

**DT  
WHOLE SCHOOL  
OVERVIEW**

**Colton Primary School**



YEAR GROUP	AUTUMN TERM	SPRING TERM	SUMMER TERM
EYFS	<p><b><u>Ongoing throughout the year:</u></b></p> <ul style="list-style-type: none"> <li>• Box modelling</li> <li>• Construct with a purpose in mind</li> <li>• Exploring a range of materials</li> <li>• Sharing creations and the process of making them</li> </ul>		
Nursery	<p><b>TOPIC ALL ABOUT ME LET'S CELEBRATE</b></p>	<p><b>TOPIC LET'S JUMP INTO A BOOK DOWN ON THE FARM</b></p>	<p><b>TOPIC MINIBEASTS A TRIP ON A MAGIC CARPET</b></p>
	<p><u>Textiles and materials</u> To explore junk modelling.</p> <p><u>Food and Nutrition</u> To make a celebration food</p>	<p><u>Textiles and materials</u> To explore different materials and how they feel.</p> <p><u>Food and Nutrition</u> To bake apple crumble. Fruit salads – healthy eating.</p>	<p><u>Textiles and materials</u> To choose materials for a specific purpose. To build structures from around the world (For example, the Eiffel Tower or Big Ben).</p>
Reception	<p><b>TOPIC SEASON/CELEBRATIONS ALL ABOUT ME FAMILIES</b></p>	<p><b>TOPIC STORIES FROM AROUND THE WORLD GROWTH AND SESAONS</b></p>	<p><b>TOPIC KINGS AND QUEENS RAINFOREST EXPLORERS</b></p>
	<p><u>Textiles/Materials</u> To explore using a range of materials to build structures.</p> <p>To explore the texture of materials.</p>	<p><u>Textiles/Materials</u> To explore a range of building materials, considering the most appropriate materials for a task. To learn how to weave paper using a traditional weaving technique.</p> <p><u>Food and Nutrition</u> Making porridge – Ghanaian Goldilocks</p>	<p><u>Textiles/Materials</u> To explore the texture of materials, choosing appropriate materials for planned creation. To use knowledge of materials to create a perfect sun hat/ swimming costume.</p> <p><u>Food and Nutrition</u> Fruit salad – fruits from the rainforest</p>

**Key  
Stage  
1**

**Subject content:**

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 [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.

**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:**

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

<b>1</b>	<b>TOPIC</b> <b>Storm resistant dens</b> Follows on from weather presenters & links to English text 'Three Little Pigs'.	<b>TOPIC</b> <b>WHAT'S IN THE UK?</b>	<b>TOPIC</b> <b>THERE'S NO PLACE LIKE HOME</b>
	Children are to plan, design and explore making a storm-resistant den. To look at different structures to find out what shapes are most effective. Test out different materials in terms of strength and weather resistant. To make the dens and then evaluate.	Look at traditional food from the 4 countries in the UK. England, Ireland, Scotland, Wales. Make and re-create own dish by Year 1. Try foods and give opinions. Children to learn about healthy foods and a balanced plate. Also to teach children about the importance of hygiene when working with food and beginning to use different kitchen equipment safely.	Children to plan, design, make and evaluate a product for our outdoor area that serves a purpose. It could be a windchime for the outdoor area or a bird feeding station to encourage more wildlife.
	<b>KEY OBJECTIVES</b> <b>Design</b> <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 models using simple computing software;</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> <b>Make</b> <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> <b>Practical skills and techniques</b> <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>• manipulate fabrics in simple ways to create the desired effect;</li> <li>• use a basic running stitch;</li> </ul>		

- cut, peel and grate ingredients, including measuring and weighing ingredients using measuring cups;
- begin to use simple finishing techniques to improve the appearance of their product, such as adding simple decorations.

#### **Evaluate**

- explore and evaluate existing products mainly through discussions, comparisons and simple written evaluations;
- explain positives and things to improve for existing products;
- explore what materials products are made from;
- 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;
- evaluate their products and ideas against their simple design criteria;
- start to understand that the iterative process sometimes involves repeating different stages of the process.

#### **Technical knowledge**

- build simple structures, exploring how they can be made stronger, stiffer and more stable;
- talk about and start to understand the simple working characteristics of materials and components;
- explore and create products using mechanisms, such as levers, sliders and wheels.

