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## **Design and Technology Policy**

Shirland Primary School

October 2022

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Last Reviewed	October 2022
Written By	Emma Sheffield
Reviewed By	Chair of Governors
Next Review Date	October 2025

## **Introduction**

This policy outlines the teaching and learning of Design and Technology (DT) to reflect the aims of the DT National Curriculum and School Improvement Priorities. The implementation of the policy is the responsibility of all teaching staff and is monitored by the Design and Technology leader and the Headteacher.

## **Intent of Design and Technology**

The National Curriculum for Design and Technology aims to ensure that all pupils:

- Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world.
- 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.
- Critique, evaluate and test their ideas and products and the work of others.
- Understand and apply the principles of nutrition and learn how to cook.

The school wants to ensure that pupils make progress in achieving these aims and knowing more, remembering more about their learning in Design and Technology.

## **Implementation of Design and Technology**

Design and Technology is planned on a two year cycle curriculum map linked to topics where appropriate. The curriculum map ensures that year group objectives are covered and the appropriate knowledge and skills are taught to build on prior learning and progression as children move up throughout the school. This ensures that there are opportunities for children of all abilities to develop their skills and knowledge. Class teachers use the year group curriculum map to plan their activities to meet the needs of their class in developing particular skills and acquiring knowledge. This is based on the Design Technology programme of study for KS1 and 2 from the National Curriculum 2014. A copy of the planning for each class is stored in the curriculum folder on the school server. Examples of curriculum maps are also collected by the leader in the DT leadership folder.

The principal aim is to develop children's knowledge, skills and understanding in Design and Technology through different teaching styles. Teachers ensure that the children apply their knowledge and understanding when developing ideas, planning and making products and then evaluating them. This is achieved through a mixture of whole-class teaching and individual or group practical activities. Various strategies are used to engage the children in their learning including the use of scenarios and problem-solving. Appropriate age related vocabulary is used and displayed in each lesson and this helps children to become familiar with and use technical terminology accurately in context and apply it to other areas of the curriculum where relevant. It also helps children to develop a bank of vocabulary at a level consistent with their increasing word reading and spelling knowledge.

Within lessons, children will be given 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, to enhance their learning.

In Foundation Stage children begin to develop skills, knowledge and understanding through 'Expressive Arts' and 'Physical Development' and this learning forms the foundations for learning in DT in KS1 and KS2. Children in the Foundation Stage work on a range of creative themes and tasks and their work links closely to other areas of the Foundation Stage framework, such as Physical Development, Mathematics and Expressive Arts and Design. Children are encouraged to undertake focused practical tasks through directed and self-initiated play related to the focus of the learning and topic. 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 materials safely and with increasing control. A range of experiences are provided that encourage exploration, observation, problem solving, critical thinking and discussion. These activities are available to them indoors and outdoors on a daily basis, attract the pupil's interest and curiosity. Learning is recorded on Tapestry and a class floorbook of evidence linking to Expressive Arts and Physical Development.

In Key Stage 1 and 2 DT is integrated into termly units where appropriate links can be made with topics which are identified on the class curriculum maps. DT may be taught as a sequence of weekly lessons or as a block depending on the process and equipment required.

Units of work will always include the four types of activity specified in the National Curriculum:

- Design
- Make
- Evaluate
- Technical knowledge, skills and vocabulary.

Children are encouraged to know more, remember more by building on knowledge and skills taught using vocabulary, knowledge organisers and class floorbooks to help prompt them about their learning using photos and examples of work. References to relevant professions are made in order to give them inspiration for future careers. After school clubs linking to DT such as cooking and construction are offered during the year to Key Stage 1 and 2 children during the year.

## **Impact of Design and Technology**

Children will have an understanding of the meaning of DT and careers related to the subject.

Children will have the knowledge, understanding and skills to engage in an iterative process of designing and making in a range of everyday contexts and participate successfully to build products for a range of users. They will also be able to apply the principles of nutrition and healthy eating. They will be able to evaluate and test their own and other's ideas and products.

Children will know more, remember more about the skills, knowledge and vocabulary related to DT and make progress in building upon these in order to apply them.

## **Links to other curriculum areas**

Cross-curricular links are encouraged in DT as a way of enriching learning experiences and developing the children's understanding of the subject via other curriculum areas. For example, DT contributes to the teaching of English by providing valuable opportunities for discussion where children learn to justify their own views and explain their design ideas. The evaluation of products requires children to explain their ideas verbally and in written form to compare and contrast their views with those of other people.

In DT there are many opportunities for children to apply their mathematical skills through choosing and using appropriate ways of calculating measurements and distances. Children learn to measure and use equipment correctly. They apply their knowledge of fractions and percentages to describe quantities and calculate proportions. Children learn about size and shape, and make practical use of their mathematical knowledge, in order to be creative and practical in their designs and modelling.

