



Design & Technology Subject Policy

Intent:

It is the intent of King George V Primary School for Design Technology to be taught in all year groups through at least one topic per term, which includes one topic relating to food. Design Technology projects are often made cross curricular - linking to other subjects taught.

Key objectives of intent within the Design Technology Curriculum based on the National Curriculum 2014 guidance:

Products are to be made for a purpose.

- Individuality should be ensured in children's design and construction of products.
- Delivery of the two strands: Designing and Making and Cooking and Nutrition.
- More emphasis to be given on creating 'innovative' products in KS2.
- Teaching the importance of making on-going changes and improvements during making stages.
- Looking into seasonality of ingredients and how they are grown, caught or reared.
- The introduction of computing and coding of products in KS2.
- Researching key events and individual designers in the History of Technology in KS2.

Aims:

The national curriculum for Design and Technology aims to ensure that all pupils:

- Develop the creative, technical and practical expertise need to perform everyday tasks confidently and to participate successfully in an increasingly technological world.
- 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
- Critique, evaluate and test their ideas and products and the work of others
- Understand and apply the principles of nutrition and learn how to cook.

Implementation:

- The teaching of Design Technology across the school follows the National Curriculum.
- Whole school curriculum maps are used to identify relevant knowledge and skills to be developed through each unit of work, ensuring that teachers build upon pupils' prior knowledge and experiences and prepare them for their next stage
- Children design products with a purpose in mind and an intended user of the products
- Food Technology is implemented across the school with children developing an understanding of where food comes from, the importance of a varied and healthy diet and how to prepare this.
- Design and technology is a crucial part of school life and learning and it is for this reason that as a school we are dedicated to the teaching and delivery of a high



quality Design and Technology curriculum; through well-planned and resourced projects and experiences.

- Pupils design and make products that solve real and relevant problems within a variety of contexts
- It is very cross - curricular and draws upon subject knowledge and skills within Mathematics, Science, History, Computing and Art
- Children draw upon their reading skills in order to read to learn in Design and Technology.
- Children learn to take risks, be reflective, innovative, enterprising and resilient. Through the evaluation of past and present technology they can reflect upon the impact of Design Technology on everyday life and the wider world.
- More detail can be found in our whole school curriculum map.

Early Years Foundation Stage:

During the EYFS pupils explore and use a variety of media and materials through a combination of child initiated and adult directed activities. They have the opportunities to learn to:

- Use different media and materials to express their own ideas
- Use what they have learnt about media and materials in original ways, thinking about form, function and purpose
- Make plans and construct with a purpose in mind using a variety of resources
- Develop skills to use simple tools and techniques appropriately, effectively and safely
- Select appropriate resources for a product and adapt their work where necessary
- Cook and prepare food adhering to good health and hygiene routines

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, (for example 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:

- 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, (or 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.

National Curriculum requirements for food and Nutrition at KS1:

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:

- Use the basic principles of a healthy and varied diet to prepare dishes
- Understand where food comes from.

Key Stage 2:

- Within key stage 2 key events and individuals that have influenced the world of Design Technology are teaching focuses that are to be covered. The use of computer programmes and applications are also a key focus to be utilised by children in their design of their products.
- 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, for example, the home, school, leisure, culture, enterprise, industry and the wider environment.

When designing and making, 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 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, such as 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 as gears, pulleys, cams, levers and linkages)
- 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 programme, monitor and control their products.

National Curriculum requirements for food and nutrition at KS2:

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
- To understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

Health and Safety:

Health and safety is important, particularly when working with tools, equipment and resources. Pupils to be given suitable instruction on the operation of all equipment before being allowed to work with it.

Pupils will be:

- Strictly supervised in their use of equipment at all times.



- Taught to respect the equipment they are using and to keep it stored safely while not in use.
- Taught to recognise and consider hazards and risks and to take action to control these risks, having followed simple instructions.

Food Hygiene and Safety:

- Pupils and staff will take care to undertake appropriate hand washing and other hygiene related activities prior to preparing food.
- Pupils and staff working with food must wear aprons designated for cooking.
- All jewellery should be removed and hair tied back.
- Food will always be stored correctly, before and after preparation.
- Teachers will check the dietary needs of the children in their class to identify any foods that should not be available to specific children, or groups of children.

Impact:

- Assessment of children's learning in Design Technology is an ongoing monitoring of children's understanding, knowledge and skills by the class teacher, throughout lessons. This assessment is then used to inform the level of scaffold and challenge required by the children.
- Summative assessment is conducted termly by class teachers across each year group of the school to inform the subject leader of progress or skills and knowledge still to be embedded.
- Design Technology is also monitored by the subject leader throughout the year in the form of book monitoring, looking at outcomes and pupil interviews to discuss their learning and understanding and establish the impact of the teaching taking place.
- EYFS pupils' progress and attainment is tracked using the Early Excellence Assessment tracker system, telling us whether each individual child is below expected, at expected or above expected attainment for their age.