Great Sankey Primary

Design and Technology Policy

September 2021

Version	Date	Action
1	April 2019	New Document adopted by Full Governing Body,
2	July 2020	Policy reviewed
2	September 2021	Policy reviewed

'Together We Learn and Grow'

Great Sankey Primary School Design and Technology Policy

The importance of Design and Technology

'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.'
The 2014 Primary National Curriculum in England, Design and technology, page 180

Aims and Purposes

The national curriculum for design and technology (DT) 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.
- think and talk about how things work, and to draw and model their ideas.
- 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.

Expectations

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study. (The 2014 Primary National Curriculum in England, Design and technology, page 180)

Organisation and Planning

At Great Sankey Primary, DT is delivered through a topic approach and our planning is cross curricular and linked to the Design and Technology Association's scheme 'Projects on a Page'. DT planning is carefully planned over a two-year cycle to engage and excite all our learners. It can be found clearly identified on our Long Term Plans and embedded within theme planning. Long term plans map out the elements taught, the range of media/materials and the processes to be developed during each year group. It also ensures an appropriate balance and distribution of work across each term, year group and key stage to ensure coverage of the curriculum.

Medium and short term planning encompasses exploring and developing ideas, investigating and making, accessing and appreciating the work of other inventors, evaluating and developing work and developing knowledge and understanding. This planning highlights the specific learning objectives and expected outcomes for each project within each class.

Children build upon prior learning to give a progression through year groups. They are given the opportunity to work as a class, as part of a group or as an individual. The choice of class organisation will be determined by; the learning task or activity, the nature of the theme and the resources being used. Children in the Early Years Foundation Stage are given the opportunity to explore and use media and materials and to be imaginative through basic and enhanced provision.

Linking with other subjects

English - Design and technology contributes to the teaching of Literacy by providing valuable opportunities to reinforce prior learning. Discussion, drama and role-play are important ways for the children to develop an understanding that people have different views about design and technology. The evaluation of products requires children to articulate their ideas and to compare and contrast their views with those of other people. This also promotes our school's questioning focus to develop their deeper thinking skills. Through discussion, children learn to justify their own views and clarify their design ideas.

Maths – In design and technology, children learn to measure and use equipment correctly, generate nets of shapes in order to create packaging and weigh and measure accurately. They will also learn about size and shape and make "real" use of their mathematical knowledge in order to be creative and practical in their designs and modelling. They will also develop their problem solving skills and the various element of design technology require logical and systematic thinking and approaches.

Science – Science helps in design and technology, by looking at, making and drawing electrical circuits. It also helps children to think about using materials to

create structures which can withstand a force. Design technology also reiterates aspects of material changes and fabrics that would be suitable to combine based on their properties.

Computing - Computing enhances the teaching of design and technology, wherever appropriate, in all key stages. Children may use software to enhance their skills in designing and making things. Younger children are able to use simple software to enhance their learning. Older children use programs to control mechanisms and to produce computer-aided designs. The children also use computers to collect information about existing products and to present their designs through a range of design and presentation software.

Personal, Social and Emotional Education (PSHE) – Design and technology contributes to the teaching of PSHE by encouraging children to develop a sense of responsibility in following safe procedures when making things. They also learn about health and healthy diets. Their work encourages them to set targets and meet deadlines. They will also learn how to prevent disease from spreading and about personal hygiene when working with food.

Nutrition and Cooking

Children will be taught how to cook and apply the principles of healthy eating and nutrition. Learning how to cook is an essential life skill that will enable children to look after themselves and others now and in later life.

Assessment, Recording and Reporting

Each child's performance in Design Technology will be assessed by the teacher against the learning objectives for the lessons. Children are also encouraged to reflect on their work and suggest ways in which it can be improved. These assessments will then be used to judge pupils progress against end of year expectations for their year group. Pupil progress will be reported to parents in writing through termly parent evenings and end of year reports.
Evidence of children's work will be collected by the subject leader to help demonstrate the level of achievement within each year group across the school.
We promote resilient, problem solving learners who are very articulate and can talk through problems. These skills are at the heart of our design curriculum and children use them to really explore and become passionate, curious and experimental in design.

Inclusion and differentiation

In every class within school there are children of differing abilities. In order to provide all pupils with relevant and appropriate work at each stage:

- We set suitable learning challenges
- Respond to pupils' diverse needs
- Endeavour to overcome potential barriers to learning

The Role of the Subject Leader

- To advise colleagues, where necessary, on the development of planning and delivering the curriculum.
- To keep up to date with developments in design and technology education passing this on to other members of staff.
- To monitor and evaluate progress in design and technology to liaise with senior management on any action necessary.
- To liaise with appropriate bodies e.g. other TCAT schools, governors, the LEA etc. concerning matters relating to design and technology.
- To monitor the quality of teaching and learning in design and technology by working alongside colleagues and by viewing children's achievements.
- To keep a portfolio of evidence of children's achievements as well as evidence of pupil voice from across the school.

Resources

The location and storage of many consumable items can be found in the Key Stage areas and class teachers replace their stock/order new requirements as needed. Some tools (e.g. hammers, clamps, junior hack saws) and non-consumable items can be found in the DT cupboard. Food preparation and cooking equipment is to be found in the cooking room along the Key Stage 2 corridor.

Health and safety

When working with tools, equipment and materials, in practical activities and in different environments, including those that are unfamiliar, pupils should be taught:

- About hazards, risks and risk control
- To recognise hazards, assess consequent risks and take steps to control the risks to themselves and others
- To use the information to assess the immediate and cumulative risks
- To manage the environment to ensure the health and safety of themselves and others
- To explain the steps they take to control risks.
- How to follow proper procedures for food safety and hygiene.

Specific health and safety tips and recommendations are provided on the project planners for each project to be completed that term. It is the individual member of staff's responsibility to ensure that they have read, understood and act on any health and safety procedures.

Design Technology Coordinator

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