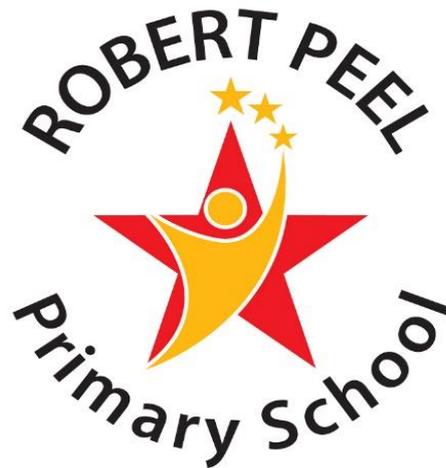


# Robert Peel Primary School

## Design and Technology Policy 2025



Signed by:

\_\_\_\_\_ Headteacher                      Date: \_\_\_\_\_

\_\_\_\_\_ Chair of Governors                      Date: \_\_\_\_\_

## **Design and Technology Intention**

### **1. School Vision**

At Robert Peel Primary School, our vision is to develop resilient and independent learners, who aspire to be the best they can be. Our aim is for the children to be happy in all aspects of school life, be able to communicate effectively and show empathy and understanding to others.

We will achieve this through the teaching of a rich and diverse curriculum, focusing on their immediate locality and the wider world, with an emphasis on deep and sustained learning. The learning will focus on building up the children's knowledge and skills over time and engaging them in real-life experiences. Children will have the opportunity to lead their own learning, question their understanding, develop their vocabulary and gain fluency through practise and rehearsing key skills. Our intent is that children gain a passion for learning and take the skills, knowledge and learning behaviours they have gained at Robert Peel into their next phase of education and adult life as a member of a global community.

### **2. Design and Technology Vision**

At Robert Peel Primary School, Design & Technology is delivered in a way which is creative, practical and enjoyable starting from the Early Years right through to Year 6. As a result of this, children are provided with the skills required to participate successfully and collaboratively in an increasingly technological world.

Our aim is to broaden children's aspirations for possible future careers and become independent and resilient learners through the process of planning, making and evaluating when solving real and relevant problems in a variety of contexts. Children will acquire new skills as well as drawing upon existing knowledge from other subjects such as Mathematics, Science, Art and Computing. Design & Technology is also a great way to incorporate a healthy lifestyle within children through cookery and exploring ways to make good nutritional choices. Through teamwork, children develop empathy as they work together to plan, develop and make a range of projects using a variety of materials and tools.

### **3. Design and Technology Implementation**

#### ***Curriculum Design & Coverage***

	Aut 1	Aut2	Spr 1	Spr 2	Sum 1	Sum 2
Nursery						
Reception						
Year 1		Moving picture mechanisms		Making spaceships	Making sandwiches	
Year 2		Design and make a split pin puppet	Fruit Animals	African Jewellery		

<b>Year 3</b>		Bread making		Bunting Making		Wooden photo frame
<b>Year 4</b>		Bangladesh Meal	Pyramids		Venetian Masks	
<b>Year 5</b>	Making kites		Making soup	Making tree houses (pulleys)		
<b>Year 6</b>		Mexican Cooking		Viking Puppets	Fan-powered Boats	

### ***Teaching & Learning of Design and Technology***

The school uses a number of teaching and learning styles in Design & Technology lessons. The main aim is to develop the children's knowledge, skills and understanding in Design & Technology. Children are encouraged to apply their knowledge and understanding when developing ideas, planning and making products and evaluating them. We are able to do this through whole class teaching, group teaching and individual activities. Children are given opportunities to work individually and collaborate with others. Groups are encouraged to listen to other children's ideas and treat them with respect. Children evaluate products, their own work and that of others. They have access to a wide range of resources and materials including ICT.

### **The Early Years Foundation Stage**

The Early Years Foundation Stage is pivotal for the children developing the early skills which they will use throughout their education and beyond in Design & Technology. During the Early Years Foundation Stage the children will:

- Draw and paint using a range of materials, tools and techniques, experimenting with colour, design, texture form and function
- Use a range of small tools, including scissors, staplers, celotape and paint brushes
- Share their creations, explaining the process they have used
- Select appropriate resources and adapt work where necessary
- Experiment with different textures of food

#### **Expressive Arts and Design (Exploring and Using Media and Materials)**

Children safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.

