

# Woodlands Primary School



## DESIGN & TECHNOLOGY POLICY & STATEMENT OF INTENT

<b>Status:</b>	Current	
<b>Date Adopted by Governing body:</b>	January 2020	
Created by Matthew Kitley Amended by Katie Wright	January 2020 July 2020	
<b>Review by Curriculum Committee</b>	January 2022	2 years

# Curriculum Statement

## Intent

Design and Technology is an inspiring, rigorous and practical subject. Design and Technology encourages children to learn to think and intervene creatively to solve problems both as individuals and as members of a team. At Woodlands Primary, we encourage children to use their creativity and imagination, to design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. We aim to, wherever possible, consider the environmental impact and health impact of their designs and to link work to other disciplines such as Mathematics, English, Science, Engineering, Computing and Art. The children are also given opportunities to reflect upon and evaluate past and present Design Technology, its uses and its effectiveness and are encouraged to become innovators and risk-takers.

## Implementation

Through a variety of creative and practical activities, we teach the knowledge, understanding and skills needed to engage in an iterative process of designing and making. The children work in a range of relevant contexts (for example home, school, leisure, culture, enterprise, industry and the wider environment).

When designing and making, the children are 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 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
- understand and use electrical systems in their products
- apply their understanding of computing to program, monitor and control products

## **Impact**

We ensure the children

- develop the creative, technical and practical expertise needed 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 and 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. Children will design and make a range of products. A good quality finish will be expected in all design and activities made appropriate to the age and ability of the child

Children learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. 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. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

## **Teaching and Learning**

Design and Technology will engage the children in a broad range of designing and making activities which involve a variety of methods of communication; speaking, designing, drawing, assembling, making, writing and using computer technology. Projects are taught in blocks which allows for more effective learning in which teachers can focus on teaching and developing Design and Technology skills, allowing children to develop their ideas and techniques. Units of work have been selected and planned to ensure a balance of materials, skills, knowledge and understanding throughout each Key Stage and each year group. All children will have a breadth and balance of experience.

## **Assessment**

Children's skills will be assessed and developed by the teacher during lessons and through critical discussion and assessment tasks set at the end of each unit. The results of these assessments are recorded on the School Tracking System INSIGHT – Below (Emerging), Just Below (Working Towards), On Track (Expected), Great Depth. Displays within the classroom and hall areas will reflect a range of work across key stages, to celebrate and exhibit the work of children, of all abilities.

## **Planning and Resources**

Design Technology planning (see appendix) provides enquiry based tasks that are based upon real life problems and scenarios based around a range of contexts that are explicitly relevant to the children. They provide a clear progression in skills and also consider health, well-being and the environment. Children are taught to use tools and equipment in a sensible, safe and efficient manner. In addition there are resources, produced by the Design and Technology Association, are available on the shared drive for additional homework tasks, competitions, etc. Resources are available in the Design and Technology resource area and others will be purchased as necessary.

## **Organisation**

Design and Technology planning is mapped in blocks on the Whole School Curriculum Overview. Links with other subject areas are made where appropriate.

## **EYFS**

The staff team will plan for children to experience creative opportunities and develop key skills and techniques within the EYFS curriculum. There will be a focus on developing fine motor skills and learning how to plan, design and produce the finished project. The Early Learning Goals that specifically relate to Design and Technology are:

- *To safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function (Expressive Arts and Design – Exploring and Using Media and Materials).*
- *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 ... (Expressive Arts and Design – Being Imaginative).*
- *Children handle equipment and tools effectively (Moving and Handling).*

Nursery and Reception classes will be, where appropriate, included in whole school projects, workshops, events and competitions associated with Design and Technology.

## **KS1 and KS2**

Teachers will plan for lessons so that children will learn to design purposeful, functional, appealing products for themselves and others based on design criteria and to communicate their ideas through talking and drawing. They learn to select from and use a range of tools and equipment to perform practical tasks and to choose from a wide range of materials and components. They also learn to explore and evaluate their design and product.

