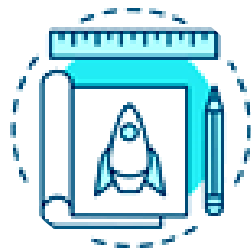


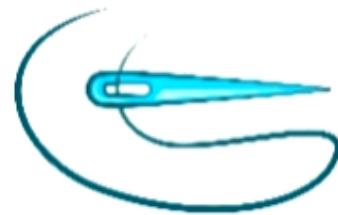


# STEETON PRIMARY SCHOOL

## DESIGN TECHNOLOGY CURRICULUM



**DESIGN**



**MAKE**



**TECHNICAL KNOWLEDGE**



**COOKING AND NUTRITION**



**EVALUATE**

# DESIGN TECHNOLOGY CURRICULUM AT STEETON PRIMARY SCHOOL

## INTENT

At Steeton Primary School, we see the importance design and creativity has for our pupils. Design technology has a high profile at Steeton Primary School and we dedicate almost a full day every week in the Summer Term to developing children's knowledge and skills in this subject, through our bespoke 'Magic Monday' curriculum. It is our intention that our pupils learn to design, think and intervene creatively to solve problems both as individuals and members of a team. At Steeton Primary School, 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, link work to other disciplines such as art and design, mathematics, science, engineering and computing. 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.

The whole school design technology overview and progression of knowledge and skills means that the National Curriculum is taught in a sequenced way meaning children know more and remember more and can do more. Progression of knowledge and skills is outlined so that at the end of each phase is clear to all teachers. It is clear to see what children have learnt previously in the phase before and what they will be learning in the next phase of their design technology education.

In order to promote maximum progression we centred our design technology curriculum on the research-based approach of repeated concepts. The use of revisiting concepts over the years means that knowledge is embedded and children make clear links in their learning and can develop their skills with more ease and accuracy.

Our Magic Mondays link directly to our history and geography topics and we spend a whole half term developing our knowledge and skills of one of more concepts. We want our children to become resilient and believe they are great designers, as we do.

Children receive high quality academic learning experiences which is enriched with our 'Pupil Offer' which provides many rich and relevant experiences beyond the classroom.

## IMPLEMENTATION

The design technology curriculum at our school is bespoke and has been designed for the children in our school to ensure the National Curriculum is covered in a logical way. We plan design technology by using our 'Magic Mondays' alongside the subject of art and design, design technology is taught throughout the summer term. Children work on specific skills and develop their knowledge as set out in our whole school overview. Each child in KS1 and KS2 has their own sketch book, which shows a clear progression of the skills they are developing for that half term, showing clearly their sketches and designs for the products they are creating. Children work both independently and in small groups to achieve their final product. The skill development ends with a final product that the child will be proud of and we display as much of the children's work throughout our school buildings as possible. In EYFS, children develop their fine motor skills by having opportunities to draw creatively and use a range of small tools, including scissors and paint brushes. They also have opportunities across the year to safely use and explore a variety of materials, tools and techniques, share their creations, explaining the process they have used. Children develop these skills according to the National Curriculum. They will explore and develop their design ideas and be able to evaluate their own products and work of other designers.

The whole school design technology overview is followed, meaning it is taught in a systematic way. Each Magic Monday will focus on one or more of our five concepts:



DESIGN



MAKE



TECHNICAL KNOWLEDGE



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EVALUATE

Magic Monday lessons will combine increasing knowledge of the concept being taught through building upon previous learning, developing resilience of motor skills, alongside enriching the half termly topic.

## IMPACT

At the end of each phase pupils will have had the opportunity to develop all of our design technology concepts, embedding and developing the skills within these concepts throughout the years. Children look forward to 'Magic Mondays'; it is seen as a high profile and important part of our school week. They are proud of their design work and their sketch books and are able to talk about the progress they have made using their sketch books to help them. They place value on the whole process of developing skills and knowledge in Magic Mondays and not just the finished high quality final product. Children are reflective designers and are open and accepting of ways they can improve their work through evaluating both their own designs/products of others. We want our children to become resilient with their technology work but also take risks and experiment with different techniques that could be used. Children will develop their own preferences of different ways products can be produced and be able to give reasons for using different techniques for different reasons using their developing technical vocabulary.