#### **Expressive Arts and Design (Being Imaginative)**

Children use what they have learnt about media and materials in original ways, thinking about uses and purposes. They represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role play and stories.

#### **Physical Development (Moving and Handling)**

Children handle equipment and tools effectively, including pencils for writing.

*Referenced from Twinkl Design and Technology Progression*

### **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 [for example, levers, sliders, wheels and axles], in their products. Cooking and nutrition
- use the basic principles of a healthy and varied diet to prepare dishes
- understand where food comes from.

### **Key Stage 2**

In line with the National Curriculum, pupils KS2 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

- 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.

### ***School Vision Promoted through Design and Technology***

In Design & Technology, we promote empathy by providing opportunities for children to work together. Children also have the opportunity to work independently and therefore use their resilience to problem-solve and tackle any difficulties they may face.

### ***Curriculum Connections in Design and Technology***

Opportunities for cross-curricular links are taken, wherever possible, to link Design and Technology with other subject areas and learning themes. Many year groups link their Design and Technology teaching with their RE, History and Geography learning.

### **DT projects linked to other areas of the curriculum:**

**Year 1** – Making spaceships (linked to learning about Neil Armstrong), Making moving pictures (linked to Christmas celebrations) and Making sandwiches (Linked to the Light House Keeper's lunch).

**Year 2** – Puppet making (linked to History of toys), Making fruit animals (linked to Science unit about healthy eating) and creating African Jewellery (linked to Geography)

**Year 3** – Making Bread (Linked to Judaism in RE), Designing and making bunting (With links to WWII and celebrating VE Day) and creating Wooden Frames (Art links for framing self-portraits)

**Year 4** - Create a Bangladesh Meal (linked to Geography topic of flooding in Bangladesh), Wooden pyramids (linked to Ancient Egypt) and Venetian Masks (Linked to history topic of Romans and Geography)

**Year 5** – Making kites (linked to Geography unit of the Seaside, Making of Soup (RE links to comparing communities), Designing and making tree houses using pulleys (linked to Science knowledge of forces and Geography unit in relation to The Rainforest)

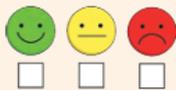
**Year 6** – Making fajitas (linked to Geography unit on Mexico), Sewing puppets (linked to Viking History project) and Designing and Making fan-powered boats (linked to Science learning regarding circuits).

### ***Enrichment Experiences in Design and Technology***

Children have the chance to embed their Design knowledge through construction club, which runs regularly throughout the year. As the children move throughout the school, opportunities are available to work with the Secondary School in relation to Food Technology and using their resources and facilities.

### ***Design and Technology Language Development***

Strand	EYFS	Y1	Y2
 <b>Design</b>	choose, colour, ideas	design, designing, drawing, labels, model, purpose, template, user	annotated drawings, appealing, communicate, computing software, creative, design criteria, develop, function, intended user, mock-up, practical, products, purposeful
 <b>Make</b>	cut, make, try	appearance, combine, construction materials, cut, decorations, equipment, fabric, finish, join, making, mark out, materials, plan, shaping, tools	accuracy, assemble, characteristics, components, finishing techniques, hand tools, manipulate, running stitch, score, textiles
 <b>Evaluate</b>	difficult, don't like, easy, feelings, thoughts, like, use	change, compare, materials, repeat	design criteria, discuss, evaluate, improve, improvements, positive, process, product, refine, stages, strengths, successes
 <b>Technical Knowledge</b>	cutlery, safe	axles, build, explore, materials, stiff, strong, wheels	characteristics, components, create, levers, mechanisms, sliders, stable, structure
 <b>Cooking and Nutrition</b>	cut, food, fruit, mix, smell, stir, taste, vegetables	animals, caught, chop, farmed, food safety, grate, grown, healthy, ingredients, plants, slice, sort, weigh	design, Eatwell Guide, food groups, hazard, hygiene, juicer, originate, peel, portions, prepare, safe knives, varied diet, zest, zester

