# Whitby Heath Primary School

## Design & Technology Policy

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| **Policy written** | October 2023 |
| **Agreed by Governors** | March 2024 |
| **Next Review** | March 2025 |
| **Head teacher** | Mr S Wright |
| **Chair of Governors** | Mr N Lacey |

Intent

## 1. Aims

At Whitby Heath Primary School we aim to provide a broad and balanced Design and Technology curriculum that fully meets the requirements set out in the National Curriculum.

Within our Design Technology Curriculum, we want to foster an enjoyment of the subject and love of learning about DT. We want to ensure that the children have the key skills necessary to research, design, make and evaluate projects, equipping them for the next stage of learning and also for life in the 21st century.

At Whitby Heath Primary School, through quality first teaching, we apply a progressive model of D.T. teaching, through which children develop a systematic and critical framework for the knowledge of design and the impact of design in daily life and the wider world. Our curriculum lends itself to broadening student's knowledge and cultural capital as well as increasing engagement.

We aim to develop our students' curiosity of design and the understanding of it, encouraging and exposing the children to endless possibilities. 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.

We aim for all our children to explore different ways of looking at the design process, using the key skills of designing, making and evaluating; gaining and applying technical skills as they go. We believe that the teaching of the D.T. process, where the children evaluate existing products, design, make and evaluate their own product, also fosters skills and

allows the children to become resourceful, resilient and innovative, which can be used both now and in their futures to make a difference in the world. Through studying the rigorous D.T. curriculum, we aim for the children to be engaged and inspired to develop a love of creativity in the real world.

We aim to provide a cyclical curriculum that allows children to return to key aspects of learning and skills regularly in order to build a greater depth of understanding that is revisited regularly and systematically.

In addition, our curriculum strives to support our SMSC agenda in school by allowing children to research ideas from other parts of the world, work collaboratively with their peers, explore and develop their own views and support their peers in bringing ideas to life. The curriculum also supports the development of British Values by promoting tolerance and understanding of others in research and working collaboratively, as well as enabling individual liberties in making their own design decisions.

The development of language is also key at Whitby Heath, and our DT curriculum aims to support this by giving opportunities for purposeful discussion, promoting the use of accurate technical vocabulary.

## 2. Statutory Requirements

Whitby Heath Primary School have adopted the Kapow scheme of work to deliver our DT curriculum. The scheme has been designed to meet all the National Curriculum requirements and is planned in a spiral structure to ensure regular coverage and revisiting to increase depth of understanding and recall. This is closely linked with the Art curriculum, which also uses the Kapow scheme. We use a combined program which is cross matched to ensure full coverage of both Art and DT National Curriculum objectives. National Curriculum outcomes as well as Early Learning Goals are included in the planning documents.

Implementation

## 3. Curriculum content and delivery

Our Design Technology curriculum is planned and sequenced so that new knowledge and skills build on what has been taught before. We recognise that new learning is fragile, so our approach is generative and sticky, enabling our pupils to make links between new and existing knowledge to aid long term retention. At Whitby Heath, retrieval of learning is at the heart of our school philosophy. We use low stake daily, weekly and monthly SODA quizzes to ensure that children can recall key information and embed this is in their long term memory. Design technology questions will be included in the foundation SODA quizzes. In addition, learning is sequenced to ensure that there are opportunities for spaced learning and links between curriculum areas are explicit; allowing children to build a detailed schema for design and also across other subjects, particularly science.

In Key Stage 1 and 2, Design Technology is taught half termly through 3 or 4 stand-alone lessons. Additional STEM opportunities are planned throughout the year for enrichment, particularly Science and Computing curriculums. In EYFS, DT is threaded throughout the thematic learning planned both through explicit teaching and continuous provision opportunities.

Within the curriculum, the key knowledge and skills for each year group can be seen in our progression of skills documents. These have then been broken down into topics in our long plans, provided by Kapow. Individual lesson plans for the unit as well as resources and instructional videos for both children and staff are also provided. These plans ensure that the following areas are covered in all units of work.

- Design
- Make
- Evaluate
- Technical Skills

The units cover all necessary aspects of the DT curriculum: -

- Cooking and nutrition
- Mechanisms and mechanical systems
- Structures
- Textiles

Additionally, in KS2

- Electrical systems
- Digital world

It is important that children learn about key figures that have made important contributions to technology in the real world. In order to encourage this, each year group has at least one inventor, scientist or designer linked a topic they are studying to learn about during the course of their DT units across the year. This enables children to be inspired by the real world applications of design technology have on the world around them, giving meaning and purpose to their learning in school.

Knowledge organisers will be displayed in the classroom and uploaded termly onto class pages to support children in their learning and development of key vocabulary.

