



Withnell Fold Primary School

Design and technology policy

Intent

At Withnell Fold Primary school, we aim to provide all children with a broad and balanced curriculum which prepares them for life beyond primary education. We encourage children to use their creativity and imagination, to design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. We support our children in becoming critical thinkers, forward planners and effective problem solvers. We also teach our children to be able to work as capable individuals and as part of a valuable, productive team. Resilience is a key theme running through our DT curriculum, and the children are encouraged to become innovators and risk takers. Our Design and technology curriculum is sequencing as it builds on prior learning to enable appropriate challenge for pupils to meet the end of key stage attainment targets in the National curriculum. EYFS (Reception) units provide opportunities for pupils' to work towards the Development matters statements and the Early Learning Goals.

The school aims to;

- 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 prepare food & cook.

Implement

At Withnell Fold Primary school, we have created a Design and Technology curriculum map for DT that works over a 2 year cycle (Year A & Year B). We have carefully created units to ensure gradual progression towards the National curriculum end of key stage attainment targets and to cover all of the four strands shown below in enough detail. Pupils work towards specific key learning as well as modelling their Age Related Expectation skills throughout each unit.

- Explore / appraise
- Design
- Make
- Evaluate
- Technical knowledge

Cooking, health and nutrition is given a key focus and we have made this one of our key areas that pupils revisit throughout their time in primary school:

- Cooking and nutrition
- Mechanisms/ Mechanical systems
- Structures
- Textiles
- Electrical systems (KS2 only)
- Digital world (KS2 only)

Some areas can appear less frequently than others throughout the 2 year cycle of learning as they link with other objectives in subjects such as Science, Computing and Art.

Our scheme has a clear progression of skills and knowledge within these strands and key areas across each year group. These skills develop to ensure that attainment targets are securely met by the end of each key stage.

Each of our key areas follows the design process (explore / appraise, design, make and evaluate) and have a particular theme and focus which includes the technical knowledge or vocabulary. The spiral curriculum, with key areas revisited again with increasing complexity, allowing pupils to revisit and build on their previous learning. Lessons incorporate a range of teaching strategies from independent tasks, paired and group work including practical hands-on, computer-based and inventive tasks. This variety means that lessons are engaging and appeal to those with a variety of learning styles. Adaptive teaching support is used in every lesson to ensure that lessons can be accessed by all pupils and opportunities to stretch pupils' learning are available when required.

We always aim to teach D&T through a variety of creative and practical activities in order to give children the knowledge, understanding and skills needed to engage in an iterative process of designing, making and evaluating. They are given opportunities to work in a range of relevant contexts such as at home and school.

EYFS

In the Early Years Foundation Stage we provide opportunities for children to:

- safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function;
- share their creations, explaining the process they have used;
- make use of props and materials when role playing characters in narratives and stories.

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 ICT
- 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
- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria
- 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.
- use the basic principles of a healthy and varied diet to prepare dishes
- understand where food comes from.

KS2

- use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose and aimed at particular individuals or groups
- generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design
- 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
- investigate and analyse a range of existing products
- evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
- understand how key events and individuals in design and technology have helped shape the world
- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- understand and use mechanical systems in their products (for example, gears, pulleys, cams, levers and linkages)
- understand and use electrical systems in their products (for example, series circuits incorporating switches, bulbs, buzzers and motors)
- apply their understanding of computing to program, monitor and control their products
- understand and apply the principles of a healthy and varied diet
- prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
- understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

Resources

- The Design & Technology subject leader will liaise with staff to order specific resources towards each unit of work.
- The resources are often stored above the Y3&4 classroom or within the Art cupboard and should always be returned after use.
- Teachers will have access to supporting materials from the subject leader, for example exemplar pieces of work and photographs. The subject leader is also available to help with planning.

- Tools and equipment such as glue guns, tools and sewing resources are safety checked annually and replaced when required.

Impact

Our Design and technology curriculum will allow pupils to leave school equipped with a range of skills to enable them to succeed in their secondary education and be innovative and resourceful members of society. Children will:

- Understand the functional and aesthetic properties of a range of materials and resources.
- Understand how to use and combine tools to carry out different processes for shaping, decorating, and manufacturing products.
- Build and apply a repertoire of skills, knowledge and understanding to produce high quality, innovative outcomes, including models, prototypes, CAD, and products to fulfil the needs of users, clients, and scenarios.
- Understand and apply the principles of healthy eating, diets, and recipes, including key processes, food groups and cooking equipment.
- Have an appreciation for key individuals, inventions, and events in history and of today that impact our world.
- Recognise where our decisions can impact the wider world in terms of community, social and environmental issues.
- Self-evaluate and reflect on learning at different stages and identify areas to improve. → Meet the end of key stage expectations outlined in the National curriculum for Design and technology.
- Meet the end of key stage expectations outlined in the National curriculum for Computing.

Assessment

Withnell Fold uses assessment to enable staff to understand what pupils have learnt before, what they need to learn now and what they will learn next. The impact of our design technology curriculum can be constantly monitored through both formative and summative assessment opportunities. Children are encouraged to make personal assessments of their own work through evaluating activities and identifying what they need to do to improve. The subject leader will collect selected examples of children's work, when monitoring.

Inclusion

Teachers set high expectations for all pupils in Design Technology. They will use appropriate assessment to set ambitious targets and plan challenging work for all groups, including:

- More able pupils
- Pupils with low prior attainment
- Pupils with special educational needs (SEN)

Lessons will be planned to ensure that there are no barriers to every pupil achieving. Teachers will plan lessons so pupils with SEN and / or disabilities can study design technology, wherever possible, and ensure that there are no barriers to every pupil achieving.

Talented or more able children will be challenged through more demanding tasks such as more open-ended design briefs, exploring and combining a range of materials in their work and carrying out independent research.

Intervention in design & technology will take the form of small group work, led by the teacher or teaching assistant. This would usually take place within the DT lesson itself and will allow the child to be directly led by the adult. For all children to produce their best, teachers will adapt lessons to suit the needs of learners by:

- changing the demands of a task;
- limiting choices;
- providing greater teacher intervention, small group work and teaching assistant support;
- ensuring manipulative skills needed are manageable;
- selecting appropriate tools and equipment;
- pre-teaching skills.

Reviewed September 2025 - Mr K Rothwell

Next reviewed - September 2027