

Graiseley Primary School



Design and Technology Policy 2023-2024

Intent Statement

At Graseley 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. During Design and Technology, we teach children the language skills they will need to be effective communicators. We actively encourage our children to be 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.

Definition

Design and Technology is a subject where children's capability in designing and making is developed through combining their designing and making skills with knowledge and understanding. At Graseley Primary School, we view Design and Technology as a subject which allows children to apply their knowledge and understanding in a creative way to design and make products.

"Design and technology is an inspiring, rigorous 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 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, 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" (National Curriculum Document 2014)

"Tell me and I forget- show me and I may remember- let me do it, and I learn." Learning through making works! (Prue Leith, Leith's School of Food and Wine As quoted in National Curriculum Document 2001, page 14)

Aims

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.

Planning Foundation Stage

Children in the Foundation Year will undertake investigative and skills-based tasks during independent working time. The Design and Technology area will be available to them on a daily basis, and they will be encouraged to undertake focused practical tasks through directed and self-initiated stimuli. They will be provided with resources based on topics within the focus of the classroom and will be encouraged to design and develop ideas independently. Children in the Foundation Stage work on a range of creative themes and tasks, and their work in Creative Development links closely to other areas of the Foundation Stage Profile, especially Physical Development.

Key Stage 1

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment]. When designing and making, pupils should be taught to:

Design

Understanding contexts, users and purposes

- Use simple design criteria; state what their products are, who and what they are for and how they will work.

Generating, developing modelling and communicating ideas

- Generate ideas using their own experiences and existing products; use talk, drawing, templates, mock-ups and, where appropriate, computers.

Make

Planning

- Plan by suggesting what to do next; select from a range of tools, equipment, materials and components.

Practical skills and techniques

- Follow procedures for safety and hygiene; measure, join, combine and finish a range of materials and components.

Evaluate

Own ideas and products

- Make simple judgements about their products and ideas against design criteria.

Existing products

- Explore who and what products are for, how they work and are used, what materials they are made from and what they like and dislike about them.

Technical knowledge

Making products work

- Know about the simple working characteristics of materials and components, the movement of simple mechanisms, how freestanding structures can be made stronger, stiffer and more stable; use the correct technical vocabulary.

Cooking and nutrition

Where food comes from

- Know that food comes from plants or animals and that it is farmed or caught.

Food preparation, cooking and nutrition

- Know how to prepare simple dishes safely and hygienically without a heat source, name and sort foods into groups; know that everyone should eat at least five portions of fruit and vegetables a day.

Key Stage 1 children will undertake one unit of work per term, at least. They will also have opportunities during Design and Technology lessons to develop their own ideas and generate designs independently. Progression of Design and Technology skills will be monitored by staff formally and informally with references to expectations from the National Curriculum.

Our DT curriculum is designed using 'Project On A Page' (POAP). Planning will follow the medium term planning linked to National Curriculum guidelines, which is all embedded in POAP.

Key Stage 2

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].

When designing and making, pupils should be taught to:

Design

Understanding contexts, users and purposes

- Gather information about user needs; develop their own design criteria; describe the user, purpose and design features of their products and explain how they will work; carry out research; develop a simple design specification.

Generating, developing modelling and communicating ideas

- Generate realistic ideas based on user needs; use a range of drawing skills, discussion, prototypes, pattern pieces and computer-aided design (if applicable); generate innovative ideas.

Make

Planning

- Order the main stages of making; select suitable tools, equipment, materials and components and explain their choices; formulate list of resources and step-by-step plans.

Practical skills and techniques

- Follow procedures for safety and hygiene; use a wider range of materials and components; measure, mark out, cut, shape, assemble, join, combine and finish with some accuracy.

Evaluate

Own ideas and products

- Evaluate their ideas and products against their design criteria; identify strengths and areas to develop in their ideas and products; consider the views of others to make improvements.

Existing products

- Investigate how well products have been designed and made, whether they are fit for purpose and meet user needs; why materials have been chosen, the methods of construction used and how well they work, and how innovative and sustainable they are.

Key events and individuals

- Know about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products.