DT is taught as a stand-alone subject, however, where meaningful links can be made to tie in end products with other subject areas, this has been done and does not affect the overall spiral nature of the curriculum and progression of skills. DT is closely linked to Art. Both use the Kapow programme and are carefully mapped together to ensure full coverage across the year.

## 4. Rationale for using Kapow

At Whitby Heath we have opted to use the Kapow scheme of work and curriculum materials. It ensures complete coverage of all National Curriculum outcomes, and the cyclical nature of the curriculum design is in keeping with Whitby Heath's aim to regularly review learning to increase retention of knowledge and deepen understanding.

In addition, DT is a subject area requiring some degree of technical knowledge and understanding to teach successfully. Kapow provides instructional videos for both teachers and pupils, allowing greater confidence to enable Quality First Teaching when lessons are delivered.

## 5. Roles and responsibilities

### 5.1 The governing body

The governing body will approve the DT policy and hold the headteacher to account for its implementation.

### 5.2 The headteacher

The headteacher is responsible for ensuring that DT is taught consistently across the school.

### 5.3 DT Coordinator and strategic team leader

The DT coordinator at Whitby Heath is Mrs G Beach and she is responsible for:

- Planning and coordination of the DT curriculum ensuring coverage in-line with that required by the National Curriculum.
- Providing training for staff to ensure consistent and age-appropriate delivery of the curriculum.
- Monitoring and supporting staff in the delivery and assessment of the curriculum.
- Working as part of the strategic STEM team to ensure that all areas within the remit of this policy are implemented and impact monitored.

### 5.4 Staff

Staff are responsible for:

- Delivering the DT curriculum in an engaging and practical way
- Modelling positive attitudes to DT
- Monitoring progress
- Responding to the needs of individual pupils

### 5.5 Pupils

Pupils are expected to engage fully in DT session. When taking part in practical aspects of DT, pupils are expected to behave responsibly with their own and others' health and safety in mind.

## 6. Training

Staff are trained on the delivery of DT as part of our continuing professional development calendar. Additional training resources are available through Kapow and staff are encouraged to access these as needed in the delivery of specific technical skills.

## 7. SEND and Inclusion

At Whitby Heath we have high expectations of all our pupils. However, we recognise that for some pupils, additional support is needed to ensure they can access tasks and retain key learning. Tasks are adapted or scaffolded to ensure that they provide suitable challenges that focus on the learning in Design Technology and remove any barriers for learning that stop learning in DT. Teachers use their pupil passports and appropriate assessments to help inform their planning. This way, a person-centered approach ensures progress is made and learning is personalised.

We want all learning to support independence wherever possible. Teachers will plan lessons so that pupils with SEND are able to successfully access the key content of the DT curriculum and ensure that no ceiling is placed on their learning and what they can achieve. Promoting independence, we allow the children to feel a sense of equality and belonging in their classroom environment.

Where appropriate, the following strategies could be used for pupils with SEND:

Task Adaptation

- Opportunities for overlearning key knowledge.
- Technology used for recording information.
- Web based learning for practice and learning of key knowledge.
- Use of concrete resources.
- Voice recordings or pictorial representations of step-by-step instructions.
- Voice recordings or pictorial representations of responses.
- Screen shots and photographs.
- Voice recordings.
- Peer support for mathematical skills.

Scaffolding

- Modeling specifically for a small group of children.
- Vocab mats highlighting specific vocabulary for a task.
- Broken down instructions for a task.
- Sentence stems from board/worksheet.
- Task organizer.
- Use of concrete resources.
- Further questioning.
- Additional focused explanations.
- Precision teaching of key knowledge.
- Additional oracy opportunities.
- Peer support.

Where a child struggles with key aspects of learning, it is crucial that we highlight what is key knowledge for a child to move on with their learning. Progression maps highlight which knowledge is the basis for other knowledge later on within the DT curriculum. Staff can therefore provide time for overlearning this key knowledge where it is deemed appropriate for these children. Support and CPD is given to staff to ensure they have a good understanding of what learning is key to moving on. These children are discussed regularly with the SENCo.

Higher Attainers

Opportunities for higher attainers to take learning deeper are planned throughout the curriculum. Open ended tasks and high quality first teaching ensure that learning is taken deeper. Enrichment opportunities are planned throughout the year. Opportunities for children to explore careers in STEM are planned into the curriculum and accessed where appropriate. Visiting speakers are encouraged to come in and support classes in delivering key areas of DT and STEM.

