



# The DT Curriculum

## Year 3

## National Curriculum Objectives

### 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 [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.

### Key stage 2

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [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.

## **4 Cooking and nutrition**

As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.

Pupils should be taught to:

### **Key stage 1**

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

### **Key stage 2**

- 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

Year 3		Autumn 1 – Woodcraft (Mark Making Tools)	
National Curriculum			
<b>National Curriculum objectives:</b> <ul style="list-style-type: none"><li>• 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 group.</li><li>• Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</li><li>• Understand and use mechanical systems in their products, for example, gears, pulleys, cams, levers and linkage.</li></ul>			
Cross-Curricular Links:			
<ul style="list-style-type: none"><li>• <b>Maths:</b> Measure and compare lengths</li></ul>			
Prior Learning		Future Learning	
<b>EYFS</b>  <b>Year 2</b> <ul style="list-style-type: none"><li>• know the purpose of a structure.</li><li>• know wood can be changed in different ways.</li><li>• know how to spilt wood into small fractions.</li><li>• know some wood can be flexible and some wood can be rigid.</li></ul>		<b>Year 5</b> <ul style="list-style-type: none"><li>• Know a drill is a machine with a rotating cutting tip used for making holes.</li><li>• Know a crook knife is a woodworking knife with a curved end.</li><li>• Know that the fore hand grip can be used to remove any sharp bits from the wood.</li><li>• Know how to use a tape measure to measure in centimeters.</li><li>• Know where to place the legs to make the stool secure.</li><li>• Know how to safely use tools such as knife and drill.</li></ul>	
Design	Make	Evaluate	Technical Knowledge
<ul style="list-style-type: none"><li>• Generate realistic ideas and design criteria collaboratively through discussion, focusing on the needs of the user and the functional and aesthetic purposes of the product.</li><li>• Develop ideas through the analysis of existing mark making tools</li></ul>	<ul style="list-style-type: none"><li>• Plan the order of the main stages of making.</li><li>• Select and use appropriate tools and software to measure, mark out, cut, score, shape and assemble with some accuracy.</li><li>• Explain their choice of materials according to functional</li><li>• properties and aesthetic qualities.</li></ul>	<ul style="list-style-type: none"><li>• Investigate and evaluate a range of mark making including the materials, components and techniques that have been used.</li><li>• Test and evaluate their own products against design criteria and the intended user and purpose.</li></ul>	<ul style="list-style-type: none"><li>• Develop and use knowledge of how to construct strong, stiff products.</li><li>• Know and use technical vocabulary relevant to the project.</li></ul>
Substantive Knowledge Acquired in the Unit			
<ul style="list-style-type: none"><li>• Know how to change the thickness of a stick.</li><li>• Know how to change the shape of a stick.</li><li>• Know how to use a knife safely to create a point on the end of a stick.</li><li>• Know what a fore hand grip is.</li></ul>			
Disciplinary Knowledge Acquired in the Unit			
<b>Marking out and cutting</b> <ul style="list-style-type: none"><li>• Work safely with a range of hand tools</li></ul> <b>Fixing and joining</b> <ul style="list-style-type: none"><li>• Extend understanding of ways of fixing and joining components and selecting most appropriate for a given task</li></ul> <b>Finishing</b>			

- Know about and apply different finishing techniques- **cut out shapes**

## Key Skills Acquired in the Unit

- Follow instructions to cut and assemble a product.
- Create a point or shape on the end of a stick.
- Design a set of mark making tools.
- Follow a design criteria to create a product.
- Evaluate own products and make suggestions on improvements.

## Misconceptions

Some children may think:

- Knives are only used to cut things.
- An object that is thick cannot be cut.
- Any tools can be used for any materials.
- That you must have two people always to cut materials.
- Wood always gets shorter when it's cut.

## By the end of this unit pupils will:

- Confidently use a forehand grip to explore different ways to cut wood.
- Change the thickness and shape of wood using different tools.
- Create a design following a criteria set for an audience.
- Evaluate the product against a criteria.

