



POLICY FOR DESIGN AND TECHNOLOGY

Pickhurst Academy

Date: September 2021

Reviewed: September 2023

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Document Purpose

This document reflects the school's aims, principles and strategies for the delivery of Design and Technology. It will form the basis for the development of DT in the school over the next year. It gives guidance on planning, teaching and assessment. This policy provides a framework for teachers, and it highlights guidance on assessment and the teaching and delivery of Design and Technology.

Audience

This policy document, having been presented to and agreed upon by the whole staff, is distributed to all members of the teaching and non-teaching staff and the curriculum committee of the Governing Body. It will also be available on the school's shared drive system.

The Significance of Design and Technology

Design and technology is an inspiring, practical subject. Using their own creativity and imagination, pupils are encouraged to design and make products that can solve problems in a practical way. Under the Design and Technology umbrella children are required to draw on knowledge and skills from mathematics, science, computing and art. Children build their confidence and learn how to take risks in a safe environment, becoming resourceful, innovative, and valuable citizens. High-quality Design and Technology education makes an essential contribution to the development of children's creativity, problem solving and in turn creating a well-rounded individual.

At Pickhurst, we are passionate about giving children opportunities to problem solve. We believe that learning through taking risks, applying knowledge from key STEAM (science, technology, engineering, art and maths) subjects, evaluating progress and working in groups are a set of skills that form a well-rounded child.



Aims

- To foster enjoyment, satisfaction, and purpose in designing and making.
- To provide a range of projects which develop a breadth of experience and progression in skills.
- To develop knowledge and to teach skills to assist in the design and making of products successfully.
- To develop the children's knowledge of tools and to encourage children to select appropriate tools and techniques for making a product, whilst following safe procedures.
- To enable children to talk about how things work (when appropriate through disassembly).
- To follow the National Curriculum and ensure a well-balanced coverage of all aspects of Design and Technology
- To develop children's Design and Technology capability through practical activities, where children are encouraged to discuss and analyse their work to justify the ideas, materials and techniques they have used to propose modifications and improvements
- To encourage children to think critically about what they eat and its effect upon their health
- To develop cooking skills that will allow them to maintain a health diet as they grow up

Delivery

All pupils have an opportunity to learn and take part in Design and Technology. A 6-week Design and Technology unit, consisting of a 1-hour lesson per week, is taught every half term in Year 3,4,5,6. Art and Design and Technology is taught on alternate half term to ensure curriculum objectives are met. Lessons are delivered by the Class Teacher.



Scheme of Work

We have created a personalised scheme of work, based on the National Curriculum expectations for England, which includes access and links to Kapow's resources. The scheme and accompanying lesson plans are designed to meet all the targets of the KS2 programme of study.

Intent, Implementation, and Impact

Intent

At Pickhurst, we aim to inspire pupils to be innovative and creative thinkers who have an appreciation for the product design cycle through planning, creation and evaluation. We want pupils to develop the confidence to take risks, through drafting design concepts, modelling, testing and to be reflective learners who evaluate their work and the work of others. Through our lesson plans and resources, we aim to build an awareness of the impact of Design and Technology on our lives and encourage children to become resourceful, enterprising citizens who will have the skills to contribute to future design advancements.

Our unique curriculum, which uses Kapow's scheme as a framework, facilitates teachers to plan lessons that enable children to meet the objectives in line with the National Curriculum.

Implementation

Our units consist of lessons that are in line with the National Curriculum objectives. When designing and making, through a variety of creative and practical activities, 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 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:

- 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.

This is achieved through a 6-week block of 1-hour lessons each term. These lessons are taught by the class teacher. Teachers follow a secure assessment tracking system to ensure good progress by all pupils. We also have a subject monitoring process, which identifies areas for improvement as well as opportunities for celebrations. Observing children speaking and listening in another language.

Impact

Through learning the principles of design and technology in conjunction with other areas of the curriculum (Science, Maths, Engineering and Art), pupils can develop their skills to become well rounded individuals. Through individual and team



projects, they will learn the importance of clear planning, effective and efficient production, collaboration with others, self and peer-evaluation.

These skills will have a clear impact on their ability to adapt and thrive in the world of work at a later stage of their lives as well as in the classroom and local community.

Additionally, they will learn to be resourceful and pro-active in everyday problem-solving situations through knowledge of the importance of flexibility of approach and through listening to the ideas of others. This delivery of DT will work to equip our pupils with the key skills of project-management, teambuilding, and a sense of pride in their creativity. They will become more pro-active, more able to lead and more practical in their thinking and solving of problems that affect society.

Resources

Resources for each project are planned and supplied by the DT coordinator. If class teachers are in need of further resources for their class, they can approach the DT coordinator and these resources can be discussed and if acceptable, supplied.

Cross-curricular

Developing skills that promote progress in DT lend themselves to also consolidating skills in subjects across the curriculum.

Maths: Shape, measurement, estimation

ICT: Research of examples linking to relevant topic (EG pavilions in Y4)

Science: Learning about food and healthy eating.

Art: Creating sketches and drawings of projects

Whole school involvement

At our school, we are very fortunate to have our Additional resource Provision (ARP). The children have additional needs; however, they follow our DT



curriculum on a yearly cycle basis. The DT coordinator regularly discusses with the teachers based in this unit and is available to offer support when planning lessons, resourcing and assessing the units of work.

Assessment

The class teacher assesses each child's progress with reference to the attainment targets of the KS2 Programme of Study for DT. By the end of each year, the stages which have been achieved for each attainment target will have been recorded on a monitoring sheet. Assessment is based on observations of activities working towards the final project; verbal evidence documented on Evidence Me. This information is recorded and stored in the 'Assessment Tracker' spreadsheet on the school network, and this is done at the end of each unit (Autumn, Spring and Summer).

Special Needs and Classroom Support

The teaching of Design Technology gives every child a chance to take part and enjoy creating and problem solving. It can provide a boost to those children who have literacy/numeracy difficulties as children are able to use their verbal, fine and gross motor skills to demonstrate their skills and understanding.

Equal Opportunities

In keeping with the school policy on Equal Opportunities the teacher will be aware of the differences and individual needs of each child with regard to the physical, emotional, behavioural and learning needs, as well as any special abilities and any needs that may arise as a result of race or gender.

Health and Safety

Health and safety arrangements are in line with the school policy.

Role of the DT Coordinator



- Implement the delivery of a scheme of work for DT which meets the targets of the KS2 Programme of Study
- Ensure the delivery of high-quality lessons of DT.
- Manage the provision and deployment of the resources
- Bid for and manage the budget for this curriculum area
- Provide advice about the DT policy
- Liaise with classroom teachers and senior management to keep them informed of latest developments and pass on assessment data
- Monitor and review the DT provision within the school
- Keep up-to-date professionally, through reading and attending local network meetings.