## Impact

At Whitby Heath, we ensure that all students are exposed to rich learning experiences that:

● Enable all students to make good progress in their design knowledge, skills and vocabulary from whatever the students starting point may have been. We define good progress as knowing more and remembering more. It is the widening of knowledge, skills, understanding and behaviours.
● Children have self-efficacy and see themselves as designers. They take an interest in the aspects of design, which enable our children to analyse the things around them.
● We aim to inspire our children to become the next generation of designers, engineers and environmentalists who love, look after and respect themselves, their communities and the world around them.
● Our pupils experience a language rich DT experience which enables them to apply their knowledge as articulate citizens of the future discussing research, knowledge and developments.
● For our pupils to be resilient when designing, learning from the process.

## 8. Monitoring arrangements

The delivery of DT is monitored by the DT coordinator, Mrs G Beach through:

- Learning walks
- Pupil voice
- Book scrutiny
- Planning scrutiny

Pupils' development in DT is monitored by class teachers as part of our internal assessment systems.

## 9. Links with other policies

- Art and Design Policy

Appendix 1 – DT Curriculum Map

**Design and Technology at Whitby Heath**

| | AUTUMN | SPRING | SUMMER |
|---|---|---|---|
| **Reception** | | | |
| **Unit of Work** | **A1: Structures**<br>Boats | **Sp1: Textiles**<br>Bookmarks | **Su1: Structures**<br>Junk modelling |
| **Year 1** | | | |
| **Unit of Work** | **A1: Structures**<br>Windmills<br>Dr James Blyth | **Sp1: Food**<br>Smoothies | **Su1: Textiles**<br>Puppets |
| **Year 2** | | | |
| **Unit of Work** | **A1: Mechanisms**<br>Making a moving monster<br>Theo Jansen | **Sp1: Structures**<br>Baby bear's chair | **Su1: Mechanisms**<br>Fair ground |
| **Year 3** | | | |
| **Unit of Work** | **A2: Food**<br>Eating seasonally | **Sp2: Digital**<br>Wearable tech<br>Seymour Rubenstein and Rob Barnaby | **Su2: structure**<br>Castles<br>Zaha Hadid |
| **Year 4** | | | |
| **Unit of Work** | **A1: Structures**<br>Pavilions | **Sp1: Mechanisms**<br>Sling shot car | **Su2: Electricity**<br>Torches<br>Sir Joseph Swan |
| **Year 5** | | | |
| **Unit of Work** | **A2: Mechanical systems**<br>Pop up books<br>Masahiro Chatani | **Sp1: Electrical systems**<br>Doodlers | **Su2: Food**<br>Developing recipes |
| **Year 6** | | | |
| **Unit of Work** | **A1: Structures**<br>Playgrounds | **Sp2: Textiles**<br>Waistcoats<br>Vivienne Westwood | **Su1: Digital**<br>Navigating the world<br>Patricia Moore |

Names in blue suggest renowned designers or inventors to look at during the design process

Appendix 2 – DT curriculum map transition year

**Design and Technology at Whitby Heath 2023/24 Transition Year**

| | AUTUMN<br>All completed structures Year 5 – structures and mechanisms | SPRING | SUMMER |
|---|---|---|---|
| **Reception** | | | |
| **Unit of Work** | **A1: Structures from old DT planning** | **Sp1: Textiles**<br>Bookmarks | **Su1: Structures**<br>Junk modelling |
| **Year 1** | | | |
| **Unit of Work** | **A1: Structures from old DT planning** | **Sp1: Food**<br>Smoothies | **Su1: Textiles**<br>Puppets |
| **Year 2** | | | |
| **Unit of Work** | **A1: Structures from old DT planning** | **Sp1: Mechanisms**<br>Making a moving monster<br>Theo Jansen | **Su1: Mechanisms**<br>Fair ground |
| **Year 3** | | | |
| **Unit of Work** | **A1: Structures from old DT planning** | **Sp2: Digital**<br>Wearable tech<br>Seymour Rubenstein and Rob Barnaby | **Su2: Food**<br>Eating seasonally |
| **Year 4** | | | |
| **Unit of Work** | **A1: Structures from old DT planning** | **Sp1: Mechanisms**<br>Sling shot car | **Su2: Electricity**<br>Torches<br>Sir Joseph Swan |
| **Year 5** | | | |
| **Unit of Work** | **A1: Structures from old DT planning**<br>**A2: Mechanical systems**<br>Pop up books | **Spring – teaching art** | **Su2: Food**<br>Developing recipes |
| **Year 6** | | | |
| **Unit of Work** | **A1: Structures from old DT planning** | **Sp2: Textiles**<br>Waistcoats<br>Vivienne Westwood | **Su1: Digital**<br>Navigating the world<br>Patricia Moore |