Children will have developed knowledge of a broad range of crafts people and designers and be able to discuss work produced by them.

High quality outcomes are displayed proudly around school.

Teachers assess children's learning in every lesson and give feedback, support and challenge where appropriate. Design Technology is discussed in Phase and Leadership Curriculum Impact Meetings and parents are kept informed of their child's progress at parents' evenings, through school reports and work is celebrated through School Ping.

# DESIGN TECHNOLOGY NATIONAL CURRICULUM AND EYFS STATUTORY FRAMEWORK

## EYES

We have selected the Early Learning Goals that link most closely to the Design Technology National Curriculum taught in the rest of the school. Level expected at the End of EYFS:

### Expressive Arts and Design

Creating with Materials ELG:

- safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function
- share their creations, explaining the process they have used
- make use of props and materials when role playing characters in narratives and stories

### Physical Development

Fine Motor Skills ELG:

- hold a pencil effectively in preparations for fluent writing - using the tripod grip in almost all cases
- use a range of small tools, including scissors, paint, brushes and cutlery
- begin to show accuracy and care when drawing

## KSI National Curriculum

### Design

Pupils should be taught to:

- 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.

### Technical Knowledge

Pupils should be taught to:

- 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.

### Evaluate

Pupils should be taught to:

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

### Make

Pupils should be taught to:

- 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.

### Cooking and Nutrition

Pupils should be taught to:

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

## KS2 National Curriculum

### Design

Pupils should be taught 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;
- generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.

### Make

Pupils should be taught to:

- 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

Pupils should be taught to:

- 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

Pupils should be taught to:

- 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




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




# STEETON PRIMARY SCHOOL DESIGN TECHNOLOGY OVERVIEW

YEAR A	KS1	LKS2	UKS2
SUMMER 1	Great Fire of London	Ancient Greece	Ancient Egyptians
Final Product			
SUMMER 2	TV Over Time	At the Movies	Thrilling Theatre
Final Product			

YEAR B	KS1	LKS2	UKS2
SUMMER 1	A United Effort 'What a load of rubbish.'	A United Effort 'Keen to be green.'	A United Effort 'What are clothes so cheap?'
Final Product			
SUMMER 2	Sport	Music	Magic
Final Product			

Year 6 Cooking and Nutrition	<ul style="list-style-type: none"> <li>• understand how to prepare and cook a savoury dish safely and hygienically</li> <li>• with support, use a heat source to cook ingredients showing awareness of the need to control the temperature</li> <li>• explain that a healthy diet is made up of a variety and balance of different food and drink</li> <li>• understand that to be active and healthy, nutritious food and drink are needed to provide energy for the body</li> <li>• prepare ingredients using a range of techniques using appropriate cooking utensils.</li> <li>• measure and weigh ingredients</li> <li>• start to independently follow a recipe</li> <li>• start to understand seasonality</li> </ul>
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# PROGRESSION OF SKILLS

