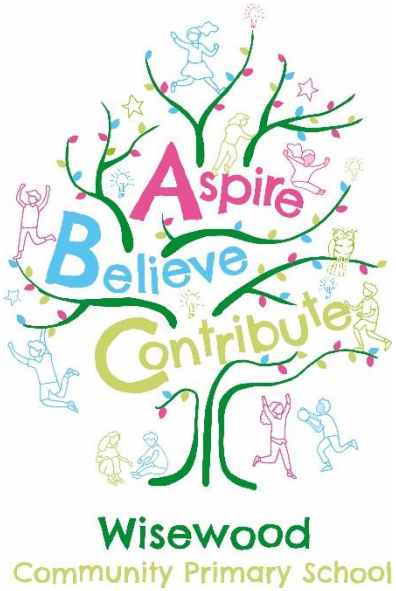
Wisewood Community Primary School



Design and Technology

Design and Technology Curriculum Intent

At Wisewood Primary School, we value Design and Technology as an important part of the children's entitlement to a rich, broad and balanced curriculum. Design and Technology provides the children with the opportunities to develop, extend skills and gives an opportunity to express their creativity, critical thinking and ideas. Design and Technology is a unique discipline that allows children to make links with their learning and the concepts of engineering, mathematics, art, science and computing. Design technology reflects the ever changing world in which we live and enables children to develop a multidisciplinary skillset for their future careers. At Wisewood School, children will be given the opportunity to be resourceful, innovative, collaborative and reflective.

Design and Technology embodies some of the highest forms of human creativity and we intend for the children of Wisewood Primary School to believe in their own creative and innovative sparks and the journey it can take them on. A high-quality Design and Technology education should engage, inspire and challenge pupils, equipping them with the knowledge and skills to experiment, invent and create their own works of engineering, systems, craft and design.

As pupils progress, they should be able to think critically and develop a more rigorous understanding of Design and Technology. They should also know how Design and Technology both reflect and shape our history, and contribute to the culture, creativity and well-being of our nation. Our children can aspire to become the creators, designers and innovators of the future.

The national curriculum for design and technology aims to ensure that all pupils:

- To develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world

- To 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
- To critique, evaluate and test their ideas and products and the work of others
- To begin to understand and apply the principles of nutrition and learn how to cook

The teaching and implementation of the Design and Technology Curriculum at Wisewood Primary School is based on the National Curriculum and where appropriate, is linked to topics to ensure a well-structured approach to this creative subject.
Medium-term plans, teaching and learning and assessment, show progression across all key stages within the strands of Design and Technology following the structure of: research, design, make and evaluate. Children have access to key knowledge, language and meanings in order to understand and readily apply to their work in DT and across the wider curriculum.

Early Years Foundation Stage

- Pupils explore and use a variety of media and materials through a combination of child initiated and adult directed activities. They have opportunities to learn to:
- Explore the textures, movement, feel and look of different media and materials
- Respond to a range of media and materials, develop their understanding of them in order to manipulate and create different effects.
- Use different media and materials to express their own ideas
- Explore colour and use colour for a particular purpose
- Develop skills to use simple tools and techniques competently and appropriately
- Select appropriate media and techniques and adapt their work where necessary

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 This will include and range from 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

- To design purposeful, functional, appealing products for themselves and other users based on design criteria
- To generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology

Make

- To select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
- To select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

Evaluate

- To explore and evaluate a range of existing products
- To evaluate their ideas and products against design criteria

Technical knowledge

- To build structures, exploring how they can be made stronger, stiffer and more stable
- To 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 This will include and range from 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

- To 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
- To generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

- To select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
- To 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

- To investigate and analyse a range of existing products
- To evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
- To understand how key events and individuals in design and technology have helped shape the world

Technical knowledge

- To apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- To understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]

- To understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
- To 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

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

Key stage 2

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

	Cooking & Nutrition Food Technology		Textiles	Systems and Mechanisms		Structures
FS1	Fruit Salad					
FS2	Soup and Bread	Potato Party	Binca Bookmarks	Moving parts person Split-pins		Box Model Houses
Y1	Lunch Kebab	Potato Party	Sock Puppets	Slider Picture		Strengthening Structures
Y2	Eat Well Pizza		Bunting	Wheels and Axels Moving vehicle		
Y3	Bunny Chow		Felting	Pneumatic Toys		
Y4	Eat Well School Lunch			Levers and Pivots		
				CAD		
Y5	Breads of The World		Narrative Scene	Bridges		
				CAD		
Y6			Book Bags	CAMS	Electrical Circuit- Steady Hand Game	

British Values & Protected Characteristics 		Significant Individuals Studied
FS1		
FS2	Isambard Kingdom Brunel was a significant British designer and engineer who had a highly influential impact on the industrial revolution.	Isambard Kingdom Brunel 
Y1	Zaha Hadid was a pioneering female British Iranian architect, artist and designer. She is recognised as a major figure in architecture of the late 20th and early 21st centuries.	Zaha Hadid 
Y2	Coco Chanel was a french fashion designer and buisiness woman during the post World War 1 era. She popularized a sporty, casual, chic as the femanine standard of style.	Coco Chanel 
Y3	Vivienne Westwood is a British fashion designer and business woman who is largely responsible for bringing modern punk and new wave fashions into the mainstream.	Vivienne Westwood 
Y4	Jamie Oliver has been a trailblazer in modern British cooking. He is passinate about healthy meals for children and has had a big impact on the way school meals are designed today.	Jamie Oliver 
Y5	Emily Warren Roebling became the chief engineer of the Brooklyn Bridge. She is creddited as the saviour of the project initially entrusted to her husband, who became bedridden. She is known for being a pioneering example of independence.	Emily Warren Roebling 
Y6	Alan Turing was an English mathematician, computer scientist, logician, cryptanalagyst, philosopher and theoretical biologist who is credited for his highly influential development of theoretical computer science. During WW2 Turing played a crucial role in cracking coded messages thst allowed the Allies to defeat the Axis powers. Despite his monumental contributions, Turing was persecuted for his sexual orientation, only being granted a posthumus pardon from the Queen in 2013.	Alan Turing