Galley Common School Design and Technology Policy

Aims and purpose of study

Design and Technology prepares 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. Through the study of design and technology they combine practical skills with an understanding of aesthetic, social and environmental. This allows them to reflect on and evaluate present and past design and technology, its uses and its impacts. Design and Technology helps all children to become discriminating and informed consumers and potential innovators.

The aims of design and technology are:

- develop the creative, technical and practical expertise needed to perform practical 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

Teaching and learning style

At Galley Common Infant school, we follow the Kapow scheme of work with the aim that the progression of units builds on the children's previous knowledge, understanding and skills. Teachers ensure that the children apply their knowledge and understanding when developing ideas, planning and making products and then evaluating them. We do this through a mixture of whole-class teaching and individual/group activities. 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 IT, where appropriate.

In all classes there are children of differing ability. We recognise this fact and provide 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.

Design and Technology curriculum planning – Key Stage One

Design and Technology is a foundation subject in the National Curriculum. At Galley Common Infant School, we use Kapow scheme of work which is based on the National Curriculum. Kapow is laid out showing the National Curriculum coverage for the subject of DT, the progression of skills between Year groups and builds on children's knowledge and understanding.

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. These are our Kapow Primary strands.

Kapow Primary's Design and technology scheme has a clear progression of skills and knowledge within these strands and key areas across each year group. Kapow's National curriculum overview shows which of the units cover each of the National curriculum attainment targets as well as each of the four strands. We also have a Progression of skills document which 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 the key stage. Cooking and nutrition is given a particular focus in the National curriculum and we have made sure each year group covers a food unit.

Through Kapow Primary'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 Kapow Primary 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. This variety means that lessons are engaging and appeal to those with a variety of learning styles.

Knowledge organisers for each unit support pupils in building a foundation of factual knowledge by encouraging recall of key facts and vocabulary.

The Early Years Foundation Stage

We encourage the development of skills, knowledge and understanding that help Reception children make sense of their world as an integral part of the school's work. As the Reception class is part of the Foundation Stage of the National Curriculum, we relate the development of the children's knowledge and understanding of the world to the objectives set out in the Early Learning Goals. By using the Kapow scheme children in reception are able to engage with the design and technology curriculum to its fullest. They are 4 units of work in reception and 6 seasonal crafts linked to the design and technology curriculum. 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, handling appropriate tools and construction material safely.

We provide a range of experiences that encourage exploration, observation, problem solving, critical thinking and discussion. These activities, indoors and outdoors, attract the children's interest and curiosity.

Contribution of design and technology to teaching in other curriculum areas

English

Design and technology contributes to the teaching of English in our school by providing valuable opportunities to reinforce what the children have been doing during their English lessons. The evaluation of products requires children to articulate their ideas and to compare and contrast their views with those of other people. Through discussion children learn to justify their own views and clarify their design ideas.

Computing

We use IT to support Design and Technology teaching when appropriate. Children use software to enhance their skills in designing and making, and use draw-and-paint programs to model ideas and make repeating patterns. The children also use IT to collect information and to present their designs through draw-and-paint programs.

Personal, Social and Health Education (PSHE) and Citizenship

Design and Technology contributes to the teaching of personal, social and health education and citizenship. We encourage the children to develop a sense of responsibility in following safe procedures when making things. They also learn about food and nutrition. 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 e.g. visit from the school nurse about hand washing.

Spiritual, Moral, Social and Cultural Development

The teaching of design and technology offers opportunities to support the social development of our children through the way we expect them to work with each other in lessons. Our groupings allow children to work together, and give them the chance to discuss their ideas and feelings about their own work and the work of others. Through their collaborative and co-operative work across a range of activities and experiences in design and technology, the children develop respect for the abilities of other children and a better understanding of themselves. They also develop a respect for the environment, for their own health and safety and for that of others. A variety of experiences teaches them to appreciate that all people are equally important, and that the needs of individuals are not the same as the needs of groups.

Teaching Design and Technology to children with Special Educational Needs

We teach Design and Technology to all children, whatever their ability. Design and Technology forms part of our school curriculum policy to provide a broad and balanced education for all our children. Our teachers provide learning opportunities that are matched to the needs of children with learning difficulties. Work in Design and Technology takes into account the targets set for individual children in their Pupil centred Plan(PCPs).

Assessment and recording

Children record their design work and evaluations within their topic folder. They create their designs which are assessed and sent home with the child.

We assess the children's work in Design and Technology whilst observing them working during lessons. We use a formative assessment throughout the year and monitor the children's progress within the four strands of DT. Any final judgements are passed onto the next teacher at the end of each year and reported to the parents.

Resources

Our school has a wide range of resources 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 boxes.

Health and safety

The general teaching requirement for health and safety applies in this subject. We teach children how to follow proper procedures for food safety and hygiene and safety in using tools and other equipment in design and technology. There are copies of risk assessments for different units of work for the staff teaching to access.

Monitoring and review

When Design and Technology is the focus of the Curriculum team, monitoring of the standards of children's work and of the quality of teaching in Design and Technology will take place, with learning walks, pupil voice, staff questionnaires and pupils work. The team leader will offer support to colleagues in the teaching of Design and Technology and staff are welcome to approach team members for support as required. The Design and Technology team leader will have specially-allocated management time.