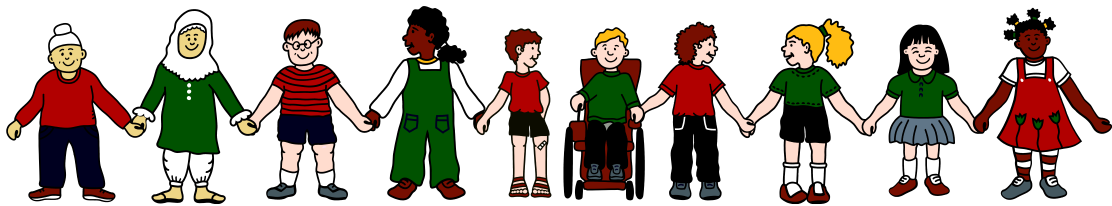


# THE GILES NURSERY AND INFANTS' SCHOOL



## Design and Technology Policy

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Date of Issue: January 2025

Review Date: January 2027

## Design and Technology Policy

### 1 Aims and objectives

1.1 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 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 of functions and industrial practices. 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 curriculum for design and technology aims to ensure that all pupils are able to:**

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

**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.**

### Key stage 1

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts, for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment.

When designing and making, pupils should be taught to:

#### **Design**

- design purposeful, functional, appealing products for themselves and other users based on given design criteria

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- generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology

### **Make**

- select from and use a range of tools and equipment to perform practical tasks, for example, cutting, shaping, joining and finishing
- select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

### **Evaluate**

- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria

### **Technical knowledge**

- build structures, exploring how they can be made stronger, stiffer and more stable
- explore and use mechanisms, for example, levers, sliders, wheels and axles in their products

## **1.2 Our objectives in the teaching of design and technology are:**

- to develop imaginative thinking in children and to enable them to talk about what they like and dislike when designing and making things
- to enable children to talk about how things work and to draw and model their ideas
- to encourage children to select appropriate tools and techniques for making a product, whilst following safe procedures
- to explore attitudes towards the manmade world and how we live and work within it
- to begin to develop an understanding of technological processes and products, their manufacture and their contribution to our society
- to foster enjoyment, satisfaction and purpose in designing and making things

## **2 Teaching and learning style**

- 2.1 Design and technology is taught through the creative curriculum. The school uses a variety of teaching and learning styles in design and technology lessons. The principal aim is 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. We do this through a mixture of whole-class teaching and individual or 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 computer technology.
- 2.2 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
  - providing a range of challenges through the provision of different resources
  - using additional adults to support the work of individual children or small groups

## **3 Design and technology curriculum planning**

- 3.1 Design and technology is a foundation subject in primary curriculum. Our school uses the primary curriculum as the basis for its curriculum planning in design and technology.
- 3.2 We carry out the curriculum planning in design and technology in three phases: long-term, medium-term and short-term. The long-term plan maps out the skills to be taught during the key stage. The subject leader works this out in conjunction with teaching colleagues in each year group.
- 3.3 Our medium-term plans, identify the learning objectives and outcomes for each topic, and ensure an appropriate balance and distribution of work across each term.
- 3.4 Class teachers complete a plan for each design and technology lesson. These list the specific learning objectives, key vocabulary and expected outcomes for each lesson, and detail how the lessons are to be taught. The class teacher keeps these individual plans, and the class teacher and curriculum leader often discuss them on an informal basis.
- 3.5 We plan the activities in design and technology so that they build on the prior learning of the children. We give children of all abilities the opportunity to develop their skills, knowledge and understanding, and we also build planned, spiral progression into the scheme of work, so that the children are increasingly challenged as they move through the school.
- 3.6 The design and technology curriculum leader has also collaboratively created a Curriculum Journey document that contains all of the design and technology taught across the school. It focuses on the knowledge and skills that are taught and clearly shows the progression from Early Years to the end of Key Stage 1.

#### **4 The Foundation Stage**

- 4.1 We encourage the development of the skills, knowledge and understanding that help Reception children make sense of their world as an integral part of the school's work. In the Reception classes, the early years foundation stage (EYFS) curriculum guides the development of the children's knowledge and understanding of the world to the objectives set out in the early learning goals (ELGs). These underpin the curriculum planning for children aged three to five. Design and technology is taught under the 'Expressive Arts and Design' curriculum strand. 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.
- 4.2 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.

