Design and Technology

Subject Statement

Design and technology equips children to take part in the development of tomorrow's rapidly changing world. Creative thinking encourages children to make positive changes to their quality of life. The subject encourages children to become autonomous and creative problem-solvers, both as individuals and as part of a team. It enables them to identify needs and opportunities and to respond by developing ideas and eventually making products and systems. Through the study of design and technology they combine practical skills with an understanding of aesthetic, social and environmental issues, as well as functions and industrial practices. This allows them to reflect on and evaluate present and past design and technology, its uses and its impacts.

Our Intent

- to develop imaginative and critical thinking in children and to enable them to express their views on existing products and those that they create themselves
- to explore, learn and discuss how things work
- to encourage children to select appropriate tools and techniques for making a product, whilst following safe procedures
- to develop an understanding of technological processes, products, and their manufacture, and their contribution to our society, including comparing and evaluating the work of designers
- to foster enjoyment, satisfaction and purpose in designing and making
- to develop resilience and perseverance through the cycle of trying things out, evaluating and modifying their own work.

Teaching and Learning

Through a mixture of whole-class teaching and individual/group activities, we aim to develop children's knowledge, skills and understanding in design and technology. Teachers ensure that the children apply their knowledge and understanding when developing ideas, planning and making products and then evaluating them. Within lessons, we give children 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.

Curriculum Planning

Design and technology is taught throughout the school ensuring a progression of skills and is an intrinsic part of our themed curriculum. We combine specialist subject teaching with opportunities to utilise the skills of staff, parents and experts from our wider community. We include STEM teaching and work in conjunction with outside agencies where possible.

Class teachers plan for design and technology sessions as part of themed curriculum building upon the prior learning of the children.

EYFS

We encourage the development of skills; knowledge and understanding that help reception children make sense of their world. This learning forms the foundations for later work in design and technology. 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 material safely and with increasing control.

KS1 and KS2

We provide a range of experiences that encourage exploration, observation, problem solving, critical thinking and discussion. These activities, indoors and outdoors, ignite the children's interest, curiosity and enthusiasm for design tasks. Design Technology is taught as part of a linked, broad and balanced curriculum and related to researching the work of modern and historical designers.

Textiles is an important aspect of our DT curriculum. We utilize the skill and expertise of our staff and the children are given opportunities to develop their knowledge of working with fibres and fabrics.

Information and communication technology (ICT). We use ICT to support design and technology teaching when appropriate. Children use ICT to enhance their skills in designing and making, and use draw-and-paint programs to model ideas. gain access to images of people and environments. The children also use ICT to collect information and to present their designs. In key stage 2 ICT is used to power and control models.

Cookery and food preparation teach safe procedures when making things. Pupils learn about health and healthy diets. 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.

We enable pupils to have access to the full range of activities involved in learning design and technology. When possible, children participate in activities outside the classroom, for example, a museum or factory trip. We invite specialists in to work with the children on STEM tasks.

Assessment

Teachers assess children's work in design and technology by making observations of their work during lessons. They record the progress that children make by assessing the children's work against the learning objectives for their lessons. Teachers use these findings to plan the future work of each child and to make an annual assessment of progress for each child, as part of the annual report to parents. Each teacher passes this information on to the next teacher at the end of each year.

Resources

Our school has a wide range of resources and tools to support the teaching of design and technology across the school. Classrooms have a range of basic resources, with the more

specialised equipment being kept in the design and technology store. This room is not accessible to children. We order in materials and tools, when needed, for specific projects.

Health and Safety

The general requirements for health and safety applies in this subject. We teach children how to follow proper procedures for food safety and hygiene.

Equal Opportunities and SEN

We enable children to work at their own level and develop at their own pace by providing suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this through a range of strategies:

- setting common tasks that are open-ended and can have a variety of results
- setting tasks of increasing difficulty where not all children complete all tasks
- grouping children by ability and setting different tasks for each group
- providing a range of challenges through the provision of different resources
- using additional adults to support the work of individual children or small groups

We research and celebrate the achievements of a diverse range of scientists including successful female role models.