 <b>DESIGN</b>		
KSI	LKS2	UKS2
<p>KSI Design and Technology National Curriculum:</p> <p>Children will be on the exploration and experimenting they did in EYFS, through a variety of creative and practical activities on Magic Mondays, pupils should be taught the knowledge, understanding and skills needed to engage in the process of designing.</p> <p>They should work in a range of relevant contexts.</p> <p>Children design purposeful, functional, appealing products for themselves and other users based on design criteria.</p> <p>They generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.</p> <p>Children can:</p> <ul style="list-style-type: none"> <li>• use their knowledge of existing products and their own experience to help generate their ideas</li> <li>• design products that have a purpose and are aimed at an intended user</li> <li>• explain how their products will look and work through talking and simple annotated drawings</li> <li>• design products or packaging using ipads</li> <li>• plan and test ideas using templates and mock-ups</li> <li>• understand and follow simple design criteria</li> <li>• work in a range of relevant contexts, for example imaginary, story-based, home, school and the wider environment.</li> </ul>	<p>KS2 Design and Technology National Curriculum:</p> <p>Children build on the design skills they learnt in KSI, through a variety of creative and practical activities on Magic Mondays, pupils should be taught the knowledge, understanding and skills needed to engage in the process of designing.</p> <p>They should work in a range of relevant contexts.</p> <p>Children 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.</p> <p>They generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes and where appropriate computer-aided design.</p> <p>Children can:</p> <ul style="list-style-type: none"> <li>• identify the design features of their products that will appeal to a target market</li> <li>• use their knowledge of a range of existing products to help generate their ideas</li> <li>• design innovative and appealing products that have a clear purpose and are aimed at a specific user</li> <li>• explain how particular parts of their products work</li> <li>• use annotated sketches and cross-sectional drawings to develop and communicate their ideas</li> <li>• when designing, explore different initial ideas before coming up with a final design</li> <li>• design products or packaging using ipads</li> <li>• when planning, start to explain their choice of materials and components including function and aesthetics</li> <li>• test ideas out through using prototypes</li> <li>• use applications on the ipad to develop and communicate their ideas</li> <li>• develop and follow simple design criteria</li> <li>• work in a broader range of relevant contexts, for example entertainment, the home, school, leisure, food industry and the wider environment</li> </ul>	<p>LS2 Design and Technology National Curriculum:</p> <p>Children will build on the design skills learnt in KSI and LKS2, through a variety of creative and practical activities on Magic Mondays, pupils should be taught the knowledge, understanding and skills needed to engage in the process of designing.</p> <p>They should work in a range of relevant contexts.</p> <p>Children 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.</p> <p>They generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes and where appropriate computer-aided design.</p> <p>Children can:</p> <ul style="list-style-type: none"> <li>• use research to inform and develop detailed design criteria to inform the design of innovative, functional and appealing products that are fit for purpose and aimed at a target market</li> <li>• use their knowledge of a broad range of existing products to help generate their ideas;</li> <li>• design products that have a clear purpose and indicate the design features of their products that will appeal to the intended user</li> <li>• explain how particular parts of their products work</li> <li>• use annotated sketches, cross-sectional drawings and exploded diagram to develop and communicate their ideas</li> <li>• explore a range of design ideas and clearly communicate final designs</li> <li>• design products or packaging using ipads</li> <li>• consider the availability and costings of resources when planning out designs</li> <li>• work in a broad range of relevant contexts, for example conservation, the home, school, leisure, culture, entertainment, enterprise, industry and the wider environment</li> </ul>

