Design and Technology lessons when weighing and measuring.

Science

Science helps us in Design and technology lessons to look at and drawing electrical circuits. It also helps us to think more about using materials to create structures which withstand a force.

Information and communication technology (ICT)

We use ICT to support design and technology teaching when appropriate. Children use software to enhance their skills in designing and making, and use draw-and-paint programs to model ideas and make repeating patterns. They use databases to provide a range of information sources and CD-ROMs to gain access to images of people and environments. Children use word processing package to plan and evaluate work through the design process and to collect information to help present their designs through draw-and-paint programs.



Personal, social and health education (PSHE) and citizenship

Design and technology contributes to the teaching of personal, social and health education and citizenship. We encourage the 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 be responsible and to set targets to meet deadlines, and they also learn through their understanding of personal hygiene, how to prevent disease from spreading when working with food.

All other subject areas can be linked into the D & T scheme of work as it may be adapted to fit into every subject area.

The Teaching of Design and Technology

The teaching of design and technology offers opportunities to support the social development of our children through the way we expect them to work with each other in lessons. Our groupings allow children to work together, and give them the chance to discuss their ideas and feelings about their own work and the work of others.

Through their collaborative and co-operative work across a range of activities and experiences in design and technology, the children develop respect for the abilities of other children and a better understanding of themselves. They also develop a respect for the environment, for their own health and safety and for that of others. They develop their cultural awareness and understanding, and they learn to appreciate the value of differences and similarities. A variety of experiences teaches them to appreciate that all people are equally important, and that the needs of individuals are not the same as the needs of groups.

Design and Technology teaching time

Each teacher has a copy of the 'Ferndale Design and Technology Timetable' compiled by the co-ordinator, which outlines the term in which each unit should be taught. A copy is attached, but this timetable is subject to change as teachers consider during the course of the year. This timetable will be updated yearly in September as teaching staff move into different areas of the school.

The teaching of Design and Technology in each year group is arranged by the teaching staff. The unit may be carried out in a block of afternoons in a week, weekly sessions for a half term or alternate weeks with art as the teaching staff see fit.

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/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.

Special needs

All children at Ferndale will have the same chance to participate in Design and Technology.

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;
- Grouping children by ability and setting different tasks for each group;
- Providing a range of challenges through the provision of different resources;
- Using additional adults to support the work of individual children or small groups.

At our school we teach design and technology to all children, whatever their ability. Design and technology forms part of the school curriculum to provide a broad and balanced education to all children.

Through our design and technology teaching we provide learning opportunities that enable all pupils to make progress. We do this by setting suitable learning challenges and responding to each child's different needs. Assessment against the National Curriculum allows us to consider each child's attainment and progress against expected levels.

When progress falls significantly outside the expected range, the child may have special educational needs. Our assessment process looks at a range of factors - classroom organisation, teaching materials, teaching style, and differentiation - so that we can take some additional or different action to enable the child to learn more effectively. This ensures that our teaching is matched to the child's needs.

Intervention through School Action and School Action Plus will lead to the creation of an Individual Education Plan (IEP) for children with special educational needs. The IEP may include, as appropriate, specific targets relating to design and technology.

We enable pupils to have access to the full range of activities involved in learning design and technology. Where children are to participate in activities outside the classroom, for example, a museum or factory trip, we carry out a risk assessment prior to the activity, to ensure that the activity is safe and appropriate for all pupils.



Design and Technology resources

Each year group has been supplied with a box of resources for the whole year. These boxes were created in close contact with each class teachers needs. Each box contains all resources needed and a booklet to give extra ideas for each year's units, design and make sheet ideas and evaluation sheets to aid the staff's teaching. It also contains a check list of resources within the box (of which the co-ordinator also has a copy.)

All design and technology equipment and extra resources are kept in fully labelled boxes in the co-ordinators classroom. (This is at present in Reception.) Please make sure all equipment borrowed is returned to the stock cupboard after use.

Health and Safety

The general teaching requirement for health and safety applies in this subject. We teach children how to follow proper procedures for food safety and hygiene.

Key Stage 1 Food Technology at Ferndale

In addition to the QCA scheme of work, each Key Stage 1 class takes part in cooking activities each term. Trained parent helpers take 4 children from each class each week and work with these children to cook a specific recipe.

Food and Technology Aims

- To recognise the need for safety and hygiene when preparing food.
- To be able to measure ingredients accurately.
- To be able to follow a recipe and use appropriate tools to cut, chop, grate, peel ingredients and then mix them together.
- To recognize the need for health and safety when using kitchen tools.

Recipes:

Reception -	Plain biscuits Plain fairy cakes
Year 1 -	Cheese biscuits Cherry cakes Chocolate chip rock cakes
Year 2 -	Iced biscuits Cheese and tomato pizzas Jam tarts

Additional worksheets and materials are kept in the D and T resource area in Reception with Mrs. Quinney.



Design and Technology for the Foundation Years

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. Design and Technology in the Foundation stage aims to develop independence and self-evaluation of their 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 underpin the curriculum planning for children aged three to five. 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, tools and products, developing making skills and handling appropriate tools and construction material safely and with increasing control.

We provide a range of experiences that encourage exploration, observation, problem solving, critical thinking and discussion. These activities, indoors and outdoors, attract the children's interest and curiosity.

Teachers throughout the Foundation Stage will plan activities and opportunities where children can learn through talk, play and their own life experiences.

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

- Choosing and exploring a variety of materials and equipments such as fabrics, card, paper and boxes.
- Learn how to use scissors safely to cut materials.
- Have experience of using a variety of joining materials such as PVA glue, pritt stick, masking tape, elastic bands, selotape and string to join materials together.
- Have the opportunity to take part in both cooking and non-cook food activities to understand the importance of food hygiene.
- Have opportunities to explore creating a variety of models using a wide range of construction kits to explore how things fit together.
- Have opportunities through talk to explain how they will make their model and evaluate their likes and dislikes about it. They will also have opportunities to re-build and re-evaluate.
- Become familiar with folding and shaping paper in order to create a range of structures.

Assessment

Teachers assess children's work in design and technology by making assessments as they observe them working during lessons. They record the progress that children make by assessing the children's work against the learning objectives for their lessons.



Throughout the year teachers record their pupil's progress on the assessment program of Report Writer on their own computers. Teachers then use this information to plan the future work of each child and to 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.

The design and technology subject leader keeps evidence of the children's work in a portfolio. This demonstrates what the expected level of achievement is in design and technology in each year of the school.

Evaluating and monitoring

The monitoring of the standards of children's work and of the quality of teaching in design and technology is the responsibility of the design and technology co-ordinator. The work of the co-ordinator also involves supporting colleagues in the teaching of design and technology, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school. The design and technology subject leader gives the head-teacher an annual report in which s/he evaluates the strengths and weaknesses in the subject and indicates areas for further improvement.

The school will also evaluate and monitor the teaching and learning of pupils in the following ways:

- The co-ordinator will observe and assess finished work displayed in the classroom or around school and provide teachers with help and feedback. The co-ordinator will also monitor the way in which the subject is being taught by watching lessons from each year group.
- The Head Teacher and management team will analyse teacher's termly and weekly planning to ensure the appropriate units are being taught and that the assessments made are informing the next weeks planning. They will also observe the teaching of D and T in different classes.
- The class teacher will assess individual pupil's attainment against the learning objectives outlined in the scheme of work.
- Year 6 and 2 teachers will assess pupils against the National Curriculum levels of attainment.

Design and Technology Co-Ordinator - Helen Donegan

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