

Subject Statement

Our Vision for Design and Technology

Intent

We consider our children to have limitless imagination and design and technology is a subject that helps children to develop their creativity in practical ways. Design and technology encourages children to learn to think and act creatively in order to solve problems both as individuals and as members of a team. At The District, we encourage children to use their creativity and imagination, to design, create and evaluate products that solve real and significant problems within a range of contexts, considering their own and others' needs and values. We aim to link design and technology to all the strands of the curriculum so children can see how it connects to the wider world. Children are given opportunities to research past innovators and look at the impact and influence of their work. Our school commits to ensuring every pupil, at every stage, has appropriately challenging and engaging learning, informed by the national curriculum.

They will be taught to:

- Learn the importance of a clear design criteria
- Generate and communicate ideas using sketching and modelling
- Learn about different types of structures, fabrics and food found in the natural world
- Understand the importance of cooking and nutrition
- Follow instructions from a plan when cutting or assembling
- Use appropriate tools and equipment for a specific purpose
- Use a range of materials for a specific project
- Consider and evaluate the efficiency of a product

Implementation of Design and Technology

At The District CE, we use the Kapow! Primary scheme for areas of study for year 1 – 6 and adapt them according to the needs of our pupils. These lessons are in a weekly block each term and are appropriate for each year group. The areas of design and technology taught for each year group consist of cooking and nutrition, mechanisms, structures, textiles and electrical systems.

It is important to recognise that our scheme of work is adapted to reflect context of our school and the needs of our pupils. Our curriculum builds upon previous learning across the key stages. Vocabulary is selected carefully to ensure that it is embedded in pupils' learning.

For every new project in design and technology, we begin by exploring and investigating existing products, identifying the function and consumer and evaluating their effectiveness against these. Pupils are taught key skills (including finishing techniques), that they can apply in their own designs. Design ideas are established through diagrams, written design criteria and making sequences. Finished products are evaluated against the original criteria, identifying strengths and possible areas of improvement.

Each lesson includes:

- A vocabulary focus;
- A revisit to check learning and progression;
- An opportunity to evaluate learning, which can be in a verbal or written form.

Opportunities and Resources

Wider world opportunities are planned accordingly to address current global and local issues/events e.g. politics and current affairs. We also encourage objectives to be covered through enrichment activities for example, assemblies, themed weeks, educational trips and visits.

We access a range of quality resources and organisations to support our teaching and learning:

www.data.org.uk

www.kapow.co.uk

www.stem.org.uk

Inclusion

As a school, we ensure that all pupils can engage with design and technology learning irrespective of their race, cultural background, gender, religion, creed, level of intellectual ability or physical and emotional circumstances.

As far as is appropriate, pupils with special educational needs should follow the same design and technology education programme as all other students. Careful consideration is given concerning the level of differentiation needed, and in some cases, the content or delivery will have to be adapted. Teachers and/or learning support assistants work with individual pupils where required, and if appropriate. It is not the school's policy to withdraw pupils with special educational needs from design and technology education to catch up on other national curriculum subjects.

Recording assessment

At the beginning of each unit, prior knowledge is established. Formative assessment is used in all lessons, in the form of retrieval practice (revisiting recent and past learning.) The outcomes inform future planning and addresses misconceptions as well as allowing children to evaluate their learning progress. At the end of a unit of work, class teachers record individual progress and attainment in design and technology on Insight.

By the end of Key Stage 1, pupils are expected to:

- design purposeful, functional, appealing products for themselves and other users based on design criteria;
- select from and use a range of tools and equipment to perform practical tasks;
- select from and use a wide range of materials and components, including construction materials, textiles and ingredients;
- have technical knowledge about building structures, exploring how they can be made stronger, stiffer and more stable and explore useful mechanisms;
- use the basic principles of a healthy and varied diet to prepare dishes and understand where food comes from.

By the end of Key Stage 2, pupils are expected to:

- widen their knowledge of preparing and cooking a variety of savoury dishes using a range of cooking techniques;
- use research and develop design criteria to inform their designs of innovative products;

- model and communicate their ideas through discussion, annotated sketches, diagrams and prototypes;
- use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors.

Monitoring

The design and technology lead monitors and reviews the implementation and development of the design and technology curriculum in consultation with the Headteacher, SLT, staff members and governors. Monitoring is carried out through a range of methods including:

- Planning scrutiny
- Learning walks;
- Learning journey observations;
- Teacher observations;
- Pupil voice surveys.