## Medium Term Planning

	Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5
Retrieval	<p><b>Flashback 4</b> Which word best describes something that doesn't break easily. (Weak, <b>strong</b>, smooth, rough) <b>Question 2:</b> Which word best describes something that does break easily? (<b>Weak</b>, strong, smooth, rigid) <b>Question 3:</b> Which tool can you see in the picture? (Scissors, <b>peeler</b>, stapler, ruler) <b>Question 4:</b> Which tool is being used in the picture to measure? Scissors, peeler, stapler, <b>ruler</b>)</p>	<p><b>Flashback 4</b> <b>Question 1:</b> Which tool would you use to cut this piece of wood in the picture? <b>Loppers</b>, secateurs, children's scissors, knife) <b>Question 2:</b> Which tool would you use to cut this piece of wood in the picture? Loppers, <b>secateurs</b>, children's scissors, knife) <b>Question 3:</b> Look at the picture. Which words would you use to describe this piece of wood? (Rigid, <b>weak</b>, <b>flexible</b>, strong) <b>Question 4:</b> Look at the picture. Which words would you use to describe this piece of wood? (<b>Rigid</b>, weak, flexible, <b>strong</b>)</p>	<p><b>Flashback 4</b> <b>Question 1:</b> Which word is used to describe when we put something together? (Structure, rigid, manipulate, <b>assemble</b>) <b>Question 2:</b> Which word is used to describe when a material is changed? Structure, rigid, <b>manipulate</b>, assemble) <b>Question 3:</b> Which technique is being used in the picture to manipulate the wood? (peeling, <b>whittling</b>, cutting, chopping) <b>Question 4:</b> Which technique is being used in the picture to manipulate the wood? (<b>peeling</b>, whittling, cutting, chopping)</p>	<p><b>Flashback 4</b> <b>Question 1:</b> What should you do before making a product to see what an idea will look like? (<b>Design</b>, label, manipulate, assemble) <b>Question 2:</b> Which word is used to describe when suggestions are made to improve a product? (assemble, annotate, design, <b>evaluate</b>) <b>Question 3:</b> Which technique is being used in the picture to manipulate the wood? (peeling, <b>whittling</b>, cutting, chopping) <b>Question 4:</b> Which technique is being used in the picture to manipulate the wood?</p>	<p><b>Flashback 4</b> <b>Question 1:</b> When designing and creating a product, what should you always consider? (<b>Tools</b>, materials, audience, <b>safety</b>) <b>Question 2:</b> Which word is used to describe when you want to make a product better? (Design, annotate, <b>improve</b>, assemble) <b>Question 3:</b> Which word is used to describe when we put something together? (Structure, rigid, manipulate, <b>assemble</b>) <b>Question 4:</b> Which word is used to describe when a material is changed? Structure, rigid, <b>manipulate</b>, assemble)</p>

				(peeling, whittling, cutting, chopping)	
Learning Objective:	To explore different ways to cut wood.	To explore ways to change the thickness and shape of a stick.	To design a set of mark making tools.	To make a mark making tool.	To evaluate a set of mark making tools.
Key vocabulary	<b>Tier 2</b> <ul style="list-style-type: none"> <li>Manipulate</li> <li>Peeling</li> <li>Whittling</li> </ul> <b>Tier 3</b> <ul style="list-style-type: none"> <li>Forehand grip</li> <li>Peeler</li> <li>Loppers</li> <li>Secateurs</li> </ul>	<b>Tier 2</b> <ul style="list-style-type: none"> <li>Manipulate</li> <li>Peeling</li> <li>Whittling</li> </ul> <b>Tier 3</b> <ul style="list-style-type: none"> <li>Forehand grip</li> <li>Peeler</li> <li>Loppers</li> <li>Secateurs</li> </ul>	<b>Tier 2</b> <ul style="list-style-type: none"> <li>Design</li> <li>Audience</li> <li>Criteria</li> <li>Annotate</li> </ul> <b>Tier 3</b> <ul style="list-style-type: none"> <li>Peeler</li> <li>Loppers</li> <li>Secateurs</li> <li>Mark making</li> </ul>	<b>Tier 2</b> <ul style="list-style-type: none"> <li>Manipulate</li> <li>Audience</li> <li>Peeling</li> <li>Whittling</li> </ul> <b>Tier 3</b> <ul style="list-style-type: none"> <li>Forehand grip</li> <li>Peeler</li> <li>Loppers</li> <li>Secateurs</li> <li>Mark making</li> </ul>	<b>Tier 2</b> <ul style="list-style-type: none"> <li>Evaluate</li> <li>Audience</li> <li>Purpose</li> <li>Improve</li> </ul> <b>Tier 3</b> <ul style="list-style-type: none"> <li>Forehand grip</li> <li>Peeler</li> <li>Loppers</li> <li>Secateurs</li> <li>Mark making</li> </ul>
Possible outcome	Children will use a range of tools (loppers, secateurs, and knife) to explore cutting wood in different ways.	Children will use a range of tools (loppers, secateurs and knife) to explore cutting wood into different thicknesses and shapes.	Children will draw and annotate mark making tools. This should be for the purpose of children aged in reception. Children explain their choice of design.	Children will use a range of tools (loppers, secateurs and knife) to create their mark making tools.	Children will evaluate the purpose of their mark making tools. Has the product met the design brief and does it meet the need of the target audience?

