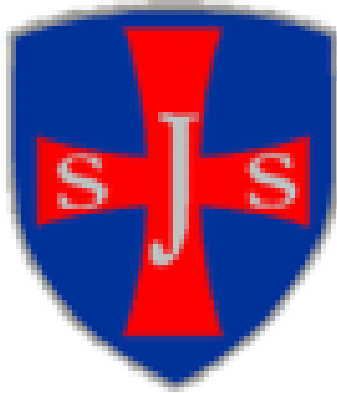


St Joseph's Catholic Primary School
Gipsy Lane, Bracknell, Berkshire, RG12 9AP
Tel: (01344) 425246 Fax (01344) 305463



DESIGN AND TECHNOLOGY

Approved by the Headteacher
and adopted by the Curriculum and Standards Committee
at its meeting on 1st February 2024

Signed:

A handwritten signature in black ink, appearing to be 'GL', written over a light blue horizontal line.

Name: Grace Lewin
Position: Chair of Curriculum and Standards
Date: 01.02.2024
Review Date: Autumn 2027 (Three years)

DESIGN AND TECHNOLOGY POLICY

MISSION STATEMENT

Growing together with Jesus in our hearts, heads and hands.

POLICY STATEMENT

At St Joseph's Catholic Primary School, we recognise that all subjects can be taught through the lens of our mission statement and charism– hearts, heads and hands (love, wisdom & action) as all three together play a significant part when learning. We therefore aim to provide an education that provides opportunities for pupils to experience:

- God's love: through this love, understand that we are empowered to love others, his creation and learning.
- God's wisdom: wisdom is a real-life process of cognitive integrations embodied in action which has a positive effect for oneself and others.
- God's workings and actions: our learning and lives are committed to the principles of [Catholic Social Teaching](#).

Art and Design provides opportunities to promote the following:

- **Hearts:**
 - To develop an awareness of different cultures and values through design technology, approaching these with tolerance and human dignity.
- **Heads:**
 - To develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world.
 - To critique, evaluate and test their ideas and products and the work of others.
- **Hands:**
 - 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.
 - Understand and apply the principles of nutrition and learn how to cook.

STATEMENT OF INTENT

At St. Joseph's Catholic Primary School, we use Kapow Primary's Design and technology scheme of work to inspire pupils to be innovative and creative thinkers who have an appreciation for the product design cycle through ideation, creation, and evaluation. We want pupils to develop the confidence to take risks, through drafting design concepts, modelling, and testing and to be reflective learners who evaluate their work and the work of others. Through our scheme of work, we aim to build an awareness of the impact of design and technology on our lives and encourage pupils to become resourceful, enterprising citizens who will have the skills to contribute to future design advancements.

The Design and Technology scheme of work (KAPOW) enables pupils to meet the end of key stage attainment targets in the national curriculum and the aims also align with those in the national curriculum. It also support the journey, inspiring children and young people to create, experience, and participate in great arts and culture.

STATEMENT OF IMPLEMENTATION

The Design and technology national curriculum outlines the three main stages of the design process:

design, make and evaluate. Each stage of the design process is underpinned by technical knowledge which encompasses the contextual, historical, and technical understanding required for each strand. Cooking and nutrition* has a separate section, with a focus on specific principles, skills and techniques in food, including where food comes from, diet and seasonality.

The National curriculum organises the Design and technology attainment targets under five subheadings or strands:

- Design
- Make
- Evaluate
- Technical knowledge
- Cooking and nutrition

Kapow Primary's Design and technology scheme has a clear progression of skills and knowledge within these five strands across each year group (see table of Kapow Design Technology Curriculum Coverage at the end of this document)

Pupils respond to design briefs and scenarios that require consideration of the needs of others, developing their skills in six key areas:

- Mechanisms
- Structures
- Textiles
- Cooking and nutrition (Food)
- Electrical systems (KS2) *and*
- Digital world (KS2)

Each of the key areas follows the design process (design, make and evaluate) and has a particular theme and focus from the technical knowledge or cooking and nutrition section of the curriculum. The Kapow Primary scheme is a spiral curriculum, with key areas revisited again and again with increasing complexity, allowing pupils to revisit and build on their previous learning.

Lessons incorporate a range of teaching strategies from independent tasks, paired and group work including practical hands-on, computer-based and inventive tasks. This variety means that lessons are engaging and appeal to those with a variety of learning styles. Differentiated guidance is available for every lesson to ensure that lessons can be accessed by all pupils and opportunities to stretch pupils' learning are available when required. Knowledge organisers for each unit support pupils in building a foundation of factual knowledge by encouraging recall of key facts and vocabulary.

STATEMENT OF IMPACT

Impact is constantly monitored through both formative and summative assessment opportunities. Furthermore, each unit has a unit quiz and knowledge catcher which can be used at the start and/ or end of the unit.

Pupils should leave school equipped with a range of skills to enable them to succeed in their secondary education and be innovative and resourceful members of society.

The expected impact of following the Kapow Primary Design and technology scheme of work is that children will:

- Understand the functional and aesthetic properties of a range of materials and resources.
- Understand how to use and combine tools to carry out different processes for shaping, decorating, and manufacturing products.
- Build and apply a repertoire of skills, knowledge and understanding to produce high quality, innovative outcomes, including models, prototypes, CAD, and products to fulfil the needs of users, clients, and scenarios.
- Understand and apply the principles of healthy eating, diets, and recipes, including key processes, food groups and cooking equipment.
- Have an appreciation for key individuals, inventions, and events in history and of today that impact our world.
- Recognise where our decisions can impact the wider world in terms of community, social and environmental issues.
- Self-evaluate and reflect on learning at different stages and identify areas to improve.
- Meet the end of key stage expectations outlined in the National curriculum for Design and technology.
- Meet the end of key stage expectations outlined in the National curriculum for Computing.
- A formal summative assessment is reported to parents at the end of each academic year

Signature of Headteacher	
Date	/ /
Signature of Chair of Curriculum & Standards Committee	
Date	/ /



Kapow Design Technology Curriculum Coverage KS1

Design Technology Programme of Study for KS1		Food: Fruit and Vegetables	Mechanisms: Making a Moving Storybook	Textiles: Puppets	Structures: Baby Bears Chair	Mechanisms: Wheels and Axels	Textiles: Pouches
		Year 1			Year 2		
Cooking and Nutrition	use the basic principles of a healthy and varied diet to prepare dishes						
	understand where food comes from						
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.						



Design Technology Curriculum Coverage KS2

Art and Design Programme of Study for KS2		Food: Eating Seasonally	Structures: Constructing Chimneys/ houses	Mechanical Systems: Pneumatic Toys	Digital World: Mindful Moments Timer	Textiles: Fastenings	Electrical Systems: Torches	Digital World: Monitoring Devices	Mechanical Systems: Making a pop-up book	Structures: Bridges	Textiles: Stuffed Decoration	Electrical Systems: Steady Hand Game	Food: Come dine with me
		Year 3			Year 4			Year 5			Year 6		
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.												
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.												