#### **Cooking and nutrition**

- explain where in the world different foods originate from;
- understand that all food comes from plants or animals;
- understand that food has to be farmed, grown elsewhere (e.g. home) or caught;
- name and sort foods into the five groups in the Eatwell Guide;
- understand that everyone should eat at least five portions of fruit and vegetables every day and start to explain why;
- use what they know about the Eatwell Guide to design and prepare dishes.

Year 2				
2	<b>Autumn 1 TOPIC LONDON'S BURNING</b>	<b>Spring 2 TOPIC "OH I DO LIKE TO BE BESIDE THE SEASIDE"</b>	<b>Summer 1 TOPIC WHO LIVED IN A CASTLE?</b>	
	Children to plan, design make and evaluate houses from Pudding Lane. Children will become architects and look at the structure, design and materials of Tudor houses – giving them an understanding of why they easily caught alite during the Great Fire of London. The unit will conclude with the fire service coming in to help put out Y2's Fire.	Children to explore a range of kites – focusing on the shapes and materials used. Using this knowledge children need to plan their own design. Once materials have been listed children need to discuss and be taught how to fix materials together to be more durable. They will evaluate their kite by testing out on a windy day!	Children to investigate medieval weapons and catapults then build their own and evaluate. Children to be shown how to use different tools, such as a saw and hammer and how to combine materials. Also focus on the different types of levers.	
	<p><b>KEY OBJECTIVES</b></p> <p><b>Design</b></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 models using simple computing software;</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><b>Make</b></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><b>Practical skills and techniques</b></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>• manipulate fabrics in simple ways to create the desired effect;</li> </ul>			

- use a basic running stitch;
- cut, peel and grate ingredients, including measuring and weighing ingredients using measuring cups;
- begin to use simple finishing techniques to improve the appearance of their product, such as adding simple decorations.

#### **Evaluate**

- explore and evaluate existing products mainly through discussions, comparisons and simple written evaluations;
- explain positives and things to improve for existing products;
- explore what materials products are made from;
- 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;
- evaluate their products and ideas against their simple design criteria;
- start to understand that the iterative process sometimes involves repeating different stages of the process.

#### **Technical knowledge**

- build simple structures, exploring how they can be made stronger, stiffer and more stable;
- talk about and start to understand the simple working characteristics of materials and components;
- explore and create products using mechanisms, such as levers, sliders and wheels.

#### **Cooking and nutrition**

- explain where in the world different foods originate from;
- understand that all food comes from plants or animals;
- understand that food has to be farmed, grown elsewhere (e.g. home) or caught;
- name and sort foods into the five groups in the Eatwell Guide;
- understand that everyone should eat at least five portions of fruit and vegetables every day and start to explain why;
- use what they know about the Eatwell Guide to design and prepare dishes.

## Key Stage 2

### **Subject content:**

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 [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.

#### **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:**

- 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.

**YEAR 3**

<b>3</b>	<b>Autumn 2 TOPIC</b> <b>KRISPY KREME FOR OR AGAINST?</b>	<b>Spring 1 TOPIC</b> <b>WHY DID THE EGYPTIANS BUILD PYRAMIDS?</b>	<b>Spring 2 TOPIC</b> <b>THERE'S NOWT LIKE A PROPER BREW</b>
	To explore the range of shops at Thorpe Park. To look at the layout of shops with a focus on the consumer. Once children have researched different shops they will move onto designing their own shop/business for Thorpe Park on computer software (CAD software)	Look at the construction of ancient pyramids. Children to build out of lego and different materials. How were the bricks stacked and how did they create they pyramid shape? Children will focus on how the stones were moved – desiging and creating their own system for transporting or a pulley system for lifting.	Children to taste different foods and focus on traditionally Yorkshire foods/ meals. They will recreate their own traditional dishes to be served in their own café/restaurant ensuring that they follow key hygiene and safety rules.
<p><b>KEY OBJECTIVES</b></p> <p><b>Design</b></p> <ul style="list-style-type: none"> <li>• identify the design features of their products that will appeal to intended customers;</li> <li>• use their knowledge of a broad 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>• 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 computer-aided design to develop and communicate their ideas (see note on p. 1);</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><b>Make</b></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><b>Practical skills and techniques</b></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 to the nearest cm and millimetre;</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> </ul>			



- demonstrate how to measure, cut, shape and join fabric with some accuracy to make a simple product;
- join textiles with an appropriate sewing technique;
- begin to select and use different and appropriate finishing techniques to improve the appearance of a product such as hemming, tie-dye, fabric paints and digital graphics.