DT contributes to the teaching of PSHE and Citizenship. Children are encouraged to develop a sense of responsibility in following safe procedures when making things. They also learn about a healthy diet through cookery. 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.

## **Assessment and Recording**

Assessment against the National Curriculum allows us to consider each child's attainment and progress against age related expectations for the year group. Attainment in DT may be assessed through judgements of recorded evidence but also through practical application and discussion, description and explanation skills. This is to ensure that children are 'knowing more, remembering more'.

Evidence may be seen in individual work, through 3-D models and photographs of children's work. Class evidence including photos and examples of sheets are recorded in class floorbooks to give an overview of the activity and prompt children's recall of their learning. Verbal feedback is given to pupils during activities about their progress and next steps. Written work is marked at the end of a lesson, in line with the school marking policy. Teachers also make a summative judgement in relation to National Curriculum objectives in line with the school assessment policy at the end of the year. Assessment of progress is recorded on OTrack by the class teacher and pupil progress is shared with parents through the children's end of year reports. Progress in Design Technology throughout the school is monitored annually by the leader and informs next steps for the action plan.

## **Monitoring and review**

It is the responsibility of the Design Technology Subject Leader to monitor the standards of children's work and the quality of teaching and learning in Design Technology. The leader is

also responsible for supporting colleagues in the teaching of DT, for being informed about current developments in the subject and for providing a strategic lead and direction for the subject in the school.

Monitoring can be carried out in the following ways:

- Discussions with staff/questionnaires/staff meetings
- Learning walks
- Pupil voice
- Informal discussions with pupils/questionnaires
- Scrutiny of floorbook and individual work.
- Display monitoring
- Monitoring of planning and curriculum maps

Each year, the leader devises an action plan outlining the actions for the year linked to key priorities linked to the School Improvement Plan. The action plan is reviewed at the end of each term and governors receive feedback on the progress of Design Technology provision.

## **Resources**

There is a selection of class-based and centrally-stored materials and tools to ensure that all children have the necessary resources to access the subject and to make informed choices. Classes may have resources that are relevant to their individual topic in their classrooms. An annual audit is carried out to update any resources needed for the curriculum. The DT budget covers the costs of materials and the replacement of equipment.

## **Health and Safety**

All activities, both on and off site are planned with due regard to health and safety. Children are taught to use tools and equipment responsibly under close supervision, including saws, drills and knives. Googles are available when required. Guidelines for safe food handling are in school as well as a list of children with specific food allergies in the office/staff room. Any visits involving children leaving the school site will be subject to a risk assessment.

## **Equal Opportunities**

Shirland Primary School is dedicated to ensuring that all members of the school community and the wider community are treated equally, fairly, and with respect by the school and by each other. We believe that it is important for all children to experience the range of Design and Technology activities. We will use opportunities within Design and Technology to challenge stereotypes.

## **Inclusion Statement**

We aim to provide for all children so that they achieve as highly as they can in Design and Technology according to their individual abilities. We will identify which pupils or groups of pupils are under-achieving and take steps to improve their attainment. Gifted children are identified and suitable learning challenges are provided. Differentiation is planned by the class teacher to match the needs of the child or group. This may support specific targets relating to Design Technology on a child's Individual Education Plan.

## **Special Needs**

We aim to meet the needs of all pupils at the school effectively to ensure that they benefit as fully as possible from the education and experiences they receive and are able to attain their full potential. All children will be encouraged and supported to develop Design and Technology capability through a range of resources and materials. We recognise the importance of identifying the specific difficulties individual children might have in Design and Technology so that appropriate teaching and organisation can be adapted.

## **Roles and responsibilities**

### Design and Technology Leader

The leader works with the whole staff to develop a cohesive Design and Technology experience throughout the school. The leader will also:

- Support colleagues in their development and understanding of planning and implementing Design and Technology.
- Take responsibility for the purchase and organisation of resources for Design and Technology.
- Keep up to date with developments in Design and Technology.
- Monitor delivery throughout the school.
- Monitor pupil progress throughout the school.

### Class Teacher

- Is responsible for the planning, teaching and assessment of Design and Technology as set out in this policy.
- Will ensure the children are always working safely and the other adults in the class are informed of the health and safety issues.

### Teaching assistants/Parent helpers

- Need to be aware of the health and safety issues.
- Undertake the activity that the class teacher decides is most appropriate for them.
- Need to be aware that when pupils are involved in a design and make activity they need to be allowed to make decisions and undertake practical work without unnecessary adult intervention.