Year 3	Spring 1 – Digital World (Electronic Charm)
National Curriculum	
<u>National Curriculum objectives</u> <ul style="list-style-type: none"> <li>Investigate and analyse a range of existing products</li> <li>Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</li> <li>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</li> <li>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> <li>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</li> </ul>	
Cross-Curricular Links:	
<ul style="list-style-type: none"> <li><b>Computing:</b> Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into small parts.</li> </ul>	

<ul style="list-style-type: none"> <li><b>Computing:</b> Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals.</li> </ul>			
Prior Learning		Future Learning	
Year 2 <ul style="list-style-type: none"> <li>Know that a program needs to be started</li> <li>Know how to change the outcome of a sequence of commands</li> <li>Know which blocks to use to meet the design</li> <li>Know how to build the sequences of blocks I need</li> <li>Know how to create a program based on a design</li> <li>Know how to create an algorithm</li> <li>Know how to build sequences of blocks to match my design</li> <li>Know how to compare my project to my design</li> <li>Know how to debug</li> </ul>		Year 6 <ul style="list-style-type: none"> <li>Know that 'form' means the shape and appearance of an object.</li> <li>Know that 'fit for purpose' means that a product works how it should and is easy to use.</li> <li>Know the importance of 'form follows function' when designing: the product must be designed primarily with the function in mind.</li> <li>Know the difference between 'form' and 'function'.</li> <li>Know that 'form over purpose' means that a product looks good but does not work very well.</li> <li>Know the diagram perspectives 'top view', 'side view' and 'back'.</li> </ul>	
Design	Make	Evaluate	Technical Knowledge
<ul style="list-style-type: none"> <li>Problem solving by suggesting potential features on a Micro: bit and justifying my ideas.</li> <li>Developing design ideas for a technology pouch.</li> <li>Drawing and manipulating 2D shapes, using computer-aided design, to produce a point of sale badge.</li> </ul>	<ul style="list-style-type: none"> <li>Using a template when cutting and assembling the pouch.</li> <li>Following a list of design requirements.</li> <li>Selecting and using the appropriate tools and equipment for cutting, joining, shaping and decorating a foam pouch.</li> <li>Applying functional features such as using foam to create soft buttons.</li> <li>Writing a program to control (button press) and/or monitor (sense light) that will initiate a flashing LED algorithm.</li> </ul>	<ul style="list-style-type: none"> <li>Analysing and evaluating an existing product.</li> <li>Identifying the key features of a pouch.</li> </ul>	<ul style="list-style-type: none"> <li>To understand that, in programming, a 'loop' is code that repeats something again and again until stopped.</li> <li>To know that a Micro:bit is a pocket-sized, codeable computer.</li> </ul>
Substantive Knowledge Acquired in the Unit			
<ul style="list-style-type: none"> <li>Know that in programming a 'loop' is code that repeats something again and again until stopped.</li> <li>Know that a Micro:bit is a pocket-sized, codeable computer.</li> <li>Know how to write a program to control (button press) and/or monitor (sense light) that will initiate a flashing LED algorithm.</li> </ul>			
Disciplinary Knowledge Acquired in the Unit			
<b>Mechanisms and control</b> <ul style="list-style-type: none"> <li>Create and write a program to control and/or monitor that will initiate an algorithm.</li> </ul>			
Key Skills Acquired in the Unit			
<ul style="list-style-type: none"> <li>Problem solve by suggesting potential features of a Micro:bit.</li> <li>Developing design ideas for a technology pouch.</li> <li>Drawing and manipulating 2D shapes, using computer-aided design, to produce a product.</li> </ul>			