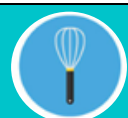
KSI	LKS2	UKS2
<p>KSI Design and Technology National Curriculum:</p> <p>Children will be on the exploration and experimenting they did in EYFS, through a variety of creative and practical activities on Magic Mondays, pupils should be taught the knowledge, understanding and skills needed to engage in the process of making.</p> <p>Children select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].</p> <p>They select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p> <p>Children can:</p> <p>Planning</p> <ul style="list-style-type: none"> <li>• with support, follow a simple plan or recipe</li> <li>• begin to select from a range of hand tools and equipment, such as scissors, graters, zesters, safe knives, juicer</li> <li>• select from a range of materials, textiles and components according to their characteristics</li> </ul> <p>Practical skills and techniques</p> <ul style="list-style-type: none"> <li>• learn to use hand tools and kitchen equipment safely and appropriately and learn to follow hygiene procedures</li> <li>• use a range of materials and components, including textiles and food ingredients</li> <li>• with help, measure and mark out</li> <li>• cut, shape and score materials with some accuracy</li> <li>• assemble, join and combine materials, components or ingredients</li> <li>• demonstrate how to cut, shape and join fabric to make a simple product</li> <li>• use a basic running stitch</li> <li>• cut, peel and grate ingredients, including measuring and weighing ingredients using measuring cups</li> <li>• begin to use simple finishing techniques to improve the appearance of their product, such as adding simple decorations</li> </ul>	<p>KS2 Design and Technology National Curriculum:</p> <p>Through a variety of creative and practical activities on Magic Mondays, pupils should be taught the knowledge, understanding and skills needed to engage in the process of making.</p> <p>Children select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] accurately.</p> <p>They 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.</p> <p>Children can:</p> <p>Planning</p> <ul style="list-style-type: none"> <li>• with growing confidence, carefully select from a range of tools and equipment, explaining their choices</li> <li>• select from a range of materials and components according to their functional properties and aesthetic qualities</li> <li>• place the main stages of making in a systematic order</li> </ul> <p>Practical skills and techniques</p> <ul style="list-style-type: none"> <li>• learn to use a range of tools and equipment safely, appropriately and accurately and learn to follow hygiene procedures</li> <li>• use a wider range of materials and components, including construction materials and kits, textiles and mechanical and electrical components</li> <li>• with growing independence, measure and mark out</li> <li>• cut, shape and score materials with some degree of accuracy</li> <li>• assemble, join and combine material and components with some degree of accuracy</li> <li>• demonstrate how to measure, cut, shape and join fabric with some accuracy to make a simple product</li> <li>• join textiles with a running stitch and back stitch technique</li> <li>• begin to select and use different and appropriate finishing techniques to improve the appearance of a product</li> </ul>	<p>KS2 Design and Technology National Curriculum:</p> <p>Through a variety of creative and practical activities on Magic Mondays, pupils should be taught the knowledge, understanding and skills needed to engage in the process of making.</p> <p>Children select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.</p> <p>They 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.</p> <p>Children can:</p> <p>Planning</p> <ul style="list-style-type: none"> <li>• independently plan by suggesting what to do next</li> <li>• with growing confidence, select from a wide range of tools and equipment, explaining their choices</li> <li>• select from a range of materials and components according to their functional properties and aesthetic qualities</li> <li>• create step-by-step plans as a guide to making</li> </ul> <p>Practical skills and techniques</p> <ul style="list-style-type: none"> <li>• learn to use a range of tools and equipment safely and appropriately and learn to follow hygiene procedures</li> <li>• independently take exact measurements and mark out</li> <li>• use a full range of materials and components, including construction materials and kits, textiles, and mechanical and electrical components</li> <li>• cut a range of materials with precision and accuracy</li> <li>• shape and score materials with precision and accuracy</li> <li>• assemble, join and combine materials and components with accuracy</li> <li>• demonstrate how to measure, make a seam allowance, tape, pin, cut, shape and join fabric with precision to make a more complex product;</li> <li>• join textiles using a greater variety of stitches, such as running stitch, backstitch and overcast stitch</li> <li>• refine the finish using techniques to improve the appearance of their product</li> </ul>





## TECHNICAL KNOWLEDGE

KSI	LKS2	UKS2
<p>KSI Design and Technology National Curriculum: Children build structures, exploring how they can be made stronger, stiffer and more stable. They explore and use mechanisms in their products. Children can:</p> <ul style="list-style-type: none"><li>• build simple structures, exploring how they can be made stronger, stiffer and more stable</li><li>• explore and create products using mechanisms, such as levers and sliders</li></ul>	<p>KS2 Design and Technology National Curriculum: Children apply their understanding of how to strengthen, stiffen and reinforce more complex structures. They understand and use mechanical systems in their products. Children can:</p> <ul style="list-style-type: none"><li>• understand that materials have both functional properties and aesthetic qualities</li><li>• apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products</li><li>• explain how mechanical systems such as levers create movement</li><li>• use mechanical systems in their products.</li></ul>	<p>KS2 Design and Technology National Curriculum: Children apply their understanding of how to strengthen, stiffen and reinforce more complex structures. They understand and use mechanical systems in their products. They understand and use electrical systems in their products They apply their understanding of computing to program, monitor and control their products. Children can:</p> <ul style="list-style-type: none"><li>• apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products</li><li>• make and represent simple electrical circuits, such as a series and parallel, and components to create functional products</li><li>• explain how mechanical systems such as sliders create movement</li><li>• apply their understanding of computing to program, monitor and control a product</li></ul>




