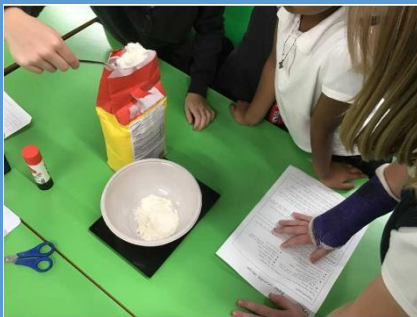


Design and Technology

Intent, Implementation and Impact Statement



Intent

Our School Vision

- To improve the life chances of every child through the pursuit of knowledge
- To ensure children are well rounded pupils with strong moral values through the 'Take Care' approach

The Design and technology scheme of work aims to inspire pupils to be innovative and creative thinkers who have an appreciation for the product design cycle through ideation, creation, and evaluation. We want pupils to develop the confidence to take risks, through drafting design concepts, modelling, and testing and to be reflective learners who evaluate their work and the work of others. Through our Design and Technology work at Edale, we aim to build an awareness of the impact of design and technology on our lives and encourage pupils to become resourceful, enterprising citizens who will have the skills to contribute to future design advancements. Our Design and technology scheme of work enables pupils to meet the end of key stage attainment targets in the National curriculum and the aims also align with those in the National curriculum. It provides opportunities for pupils' to work towards the Development matters statements and the Early Learning Goals in EYFS.

Areas for development at Edale include ensuring our children build a range of skills in our combined Art and Design and Technology curriculum which prepare them for the future, both at home and work. Working with real life people who have Design and Technology careers, such as engineers, will enhance the children's experience at our school.

Implementation

The Design and technology National curriculum outlines the three main stages of the design process: design, make and evaluate. Each stage of the design process is underpinned by technical knowledge which encompasses the contextual, historical, and technical understanding required for each strand. Cooking and nutrition has a separate section, with a focus on specific principles, skills and techniques in food, including where food comes from, diet and seasonality.

The National curriculum organises the Design and technology attainment targets under four subheadings: Design, Make, Evaluate, and Technical knowledge. We have taken these subheadings to be our Edale Primary strands:

- Design
- Make
- Evaluate
- Technical knowledge.

Edale's Design and technology scheme has a clear progression of skills and knowledge within these strands and key areas across each year group. Our National curriculum overview shows which of our units cover each of the National curriculum attainment targets as well as each of the four strands.

Our Progression of skills shows the skills and knowledge that are taught within each year group and how these skills develop to ensure that attainment targets are securely met by the end of each key stage.

The six key areas that pupils revisit throughout their time in primary school are:

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

Implementation

Through Edale's Design and technology scheme, pupils respond to design briefs and scenarios that require consideration of the needs of others, developing their skills in the six key areas. Each of our key areas follows the design process (design, make and evaluate) and has a particular theme and focus from the technical knowledge or cooking and nutrition section of the curriculum. The Edale scheme is a spiral curriculum, with key areas revisited again and 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. Differentiated guidance is available for every lesson to ensure that lessons can be accessed by all pupils and opportunities to stretch pupils' learning are available when required. Pupils with SEND are catered for by appropriately adapting lessons, for example using adapted equipment and use of adult support.

Knowledge organisers for each unit support pupils in building a foundation of factual knowledge by encouraging recall of key facts and vocabulary. Strong subject knowledge is vital for staff to be able to deliver a highly effective and robust Design and technology curriculum. Teachers have access to videos for every lesson to support with this.

Each year group will complete one Design and technology project per half term (3 per year). Most projects consist of 4 – 6 lessons which can be timetabled flexibly to fit around the needs of the class and/or project.

Pupils are encouraged to take part in family competitions throughout the year to practice their cooking skills, for example, The Great 'Edale' Bake Off.

Impact

We assess formatively within and between lessons and ensure appropriate adaptations are put in place to support children. For example, using the knowledge organisers for each topic to support the use of technical vocabulary. We also summatively assess Design and Technology twice a year. Once at February half-term and once at the end of the summer term. This is to track children's progress across years, to provide essential transition information for new teachers and to track the progress and attainment of any potentially vulnerable groups such as SEND or Pupil Premium.

Each lesson includes guidance to support teachers in assessing pupils against the learning objectives. Furthermore, each unit has a unit quiz and knowledge catcher which can be used at the start and/ or end of the unit. After the implementation of Design and technology, pupils should 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.

The expected impact of following the Edale Design and technology scheme of work is that 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.