BROOMFIELDS JUNIOR SCHOOL

Design and Technology Policy

2022-2023

DOCUMENT STATUS

Version	Date	Action
1	15.09.22	New Policy

Design and Technology
Broomfields Junior School

The Public Duty of the Equality Act 2010 Protected characteristics in the act include sex, sexual orientation and gender reassignment. Schools have due regard to:

(a) "eliminate discrimination, harassment, victimisation"
(b) "advance equality of opportunity"
(c) "foster good relations between persons who share a relevant protected characteristic and persons who do not share it"

This includes tackling prejudice and promoting understanding.

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)

Intent

It is the intent of Broomfields Junior School that Design Technology is taught in all year groups with a topic per term, meaning that each year group covers 3 Design Technolgy topics per year, one of these will relate to food. Where appropriate Design Technolgy topics will be cross curricular, linking with our wider curriculum.

It is the intent of Broomfields Junior School that our children are prepared to deal with tomorrows rapidly changing world. Design Technology encourages children to become independent, creative problem solvers and thinkers, who are able to work with confidence both individually and as part of a team. We will encourage children to consider their own and others' needs, to design and make products that solve real and relevant problems within a variety of contexts. They will be given opportunities to look at past and present design, to reflect upon and evaluate uses and effectiveness. We would like our children to become innovators and risk takers - not to be afraid of challenges, to not give in, but to persevere and find solutions to problems they encounter.

Implementation

At Broomfields Junior School the teaching of Design Technology follows the National Curriculum through the use of the Design and Technology Associations, Projects on a Page. This will be taught in focussed blocks once per term in each year group.

Through a variety of creative and practical activities, we teach the knowledge, understanding and skills needed to engage in an iterative process of design and making. This will involve planning, designing, implementing, testing and evaluating. It is important that evaluation is not seen as an end goal, but an ongoing process throughout the development of the product. Children are given projects which have a purpose in mind and an intended user for the product. Food Technology is implemented across the school with children developing an understanding of where food comes from, seasonality of ingredients, and the importance of planning and preparing a healthy varied diet, creating links with science and PSHE.

At Broomfields Junior School, children will build upon the knowledge and skills taught in KS1, at The Cobbs Infant School. They will be expected to produce more detailed planning and annotated sketches. They will investigate and analyse existing products, and within Broomfields Junior School there is more emphasis on looking at events and real life problem solving; for example creating a fruit cocktail for the Year 6 Leavers' Party.

Across all year groups children will develop an understanding of producing food safely. They will build on their understanding of a healthy and varied diet, looking at seasonality and different cooking techniques.

As well as children following the Projects on a page for Design Technology, there are also other opportunities where DT plays a key role - for example in ongoing STEM activities within each year group in Science, and within our Year 6 Enterprise week, where there were some super design activities to raise funds for the Leavers' Party.

Impact

Assessment of children's learning in Design Technology is ongoing throughout the design and production process. Teachers are able to make assessments according to the expectations as to where children's understanding, knowledge and skills are when observed in lessons. This will enable them to intervene, support, challenge or provide differentiation as necessary.

Design Technology is also monitored by the Subject leader throughout the year through talking to class teachers, observing lessons, book monitoring and pupil voice.

Organisation and Planning

At Broomfields Junior School, Design and Technology 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'. Design and Technology planning is carefully planned in each year group to engage and excite all our learners. It can be found clearly identified on our Long Term Plans and embedded within our 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 and year group 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 year groups. Children may use computers to research designs and recipes, along with software to enhance their skills in designing and making things. The children also use computers 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. Children with SEND are encouraged to develop their life skills through more regular practise of day-to-day tasks, which are in-line with occupational therapy programmes.

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 points in Year 4 and Year 6, from the DT Association. Pupil progress will be reported to parents in writing through the end of year reports and in discussions during Parents' Evening. 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
- Scaffold learning to support independence
- Purchase of adapted tools to develop manipulation and independence.

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 LA 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 (including Twitter) as well as evidence of pupil voice from across the school.

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

- Head Teacher: .... Date: .....
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- Agreed at the Governing Body Meeting on: .....
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- Minute Reference: .....