## **Equal Opportunities**

Whole school policy on equal opportunities will be adhered to in Design and Technology activities. Teachers ensure that children have access to the range of Design and Technology activities and use opportunities within Design and Technology to challenge stereotypes. Children are encouraged and supported to develop their Design and Technology capability using a range of materials. Children with special needs or disabilities will be differentiated for and supported appropriately, to ensure development of skills and equal access to the Design and Technology curriculum.

## **Inclusion**

All children will be supported through differentiation, adaptation or adult support, to enable equal access to learning in Design and Technology.

## **Parents and carers**

We encourage all parents and carers to support and assist with whole school events and Design and Technology homework projects. We recognise the need to enforce healthy eating, well-being and respect for our environment and encourage our parents and carers to do .

## **Role of the Subject Leader**

The subject leader's responsibilities are:

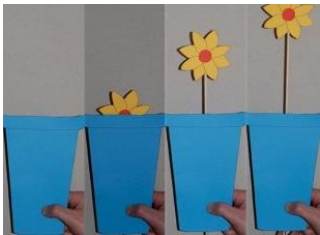

- To ensure a high profile of the subject
- To plan and regularly update the Design and Technology Subject Action Plan
- To ensure a full range of relevant and effective resources are available to enhance and support learning.
- To ensure progression of the key knowledge and skills identified within each unit and that these are integral to the programme of study and secure at the end of each age phase
- To monitor pupil work/books in Design and Technology and ensure that key knowledge is evidenced in outcomes, alongside and as supported, by the SLT (Senior Leadership Team). This includes carrying out a book scrutiny for each unit of Design Technology work.
- To ensure staff receive prompt feedback and make sure that staff achieve the development points that they are given.
- To monitor planning and the quality of Design and Technology teaching
- To lead further improvement in and development of the subject as informed by effective subject overview
- To ensure that the Design and Technology curriculum has a positive effect on all pupils, including those who are disadvantaged or have low attainment
- To ensure that the Design Technology curriculum take account of the school's context, promotes children's pride in the local area and provides access to positive role models from the local area to enhance the Design and Technology curriculum
- To ensure that approaches are informed by and in line with current identified good practice and pedagogy.
- The subject leader will attend relevant training for curriculum leaders and share information with staff.
- To ensure CPD is in place through working with the head teacher/ leadership team and at staff meetings.
- Assessment - The leader will also monitor staff use of the INSIGHT Assessment tracking system. Evidence will be kept from year to year.
- To work closely with the Lead Governor for Design and Technology (providing appropriate support and challenge) and ensure that they meet with the subject leader at least three times every academic year (once every old term).




The subject leader will monitor the teaching and learning of Design and Technology across the school; ensuring a high quality, broad and stimulating curriculum. They will also maintain a range of good-quality materials and tools, enabling teachers to resource and teach effectively.

## Appendix



The Early Learning Goals that specifically relate to Design and Technology are:



- To safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function (*Expressive Arts and Design – Exploring and Using Media and Materials*).
- 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 ... (*Expressive Arts and Design – Being Imaginative*).
- Children handle equipment and tools effectively (*Moving and Handling*).



Year	Focus	Skills	Content
1	How do I make a flower that grows? 	Design	Design purposeful, functional, appealing products for themselves and others. Generate, develop and communicate their ideas through talking, drawing, templates and mock-ups.
		Make	Select from and use a range of tools and equipment to perform practical tasks (cutting, shaping, joining and finishing). Select from a range of materials and construction materials.
		Evaluate	Explore and evaluate a range of existing products (cards, moving pictures). Evaluate their ideas and product against design criteria.
		Technical knowledge	Explore and use mechanisms in their products. (sliders, levers)
	How do I make a tasty and healthy desert? 	Design	Design purposeful, functional, appealing products for themselves and others. Generate, develop and communicate their ideas through talking and drawing.
		Make	Select from and use a range of tools (knives) and equipment to perform practical tasks (cutting). Select from a range of products.
		Evaluate	Explore and evaluate a range of existing products. Evaluate their ideas and product against design criteria.
		Cooking and nutrition	Understand the basic principles of a healthy and varied diet. Understand where food comes from.
2	How do I build a stable structure?	Design	Design purposeful, functional, appealing products for themselves and others. Generate, develop and communicate their ideas through talking, drawing, templates and mock-ups.