Technical knowledge

Making products work

- Know that materials have functional and aesthetic qualities; that systems have an input, process and output; how to program a computer to control their products; how to make strong, stiff shell structures; use the correct technical vocabulary.

Cooking and nutrition

Where food comes from

- Know that food is grown, reared and caught in the UK, Europe and the wider world; that seasons may affect the food available; how food is processed into ingredients.

Food preparation, cooking and nutrition

- Know how to prepare and cook a variety of dishes safely and hygienically; that a healthy diet is made from a variety and balance of different food and drink; that food and drink are needed to provide energy for the body; where appropriate, use a heat source; that different food and drink contain nutrients, water and fibre that are needed for health.

Organisation

Children will be taught by Foundation Stage staff or Key Stage 1 and 2 staff. External specialists will be used when possible. Students in school will be encouraged to consider the benefits and learning opportunities possible through Design and Technology.

Assessment and record keeping

- The Subject Leader will keep a photographic portfolio of designs, drawings, pictures and finished products. These can be used for assessment purposes and for monitoring progression through year groups.
- Books will be used by each year group to document the progress in DT. This can be images, prototypes or children's quotes/evaluations. These can be used to assess the progression throughout the year and to share with the Leader for monitoring.
- A display of design and technology work will be set up in the general display area of school, periodically. This will include drawings, patterns, quick models and final products to demonstrate to parents the whole and making process.

Equal opportunities and inclusion of all children

As a Right's Respecting School, 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.

All children will be encouraged and supported to develop design and technological capability through a range of materials. We recognise the importance of identifying the specific difficulties that individual children might experience, and targets will be set within their IEP to reflect appropriate teaching and organisational strategies to meet their needs.

At Graiseley Primary School, we expect all children to participate in Design and Technology projects. Specialist equipment and support will be sought and provided for any children who need them in order that they will be included within and have access to tasks in Design and Technology.

The subject Leader will liaise closely with the SENCO (Special Needs Leader) to ensure that all our children have differentiated access to Design and Technology, including provision of special resources or equipment where necessary and possible.

Resources

All resources for Foundation Stage are held within the Foundation Stage classrooms. Resources for Key Stage 1 and 2 are held centrally. Within Foundation Stage, the classroom has a Design and Technology area containing renewable and interchangeable resources including a selection of paper, plastics and metals. These resources will be renewed and replaced as appropriate, with consideration given to topics within all areas of learning across the Foundation Stage Profile. The outdoor classroom will contain opportunities for working on Design and Technology projects, including construction kits, sand and water. Resources will be made whenever possible linked to projects which are self-generated by the children within the Foundation Stage.

- A limited range of materials and tools will be provided for Key Stage 1 and 2 children within classrooms including: paper, card, reclaimed materials, textiles, square section wood, dowelling, wheels, construction kits, hole punches, snips, scissors.
- Food resources, tools and equipment are kept in the food store area.
- Collections of products suitable to use as a stimulus for designing and making activities are stored in central store.

Health and Safety

Teachers will always teach the safe use of tools and equipment and insist on good practise.

Teachers will refer to the general DT risk assessments for Graiseley Primary School and refer to risk assessments on CLEAPSS (which they have login details for).

The Role of the Design and Technology Leader is to:

- lead the development of design and technology in school
- provide guidance to individual members of staff
- keep up to date with local and national developments in design and technology and disseminate relevant information
- review and monitor the success and progress of the planned units of work
- order stock linked to the planned units of work at the end of each term
- be responsible for the organisation and maintenance of design and technology resources
- co-ordinate any display of design and technology work

This policy outlines the teaching and learning of design and technology following POAP. It reflects the views of all teaching staff and was drawn up as a result of staff discussion. This policy will be reviewed annually by the DT Leader. The implementation of the policy is the responsibility of all teaching staff and will be monitored by the head teacher.

The policy is written with consideration to our school commitment to the Rights of the Child and our achievement of becoming a Rights Respecting School. Although direct reference to this is not continuously made, the policy has been written with full awareness of our commitment to this initiative.

This policy will be reviewed in September 2024