#### **Evaluate**

- explore and evaluate existing products, explaining the purpose of the product and whether it is designed well to meet the intended purpose;
- explore what materials/ingredients products are made from and suggest reasons for this;
- 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;
- evaluate their product against their original design criteria;
- evaluate the key events, including technological developments, and designs of individuals in design and technology that have helped shape the world.

#### **Technical Knowledge**

- understand that materials have both functional properties and aesthetic qualities;
- apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products;
- understand and demonstrate how mechanical and electrical systems have an input and output process;
- make and represent simple electrical circuits, such as a series and parallel, and components to create functional products;
- explain how mechanical systems such as levers and linkages create movement;
- use mechanical systems in their products.

#### **Cooking and nutrition**

- start to know when, where and how food is grown (such as herbs, tomatoes and strawberries) in the UK, Europe and the wider world;
- understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically;
- with support, use a heat source to cook ingredients showing awareness of the need to control the temperature of the hob and/or oven;
- use a range of techniques such as mashing, whisking, crushing, grating, cutting, kneading and baking;
- explain that a healthy diet is made up of a variety and balance of different food and drink, as represented in the Eatwell Guide and be able to apply these principles when planning and cooking dishes;
- understand that to be active and healthy, nutritious food and drink are needed to provide energy for the body;
- prepare ingredients using appropriate cooking utensils;
- measure and weigh ingredients to the nearest gram and millilitre;
- start to independently follow a recipe;
- start to understand seasonality.

**YEAR 4**

<b>4</b>	<b>Spring 1 TOPIC</b> <b>LIFE AS A ROMAN</b>	<b>Spring 2 TOPIC</b> <b>OU HABITE TU? J’HABITE A LILLE</b>	<b>Summer 2 TOPIC</b> <b>LOIDIS</b>
	Children to look at Roman chariots and the purpose of these to link with the history learning. From looking at pictures children will develop their understanding of how the chariots were constructed with a focus on wheels and axels. Children will learn to use different tools (haxsaw) safely. From using their knowledge children will design and create their own chariot.	Children will look and taste traditional food/meals from France compared to traditional meals we may have at home. Link to to what food is grown in different countries and seasonal foods. Children to build on their previous learning of a balanced diet and be able to say more specifically why different foods are important. To use relevant tools safely and cooking techniques to create their own dish.	Children to look at pictures and sources of what medieval houses were like and how they were constructed. Children to use techniques (such as wattle and daub and branch weaving). From using their knowledge they will create their own model medieval house.
<p><b>KEY OBJECTIVES</b></p> <p><b>Design</b></p> <ul style="list-style-type: none"> <li>• identify the design features of their products that will appeal to intended customers;</li> <li>• use their knowledge of a broad 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>• 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 computer-aided design to develop and communicate their ideas (see note on p. 1);</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><b>Make</b></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><b>Practical skills and techniques</b></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 to the nearest cm and millimetre;</li> <li>• cut, shape and score materials with some degree of accuracy;</li> </ul>			

- assemble, join and combine material and components with some degree of accuracy;
- demonstrate how to measure, cut, shape and join fabric with some accuracy to make a simple product;
- join textiles with an appropriate sewing technique;
- begin to select and use different and appropriate finishing techniques to improve the appearance of a product such as hemming, tie-dye, fabric paints and digital graphics.

#### **Evaluate**

- explore and evaluate existing products, explaining the purpose of the product and whether it is designed well to meet the intended purpose;
- explore what materials/ingredients products are made from and suggest reasons for this;
- 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;
- evaluate their product against their original design criteria;
- evaluate the key events, including technological developments, and designs of individuals in design and technology that have helped shape the world.

#### **Technical Knowledge**

- understand that materials have both functional properties and aesthetic qualities;
- apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products;
- understand and demonstrate how mechanical and electrical systems have an input and output process;
- make and represent simple electrical circuits, such as a series and parallel, and components to create functional products;
- explain how mechanical systems such as levers and linkages create movement;
- use mechanical systems in their products.