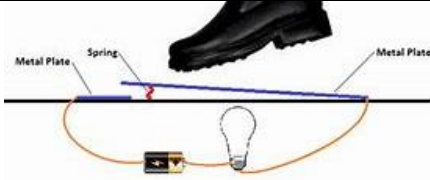
		<p>Make</p>	<p>Select from and use a range of tools and equipment to perform practical tasks (cutting, shaping, joining and finishing). Select from a range of materials and construction materials, textiles, according to their characteristics.</p>
		<p>Evaluate</p>	<p>Explore and evaluate a range of existing products. Evaluate their ideas and product against design criteria.</p>
		<p>Technical knowledge</p>	<p>Build structures, exploring how they can be made stronger, stiffer and more stable.</p>
<p>How do I create a unique bookmark?</p>		<p>Design</p>	<p>Design purposeful, functional, appealing products for themselves and others. Generate, develop and communicate their ideas through talking, drawing, templates, mock-ups.</p>
		<p>Make</p>	<p>Select from and use a range of tools and equipment to perform practical tasks (cutting, shaping, joining and finishing). Select from a range of materials (fabrics, wools, cottons) and construction materials.</p>
		<p>Evaluate</p>	<p>Explore and evaluate a range of existing products (book marks). Evaluate their ideas and product against design criteria.</p>
		<p>Technical knowledge</p>	<p>Explore and use different stitches – running, cross</p>
<p>3</p>	<p>How can I help the environment by replacing the plastic bag?</p> 	<p>Design</p>	<p>Use research to develop innovative, functional and appealing product fit for purpose and aimed at particular individual. Generate, develop, model and communicate ideas through discussion and annotated sketches.</p>
		<p>Make</p>	<p>Select from and use a range of tools and equipment to perform practical tasks accurately. Select from a range of materials (textiles, wools, cottons, fabric pens / paints) and construction materials according to their functional properties and aesthetic qualities.</p>
		<p>Evaluate</p>	<p>Investigate and analyse a range of existing products (environmentally friendly bags). Evaluate their ideas and product against design criteria and consider views to improve product. Understand how the product can help the world.</p>
		<p>Technical knowledge</p>	<p>Apply understanding of how the structure can be made stronger, stiffer and more stable.</p>



	<p>How do I use seasonal produce to create a delicious and healthy drink?</p> 	Design	Use research to develop innovative, functional and appealing product fit for purpose and aimed at particular individual. Generate, develop, model and communicate ideas through discussion and annotated sketches.
		Make	Select from and use a range of tools and equipment to perform practical tasks accurately. Select from a range of foods and construction materials according to their functional properties and aesthetic qualities.
		Evaluate	Investigate and analyse a range of existing products. Evaluate their ideas and product against design criteria and consider views to improve product.
		Cooking and nutrition	Understand and apply the principles of a healthy and varied diet. Prepare food using a range of cooking techniques. Understand seasonality, and know how a variety of ingredients are grown.
4	<p>How do I help the environment by building a home for a wild animal?</p> 	Design	Use research to develop innovative, functional and appealing product fit for purpose and aimed at particular individual. Generate, develop, model and communicate ideas through discussion and annotated sketches.
		Make	Select from and use a range of tools and equipment to perform practical tasks accurately (cut, shape, join, finish). Select from a range of materials and construction materials according to their functional properties and aesthetic qualities.
		Evaluate	Investigate and analyse a range of existing products. Evaluate their ideas and product against design criteria and consider views to improve product. Understand how the product can help the environment.
		Technical knowledge	Apply understanding of how the structure can be made stronger, stiffer and more stable.
	<p>Are all pizzas unhealthy?</p>	Design	Use research to develop innovative, functional and appealing product fit for purpose and aimed at particular individual.

