PILGRIM PRIMARY ACADEMY

DT Policy
September 2020

Date of Policy Review:	Reviewer:	Date Shared with Staff:	Date of Next Review:
September 2020	S Mantell	September 2020	July 2022

Our school policies reflect Pilgrim Primary Academy's commitment to an inclusive, creative and stimulating curriculum, based around high quality teaching and learning. It supports our curriculum intent of: ambition.

Purpose of Study:

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.

Aims:

The national curriculum for design and technology 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.

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.

Knowledge and understanding:

Early Years:

Children will begin to develop an awareness of Design and Technology through activities linked to 'Expressive Arts and Design' and 'Understanding the World' as outlined in the Early Years Foundation Stage Curriculum.

Key Stage 1:

When designing and making, pupils should be taught to:

Design

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

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

Key Stage 2:

When designing and making, pupils should be taught to:

Design

Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups

Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately

Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

Investigate and analyse a range of existing products

Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work

Understand how key events and individuals in design and technology have helped shape the world

Technical knowledge

Apply their understanding of how to strengthen, stiffen and reinforce more complex structures

Understand and use mechanical systems in their products [for example,¬ gears, pulleys, cams, levers and linkages] understand and use electrical systems in their products [for example, series¬ circuits incorporating switches, bulbs, buzzers and motors]

Apply their understanding of computing to program, monitor and control their products

Curriculum Planning:

Design and technology is a foundation subject in the National Curriculum. Our school uses the National Curriculum as the basis for its curriculum planning in design and technology. Our medium-term plans, which we have adopted from the National Curriculum give details of each unit of work for each term. They identify learning objectives and outcomes for each unit, and ensure an appropriate balance and distribution of work across each term

Cross Curricular links:

Our Creative Curriculum enables us to teach in a cross-curricular manner where appropriate. Throughout school Design and Technology is taught both discretely and in a cross-curricular way. The curriculum can promote learning across the curriculum in a number of areas such as spiritual, moral, social and cultural development, key skills and thinking skills as well as the core areas of literacy, numeracy and science.

Resourcing and field work:

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 cupboard.

Health and safety:

The safety of the children is the responsibility of the class teacher. The children are made aware of the safe use and correct procedure involved when using tools and equipment in a learning environment and how to follow proper procedures for food safety and hygiene. The children are made aware of the need to be careful and to understand that their actions can affect others. The children build up a range of skills when using equipment to reduce unnecessary risk. Rotary cutters are to be used with a safety ruler. Craft knives are used only by 5/6 under direct supervision of an adult. Glue guns are used (low temperature) under supervision. All staff, including teaching assistants, are made aware of food safety procedures when working with food to minimise any risks. The children wear protective clothing if necessary.

Assessment and reporting:

Formative Assessment

Formative assessment is a crucial element in children's learning. It is intrinsic to Assessment for Learning - the improving of learning through assessment. Within Design and Technology teachers will:

Set learning goals for the children.

Discuss these goals with the children so they understand what they are aiming for.

Take the learning goals from the knowledge, skills and understanding laid out in the National Curriculum D&T guidance.

Use open-ended, interesting questions and scaffold their learning to help them succeed.

Give frequent feedback to children about how they are doing and how they can improve.

Actively involve all children in their own learning through, for instance, discussion and debate with peers and teacher; assessing, reviewing and reflecting on their own performance.

Use on-going informal assessment (based on observation; discussion; questioning; written and creative work) to adjust teaching and progress the children's learning.

Notice that speaking and listening are central to formative assessment.

Summative Assessment

Pupils are assessed at the end of KS1 and KS2 against the following criteria:

KS1 criteria:

Able to design a purposeful, functional and appealing product

Selects materials, tools and methods to make a product

Evaluates own and others products against design criteria

Demonstrates technical knowledge and specific vocabulary

Applies knowledge of healthy diet to prepare a dish

KS2 Criteria:

Research, develop, and communicate design criteria

Select tools and use accurately to produce a product

Select materials appropriately using knowledge of properties

Investigate and analyse existing products

Evaluate key events and individual designs that change the shape of the world

Apply technical knowledge related to structure, mechanics, electronics and computing

Demonstrate knowledge of food related to origin, season and health benefits

Prepare a savoury dish using two or more techniques

Subject leader assessment and monitoring:

The monitoring of the standards of children's work and of the quality of teaching in design and technology is the responsibility of the design and technology subject leader. The work of the subject leader also involves supporting colleagues in the teaching of design and technology, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school. The design and technology subject leader gives the headteacher an annual report in which she evaluates the strengths and weaknesses in the subject and indicates areas for further improvement. The design and technology subject leader has specially-allocated, regular management time in order to review evidence of the children's work and undertake lesson observations of design and technology teaching across the school.