#### **Cooking and nutrition**

- start to know when, where and how food is grown (such as herbs, tomatoes and strawberries) in the UK, Europe and the wider world;
- understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically;
- with support, use a heat source to cook ingredients showing awareness of the need to control the temperature of the hob and/or oven;
- use a range of techniques such as mashing, whisking, crushing, grating, cutting, kneading and baking;
- explain that a healthy diet is made up of a variety and balance of different food and drink, as represented in the Eatwell Guide and be able to apply these principles when planning and cooking dishes;
- understand that to be active and healthy, nutritious food and drink are needed to provide energy for the body;
- prepare ingredients using appropriate cooking utensils;
- measure and weigh ingredients to the nearest gram and millilitre;
- start to independently follow a recipe;
- start to understand seasonality.

**YEAR 5**

**5**

**AUTUMN 1 TOPIC  
THE VIKING WHO CAME TO TEA**

From looking at different sources children will develop their knowledge of a Viking's diet and make comparisons with our own diets. To focus on a balanced plate and the foods Vikings would have had at the time. Children to design and make two meals from different time periods. To continue to develop skills using equipment and cooking techniques.

**AUTUMN 2 TOPIC  
THE WRATH OF THE NORSEMEN**

Pupils will design and create a traditional style canoe, emulating primitive technologies from around the world. They use research to inform the design of a product, recording their ideas appropriately, then select appropriate materials and tools to build their design, and making modifications in response to problems they encounter. Finally they test and evaluate the product against their initial criteria. The children will also look at Viking Sails and investigate and explore what makes a good sail.

**Summer 2 TOPIC  
COLTON SCAVENGER HUNTERS**

Children to explore a range of rucksacks – evaluating against a ticklist. Discuss the different elements of the rucksack and its functionality. Children to design own Rucksack and begin to learn some of the techniques of construction. Could use ICT software for finished design and pitch to a brand (like Regatta) why their Rucksack should be sold in shops.

**KEY OBJECTIVES**

**Design**

- 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;
- use their knowledge of a broad range of existing products to help generate their ideas;
- design products that have a clear purpose and indicate the design features of their products that will appeal to the intended user;
- explain how particular parts of their products work;
- use annotated sketches, cross-sectional drawings and exploded diagrams (possibly including computer-aided design) to develop and communicate their ideas;
- generate a range of design ideas and clearly communicate final designs;
- consider the availability and costings of resources when planning out designs;
- work in a broad range of relevant contexts, for example conservation, the home, school, leisure, culture, enterprise, industry and the wider environment.

**Make**

- independently plan by suggesting what to do next;
- with growing confidence, select from a wide range of tools and equipment, explaining their choices;
- select from a range of materials and components according to their functional properties and aesthetic qualities;
- create step-by-step plans as a guide to making;

**Practical skills and techniques**

- learn to use a range of tools and equipment safely and appropriately and learn to follow hygiene procedures;

- independently take exact measurements and mark out, to within 1 millimetre;
- use a full range of materials and components, including construction materials and kits, textiles, and mechanical components;
- cut a range of materials with precision and accuracy;
- shape and score materials with precision and accuracy;
- assemble, join and combine materials and components with accuracy;
- demonstrate how to measure, make a seam allowance, tape, pin, cut, shape and join fabric with precision to make a more complex product;
- join textiles using a greater variety of stitches, such as backstitch, whip stitch, blanket stitch;
- refine the finish using techniques to improve the appearance of their product, such as sanding or a more precise scissor cut after roughly cutting out a shape.

#### **Evaluate**

- complete detailed competitor analysis of other products on the market;
- critically evaluate the quality of design, manufacture and fitness for purpose of products as they design and make;
- evaluate their ideas and products against the original design criteria, making changes as needed.

#### **Technical knowledge**

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products;
- understand and demonstrate that mechanical and electrical systems have an input, process and output;
- explain how mechanical systems, such as cams, create movement and use mechanical systems in their products;
- apply their understanding of computing to program, monitor and control a product.