			<p>Generate, develop, model and communicate ideas through discussion and annotated sketches.</p>
		<p>Make</p>	<p>Select from and use a range of tools and equipment to perform practical tasks accurately. Select from a range of foods and construction materials according to their functional properties and aesthetic qualities.</p>
		<p>Evaluate</p>	<p>Investigate and analyse a range of existing products. Evaluate their ideas and product against design criteria and consider views to improve product.</p>
		<p>Cooking and nutrition</p>	<p>Understand and apply the principles of a healthy and varied diet. Prepare food using a range of cooking techniques. Understand seasonality, and know how a variety of ingredients are grown., reared, caught and processed.</p>
<p>5</p>	<p>How do I bring a picture to life?</p> 	<p>Design</p>	<p>Use research to develop innovative, functional and appealing product fit for purpose and aimed at particular group (YR). Generate, develop, model and communicate ideas through discussion, annotated sketches, exploded diagrams, prototypes and computer-aided design.</p>
		<p>Make</p>	<p>Select from and use a range of tools and equipment to perform practical tasks accurately (cut, shape, join, finish). Select from a range of materials and construction materials according to their functional properties and aesthetic qualities.</p>
		<p>Evaluate</p>	<p>Investigate and analyse a range of existing products. Evaluate their ideas and product against design criteria and consider views to improve product.</p>
		<p>Technical knowledge</p>	<p>Apply understanding of how the structure can be made stronger, stiffer and more stable. Apply their understanding of computing.</p>
	<p>How do I replace an unhealthy snack?</p>	<p>Design</p>	<p>Use research to develop innovative, functional and appealing product fit for purpose and aimed at particular individual.</p>

			<p>Generate, develop, model and communicate ideas through discussion and annotated sketches.</p>
		<p>Make</p>	<p>Select from and use a range of tools and equipment to perform practical tasks accurately. Select from a range of foods and construction materials according to their functional properties and aesthetic qualities.</p>
		<p>Evaluate</p>	<p>Investigate and analyse a range of existing products. Evaluate their ideas and product against design criteria and consider views to improve product.</p>
		<p>Cooking and nutrition</p>	<p>Understand and apply the principles of a healthy and varied diet. Prepare food using a range of cooking techniques. Understand seasonality, and know how a variety of ingredients are grown and processed.</p>
<p>6</p>	<p>Is it possible to create a nutritious fast food meal?</p> 	<p>Design</p>	<p>Use research to develop innovative, functional and appealing product fit for purpose and aimed at particular individual. Generate, develop, model and communicate ideas through discussion and annotated sketches.</p>
		<p>Make</p>	<p>Select from and use a range of tools and equipment to perform practical tasks accurately. Select from a range of foods and construction materials according to their functional properties and aesthetic qualities.</p>
		<p>Evaluate</p>	<p>Investigate and analyse a range of existing products. Evaluate their ideas and product against design criteria and consider views to improve product.</p>
		<p>Cooking and nutrition</p>	<p>Understand and apply the principles of a healthy and varied diet. Prepare food using a range of cooking techniques. Understand seasonality, and know how a variety of ingredients are grown, reared, caught and processed.</p>
<p>How do I keep the school safe and secure?</p>		<p>Design</p>	<p>Use research to develop innovative, functional and appealing product fit for purpose and aimed at particular individual.</p>

		Generate, develop, model and communicate ideas through discussion and annotated sketches.
	Make	Select from and use a range of tools and equipment to perform practical tasks accurately. Select from a range of foods and construction materials according to their functional properties and aesthetic qualities.
	Evaluate	Investigate and analyse a range of existing products. Evaluate their ideas and product against design criteria and consider views to improve product.
	Technical knowledge	Understand and use electrical systems in their products (switches, bulbs, buzzers and motors). Apply their understanding of computing to programme, monitor and control their products.