Strand	Y3	Y4	Y5	Y6
 <b>Design</b>	annotated sketches, computer-aided design, develop, fit for purpose, functional, pattern pieces, research	aesthetics, cross-sectional diagrams, exploded diagrams, generate, innovative, prototypes, specific user	industry, leisure, resources, target market	availability, costings, conservation, culture, enterprise
 <b>Make</b>	fabric paint, functional properties, kits, mechanical components, select, sewing technique, stages, tie-dye	aesthetic qualities, digital graphics, exploded diagrams, generate, innovative, prototypes, specific user	backstitch, blanket stitch, precision, sanding, step-by-step plan	seam allowance, whip stitch
 <b>Evaluate</b>	alter, existing products, key events, key individuals, investigate, views	analyse, technological developments	competitor analysis, fitness for purpose, manufacture, quality	competitor analysis, market
 <b>Technical Knowledge</b>	cams, gears, input process, linkages, mechanical systems, output process, program, pulleys, stiffen, strengthen	bulb, buzzer, complex structure, control, electrical systems, monitor, motor, parallel circuits, reinforce, series circuits, switch	monitor	incorporate
 <b>Cooking and Nutrition</b>	bake, balance, crush, energy, gram, heat source, hob, hygiene procedures, knead, mash, millilitre, oven, preparation, processed, reared, recipe, savoury, sweet, temperature, varied diet, whisk	active, balanced diet, cooking utensils, hygienically, menu, nutrition, nutritious, seasonality, variety	boiling, cattle, frying, griddling, grilling, processed, protein	aroma, poultry, ratios, refine, scale down, scale up, substances, substitute

Referenced from Twinkl Art and DT Vocabulary Progression Document

### Community, Cultural & Global Learning through Design and Technology

Design Technology is global subject, where links are made to designers and technologists around the world. It explores the mechanics and workings of lots of things on our planet and connections are made to all areas of life.

#### 4. Impact

##### ***Monitoring Impact of Curriculum Design and Teaching & Learning***

##### ***Role of Subject Leader & Monitoring***

Monitoring the impact of teaching and learning is carried out regularly by the Subject Leader. This consists of:

- Learning walks and Lesson observations
- Team teaching and example lessons
- Monitoring and scrutiny of weekly plans
- Monitoring and scrutiny of DT based books
- INSETs and Staff training sessions for teachers and support staff
- Collection and analysis of assessment data
- Discussions with children about their experiences and learning in Design and Technology
- Reporting to the Governing Body as required
- Supporting new staff and providing guidance and training, when necessary

#### 5. Resources in Design and Technology

The school will provide a range of tools, equipment, and materials to support the teaching of Design Technology. Additional resources are stored in the designated DT cupboard. These include books, tools and materials. Further tools are locked away in the head teacher's office. Teachers will ensure that resources are used safely and appropriately, following health and safety guidelines.

#### 6. Health & Safety in Design and Technology

Children will be taught how to use materials, tools and equipment correctly and safely in accordance with the schools overall Health and Safety policy.

- **Age-Appropriate Tool Use:**
  - **EYFS & KS1:** Tools and materials will be selected for safety, using blunt-edged scissors, soft materials, and simple joining methods. Adult supervision will be constant, with clear guidance on basic handling.
  - **KS2:** Students will gradually be introduced to more advanced tools, such as hand drills and basic electrical components, under strict supervision and with comprehensive safety instructions.
- **Tool Storage and Maintenance:** Tools and materials will be securely stored when not in use, and regular checks will be made to ensure all equipment is in safe working order.
- **Selection of Materials:** Only materials appropriate for the age group and activity will be used, ensuring younger students handle softer, child-friendly materials.

#### 7. Assessment, Recording & Reporting of Design and Technology

Teachers planning identifies opportunities to develop generic and subject specific skills and to assess children's levels of achievement in relation to learning. Children should have regular verbal feedback regarding their work. Records of children's achievement can be derived from informal evaluations and self-assessments by the child. Evidence of achievement should be derived from a variety of activities

including written, oral, practical and D&T specific activities. These activities can be conducted in a variety of contexts, such as individual tasks, paired and group work and whole class settings. Evidence may therefore be gathered through observation, children's work or discussion. Formal reporting takes place within the annual report to parents.

## **8. Provision in Design and Technology**

Teachers ensure support, provision and suitable resources are in place for each learning task, with extension activities for those who are meeting expectations during lessons. Additional classroom support, ICT programmes and appropriate tools and equipment are provided to ensure that all children have sufficient access to the Design & Technology curriculum.

Through enjoyment and mutual respect, we aim to create a community where all learners with support of others and by their own efforts, reach their potential.