#### **Cooking and nutrition**

- know, explain and give examples of food that is grown (such as pears, wheat and potatoes), reared (such as poultry and cattle) and caught (such as fish) in the UK, Europe and the wider world;
- understand about seasonality, how this may affect the food availability and plan recipes according to seasonality;
- understand that food is processed into ingredients that can be eaten or used in cooking;
- demonstrate how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source;
- demonstrate how to use a range of cooking techniques, such as griddling, grilling, frying and boiling;
- explain that foods contain different substances, such as protein, that are needed for health and be able to apply these principles when planning and preparing dishes;
- adapt and refine recipes by adding or substituting one or more ingredients to change the appearance, taste, texture and aroma;
- alter methods, cooking times and/or temperatures;
- measure accurately and calculate ratios of ingredients to scale up or down from a recipe;
- independently follow a recipe.

**YEAR 6**

<b>6</b>	<b>Spring 2 TOPIC</b> <b>#BEST PLACE FOR A SELFIE</b>	<b>SUMMER 1 TOPIC</b> <b>SO YOU THINK YOU'VE GOT IT BAD?</b>	<b>SUMMER 2 TOPIC</b> <b>RACE AROUND THE UK</b>
	<p>To focus on inventions throughout different time periods. Look at more contemporary inventions and the rise of their popularity – like the ‘selfie stick’. Can the children invent something to serve a purpose/solve a problem. Thoughtshower as a class challenges we face in our everyday life. To then design an invention to solve a problem.</p>	<p>To look at a range of photographs and sources to show children how clothing has changed through the years – from style, differences in gender and materials used. Briefly explore present day fashion and the impact of this on the world today. Children to use this knowledge to design and make their own clothing range as a class. To look at reusing old clothes and develop sewing skills.</p>	<p>Children to explore a range of dishes from different parts of the UK and focus on how nutritional the food is. Explore different foods grown in the UK during different seasons. Using their knowledge, children will create their own Year 6 recipe book of some of their favourite dishes. Children can take part in a masterchef challenge – judged by the headteacher!</p>
<p><b>KEY OBJECTIVES</b></p> <p><b>Design</b></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 diagrams (possibly including computer-aided design) to develop and communicate their ideas;</li> <li>• generate a range of design ideas and clearly communicate final designs;</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, enterprise, industry and the wider environment.</li> </ul> <p><b>Make</b></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><b>Practical skills and techniques</b></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, to within 1 millimetre;</li> <li>• use a full range of materials and components, including construction materials and kits, textiles, and mechanical components;</li> <li>• cut a range of materials with precision and accuracy;</li> <li>• shape and score materials with precision and accuracy;</li> </ul>			

- assemble, join and combine materials and components with accuracy;
- demonstrate how to measure, make a seam allowance, tape, pin, cut, shape and join fabric with precision to make a more complex product;
- join textiles using a greater variety of stitches, such as backstitch, whip stitch, blanket stitch;
- refine the finish using techniques to improve the appearance of their product, such as sanding or a more precise scissor cut after roughly cutting out a shape.

#### **Evaluate**

- complete detailed competitor analysis of other products on the market;
- critically evaluate the quality of design, manufacture and fitness for purpose of products as they design and make;
- evaluate their ideas and products against the original design criteria, making changes as needed.

#### **Technical knowledge**

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products;
- understand and demonstrate that mechanical and electrical systems have an input, process and output;
- explain how mechanical systems, such as cams, create movement and use mechanical systems in their products;
- apply their understanding of computing to program, monitor and control a product.

#### **Cooking and nutrition**

- know, explain and give examples of food that is grown (such as pears, wheat and potatoes), reared (such as poultry and cattle) and caught (such as fish) in the UK, Europe and the wider world;
- understand about seasonality, how this may affect the food availability and plan recipes according to seasonality;
- understand that food is processed into ingredients that can be eaten or used in cooking;
- demonstrate how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source;
- demonstrate how to use a range of cooking techniques, such as griddling, grilling, frying and boiling;
- explain that foods contain different substances, such as protein, that are needed for health and be able to apply these principles when planning and preparing dishes;
- adapt and refine recipes by adding or substituting one or more ingredients to change the appearance, taste, texture and aroma;
- alter methods, cooking times and/or temperatures;
- measure accurately and calculate ratios of ingredients to scale up or down from a recipe;
- independently follow a recipe.