#### **5 Contribution of design and technology to teaching in other curriculum areas**

##### **5.1 English/Literacy**

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. Discussion, drama and role-play are important ways that we employ for the children to develop an understanding of the fact 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.

##### **5.2 Mathematics**

In design and technology, there are many opportunities for children to apply their mathematical skills through choosing and using appropriate ways of calculating measurements and distances. Children learn to measure and use equipment correctly. They will learn about size and shape, and make practical use of their mathematical knowledge, in order to be creative and practical in their designs and modelling.

##### **5.3 Personal, social, health and citizenship education (PSHCE)**

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 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.

##### **5.4 British Values, spiritual, moral, social development and cultural capital**

The teaching of design and technology offers opportunities to support the social development of our children through the way in which 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 cooperative 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. They develop their cultural awareness and understanding, and they learn to appreciate the value of differences and similarities. 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.

## **6 Design and technology and computing**

- 6.1 Computing enhances the teaching of design and technology, wherever appropriate. Children use software to enhance their skills in designing and making things

## **7 Design and technology and inclusion**

- 7.1 At our school, we teach design and technology to all children, whatever their ability and individual needs. Design and technology implements the school curriculum policy of providing a broad and balanced education to all children. Through our design and technology teaching, we provide learning opportunities that enable all pupils to make good progress. We strive hard to meet the needs of those pupils with special educational needs, those with disabilities, those that are gifted and talented, and those learning English as an additional language, and we take all reasonable steps to achieve this. For further details, see separate policies: 'Special Educational Needs'; 'Equalities Scheme'; 'More Able and Most Able'; 'English as an Additional Language' (EAL).
- 7.2 Intervention through Assess, Plan, Do, Review documents (ADPRs) and EHC Plans for children with special educational needs. The ADPRs may include, as appropriate, specific targets relating to design and technology.
- 7.3 We enable pupils to have access to the full range of activities involved in learning design and technology.

## **8 Cooking and nutrition**

- 8.1 As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.

Pupils in key stage 1 should be taught to:

- use the basic principles of a healthy and varied diet to prepare dishes
- understand where food comes from

## **9 Assessment for learning**

- 9.1 Teachers assess children's work in design and technology by making assessments as they observe them working during lessons. They record the progress that children make by assessing the children's work against the learning objectives for their lessons. At the end of a unit of work, teachers make a judgement against the primary curriculum levels of attainment. Older children are encouraged to make judgements on ways in which their work can be improved. Teachers then use the levels that they record to plan the future work of each child, and to make an annual assessment of progress for each child. Each teacher passes this information on to the next teacher at the end of each year using progression mapping. Progression mapping is carried out on a whole class basis, with additional notes for specific learners. This progression map is then carried up with the class throughout their school career at the school.
- 9.2 The curriculum leader keeps evidence of the children's work in a portfolio. This demonstrates the expected level of achievement in design and technology in each year of the school. Teachers meet regularly to review individual evidence of children's work against the national exemplification material produced by the DfE.

## **10 Resources**

- 10.1 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 store. Special orders can be placed with Herts Full Stop through the school office on a Thursday for delivery on a Monday or Tuesday.

## **11 Health and safety**

- 11.1 In this subject, the general teaching requirement for health and safety applies. We teach children how to follow proper procedures for food safety, hygiene, how to use specialist tools safely and correctly. Children are supervised by an adult when required to ensure pupils safety.

## **12 Monitoring and review**

- 12.1 The coordination and planning of the design technology curriculum are the responsibility of the curriculum leader, who also:
- supports colleagues in their teaching, by keeping informed about current developments in design technology, and by providing a strategic lead and direction for this subject in the school
  - gives the head teacher an annual summary report in which she evaluates the strengths and weaknesses in design technology, and indicates areas for further improvement
  - uses some PPA time to review evidence of the children's work, and to observe lessons of design technology across the school.
- 12.2 This policy will be reviewed at least every two years.

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**Date: January 2025**

**Review date: January 2027**