



Design & Technology Curriculum Policy

Date of policy:	Summer 2024
Date of approval:	
Approval by:	

Intent

At Westglade, Design and Technology should be fully inclusive to every child. Our aims are to: fulfil the requirements of the National Curriculum for Design and Technology, provide a broad and balanced curriculum, ensure the progressive development of knowledge and skills, to learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens through evaluation of past and present design and technology, develop a critical understanding of its impact on daily life and the wider world and to participate successfully in an increasingly technological world using the language of design and technology.

The aims of teaching Design and Technology in our school are:

- Being able to develop creative, technical and imaginative thinking in our children and to develop confidence to participate successfully in an increasingly technological world
- To enable our children to talk about how things work and to develop their technical knowledge
- To apply a growing body of knowledge, understanding and skills in order to design and make prototypes and products for a wide range of users
- To encourage our children to select appropriate tools and techniques when making a product, whilst following safe procedures
- 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
- To critique, evaluate and test their ideas and products, and the work of others
- To understand and apply the principles of nutrition and to learn how to cook
- To understand how key events and individuals in design and technology have helped shape the world

Implementation

To ensure high standards of teaching and learning in Design & Technology, we implement a curriculum that is progressive and well sequenced throughout the whole school. Design & Technology is taught as part of a half-termly unit, focusing on knowledge and skills stated in the National Curriculum, where lessons are planned for classes using our progression of knowledge and skills documents known as our Knowledge Path and Learning Ladder. Our Knowledge Path details the essential substantive knowledge needed to develop a deep understanding of Design & Technology and our Skills Ladder maps out the progression in disciplinary knowledge needed to understand how Design & Technology works. At Westglade, we ensure that Design & Technology is given the same importance as the core subjects, as we feel this is important in enabling all children to gain 'real-life' experiences.

The Design & Technology curriculum at Westglade Primary is based upon the 2014 Primary National Curriculum in England, which provides a broad framework and outlines the knowledge and skills taught in each Key Stage. From September 2023, the Design & Technology coordinator has used the

Knowledge Path and Skills Ladder to plan DT lessons for Years 1 to 6 along with 'stand-alone' DT sessions to cover skills that do not lend to the current Learning Challenge question but are still part of our progression documents. The progression documents ensure the curriculum is covered and the skills/knowledge taught is progressive from year group to year group to help commit these to our children's long-term memory. Each session has a focus question to help give purpose to the learning and flashbacks are used at the beginning of sessions to support our children in recalling key knowledge and skills previously taught. We also use flashchecks through our sessions to further embed the learning.

At Westglade, we use project booklets to record designs, research of mechanisms/structures, analysis of products and development of technical skills. Each project also includes a key design technologist so that the children understand how individuals in design and technology have helped shape the world. Each class will produce 2 products each year in addition to a cooking and nutrition unit. At the end of the academic year, the class teacher will make a benchmark judgement of each child's progress based on the work produced.

Adaptive Teaching

Westglade Primary School is committed to ensuring that every child in this school, regardless of gender, race, cultural background or ability is entitled to have full access to our curriculum in Design & Technology. Our sessions include clear differentiation to support the varied needs of all children and we ensure we include design technologists of different ethnic backgrounds which promotes the fundamental British Values too. Our sessions also provide excellent opportunities for mixed ability grouping in practical sessions and this is acknowledged in our planning and preparation, as well as in our resourcing. In addition to this, opportunities will be given for specially gifted and talented children in Design and Technology to further develop their skills.

Impact:

Within Design and Technology, we strive to prepare children to take part in the development of tomorrow's rapidly changing world. We aim to encourage children to become creative problem-solvers, both as individuals and as part of a team. Through the study of design and technology, children 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 impact. Our Design and Technology curriculum is high quality, well thought out and is planned to demonstrate progression. We focus on progression of knowledge and skills and discreet vocabulary progression also form part of the units of work.

We measure the impact of our curriculum through the following methods:

- Assessing children's understanding of topic linked vocabulary before and after the unit is taught
- Summative assessment of pupil discussions about their learning
- Images and videos of the children's practical learning
- Interviewing the pupils about their learning (pupil voice)
- Moderation staff meetings where pupil's books are scrutinised and there is the opportunity for a dialogue between teachers to understand their class's work

- Annual reporting of standards across the curriculum
- Marking of project work books

Subject Content and Pupil Attainment

Westglade Primary School follows the National Curriculum for Design and Technology of which the Design & Technology coordinator will use to plan lessons for Years 1 to 6 to meet the requirements set out below:

Foundation Stage

Design and Technology learning in the EYFS takes place within Understanding of the World and Expressive Art and Design and is based on the Early Years Outcomes Guidance for EYFS.

In the Early Years, pupils will experiment to create different textures and to manipulate materials to achieve a planned effect. They will construct with a purpose in mind, using a variety of resources and simple tools and techniques competently and appropriately.

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 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 [for example, levers, sliders, wheels and axles], in their products.

Key stage 2

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, school, leisure, culture, enterprise, industry and the wider environment].

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

Cooking and nutrition

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 should be taught to:

Key stage 1

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

Key stage 2

- understand and apply the principles of a healthy and varied diet
- prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
- understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. (National Curriculum 2014)

Method and Approach

Foundation Stage

Nursery (F1), transition and reception (F2) children explore Creative Development through a variety of cross-curricular topics and themes mainly based on the Early Learning Goals.

Key Stages 1 and 2

The delivery of Design and Technology for children in Key Stage 1 and 2 will be predominantly through the Learning Challenge Curriculum. Design and Technology will enhance their learning in other subjects and opportunities will be given to meet the objectives of the National Curriculum through links to the half-termly theme. In Key Stage 2, children build upon their experiences in Key Stage 1 to help them to develop their understanding of the diverse roles and functions of Design and Technology in the locality and a wider world.

Raising Standards

Westglade Primary School are committed to demonstrating an appreciation of Design and Technology. Therefore, in addition to teacher demonstration and children's practical sessions, we will aim to:

- Display children's Design and Technology work to celebrate diversity and achievement
- Facilitate discussion about the work of engineers

- Make sure all children are involved in hands-on exploration and investigation
- Provide workshop activities when appropriate
- Provide visits when appropriate
- Develop Design and Technology through ICT
- Make Design and Technology an integral part of other curriculum areas

Assessment

Assessment in EYFS is through the Early Learning Goals and in Key Stages 1 and 2 through the attainment target levels. Together, these provide a progressive indication of the expected and achieved progress as children move through school. We will assess pupil's skills in order to inform our planning and to ensure successful progression.

Assessment will be done by:

Observation, discussion and reflection. This may be completed either verbally or through practical work and completed project booklets.

Copies and photographs of Design and Technology throughout school will be collected by the co-ordinator and collated into a portfolio, as well as placed on the school website and on the whole school DT board.

Design and Technology through ICT

In school, there are a number of programs designed to enhance the provision of Design and Technology. Some programs allow pupils to access Design and Technology via the internet but all are valuable resources in enabling children to take responsibility for their own learning.

Health and Safety

Many Design and Technology activities involve the use of specialist equipment. We ensure pupils are taught how to use equipment appropriately and safely. Staff will also ensure that allergies and permissions are planned for before any food items are used (lactose-intolerant/vegan/allergens etc.)