## COOKING AND NUTRITION

KSI	LKS2	UKS2
<p>KSI Design and Technology National Curriculum: Children use the basic principles of a healthy and varied diet to prepare dishes. They understand where food comes from. Children can:</p> <ul style="list-style-type: none"><li>• explain where in the world different foods originate from</li><li>• understand that all food comes from plants or animals</li><li>• understand that food has to be farmed, grown elsewhere (e.g. home) or caught</li><li>• understand that everyone should eat at least five portions of fruit and vegetables every day and start to explain why</li></ul>	<p>KS2 Design and Technology National Curriculum: Children understand and apply the principles of a healthy and varied diet. They prepare and cook a savoury dish. They understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. Children can:</p> <ul style="list-style-type: none"><li>• understand how to prepare and cook a savoury dish safely and hygienically</li><li>• with support, use a heat source to cook ingredients showing awareness of the need to control the temperature</li><li>• explain that a healthy diet is made up of a variety and balance of different food and drink</li><li>• understand that to be active and healthy, nutritious food and drink are needed to provide energy for the body</li></ul>	<p>KS2 Design and Technology National Curriculum: Children understand and apply the principles of a healthy and varied diet. They prepare and cook a savoury dish. They understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. Children can:</p> <ul style="list-style-type: none"><li>• know, explain and give examples of food that is grown, reared, and caught in the UK, Europe and the wider world</li><li>• understand about seasonality, how this may affect the food availability</li><li>• understand that food is processed into ingredients that can be eaten or used in cooking</li><li>• demonstrate how to prepare and cook a savoury dish safely and hygienically</li></ul>



	<ul style="list-style-type: none"> <li>• prepare ingredients using a range of techniques using appropriate cooking utensils;</li> <li>• measure and weigh ingredients</li> <li>• start to independently follow a recipe</li> <li>• start to understand seasonality</li> </ul>	<ul style="list-style-type: none"> <li>• demonstrate how to use a range of cooking techniques using the appropriate utensils</li> <li>• measure and weight ingredients accurately</li> <li>• independently follow a recipe.</li> </ul>
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 <b>EVALUATE</b>		
KS1	LKS2	UKS2
<p>KS1 Design and Technology National Curriculum: Children explore and evaluate a range of existing products. They evaluate their ideas and products against design criteria in Magic Mondays.</p> <p>Children can:</p> <ul style="list-style-type: none"> <li>a explore and evaluate existing products mainly through discussions, comparisons and simple written evaluations;</li> <li>b explain positives and things to improve for existing products</li> <li>c explore what materials products are made from</li> <li>d talk about their design ideas and what they are making as they work, start to identify strengths and possible changes they might make to refine their existing design</li> <li>f evaluate their products and ideas against their simple design criteria</li> <li>g start to understand that the iterative process sometimes involves repeating different stages of the process</li> </ul>	<p>KS2 Design and Technology National Curriculum: Children investigate and analyse a range of existing products. They evaluate their ideas and products against their own design criteria and consider the views of others to improve their work in Magic Mondays.</p> <p>They understand how key events and individuals in design and technology have helped shape the world.</p> <p>Children can:</p> <ul style="list-style-type: none"> <li>• explore and evaluate existing products, explaining the purpose of the product and whether it is designed well to meet the intended purpose</li> <li>• explore what materials/ingredients products are made from and suggest reasons for this</li> <li>• consider their design criteria as they make progress and are willing to alter their plans, sometimes considering the views of others if this helps them to improve their product</li> <li>• evaluate their product against their original design criteria</li> <li>• evaluate the key events, including technological developments, and designs of individuals in design and technology that have helped shape the world</li> </ul>	<p>KS2 Design and Technology National Curriculum: Children investigate and analyse a range of existing products. They evaluate their ideas and products against their own design criteria and consider the views of others to improve their work in Magic Mondays.</p> <p>They understand how key events and individuals in design and technology have helped shape the world.</p> <p>Children can:</p> <ul style="list-style-type: none"> <li>• complete detailed competitor analysis of other products on the market</li> <li>• critically evaluate the quality of design, manufacture and fitness for purpose of products as they design and make</li> <li>• evaluate their ideas and products against the original design criteria, making changes as needed</li> </ul>