- Using a template when cutting and assembling the pouch.
- Applying functional features such as using foam to create soft buttons.
- Following a list of design requirements.
- Developing design ideas for a technology pouch.
- Analysing and evaluating an existing product.
- Drawing and manipulating 2D shapes, using computer-aided design, to produce a point of sale badge.
- Identifying the key features of a pouch.
- Selecting and using the appropriate tools and equipment for cutting, joining, shaping and decorating a foam pouch.

## Misconceptions

Some children may think:

- Electronics such as tablets, phones have always been around and the same as they were 10-20 years ago.
- That each time the micro bit flashes it needs a new program.
- A program and algorithm are the same thing.
- To repeat the program, you must keep restarting the program.
- The pouch they create can be of any size.

## By the end of this unit pupils will:

- Give a brief explanation of the digital revolution and/or remember key examples.
- Suggest a feature from the Micro:bit that is suitable for an eCharm.
- Write a program that initiates a flashing LED panel, or another pattern, on the Micro:bit when a button is pressed.
- Identify errors, if testing is unsuccessful, by comparing their code to a correct example.
- Explain the basic functionality of their finished program.
- Suggest key features for a pouch, with some consideration for the overall theme and the user.
- Use a template when cutting and assembling a pouch, with some support.
- Describe what is meant by 'point of sale display' with an example.
- Follow basic design requirements using computer-aided design, drawing at least one shape with a text box and bright colours, following a demonstration.
- Evaluate their design.

## Medium Term Planning

	Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5
Retrieval	<b>Flashback 4</b> <b>Question 1: 'To detect and remove errors in a program' What is this describing?</b> Sequence, <b>debug</b> , program, design <b>Question 2: 'A process or set of rules that need to be followed, especially by a computer' What is this describing? Algorithm,</b> sequence, debug, programming	<b>Flashback 4</b> <b>Question 1: What is an algorithm?</b> <b>Question 2: What is a command?</b> <b>Question 3: What are the small pieces of program that can be stuck together in a sequence called?</b> <b>Question 4: How do you start a program running in Scratch Junior?</b>	<b>Flashback 4</b> <b>Question 1: Name on piece of technology that has developed over time.</b> <b>Question 2: What you call the advancement of technology over time?</b> Iron age, industrial revolution, 21 <sup>st</sup> century, <b>digital revolution</b> <b>Question 3: What will you program your micro:bit to create? A LED flashing light, a digital message, a picture of a love heart, a beeping sound</b>	<b>Flashback 4</b> <b>Question 1: Complete the sentence 'Smart wearables are items that...' can tell the time, can turn on and off, have computer-processing capabilities, have a mind of its own.</b> <b>Question 2: What is a 'loop' in programming?</b> A code that counts down, <b>code that repeats itself again and again until stopped</b> , code that draws	<b>Flashback 4</b> <b>Question 1: What does CAD stand for?</b> Computer and design, <b>computer aided design</b> , company and drawing, computer aided drawing <b>Question 2: What is a list of design criteria? A list of points that outline the intended purpose, a list of materials used, how you will make your product, a range of people that will use your product</b>

	<p><b>Question 3: ‘A connected series in the right order’ What is this describing?</b> Program, design, <b>sequence</b>, evaluation</p> <p><b>Question 4: ‘A plan to show the function and look of a product’ What is this describing?</b> Evaluation, program, debug, <b>design</b></p>		<p><b>Question 4: What features of the micro:bit is needed to make our echarm?</b></p>	<p>a circle, code that creates endless lists.</p> <p><b>Question 3: What product function can we use to create a loop? Flashing light when button pressed</b>, a string of letters on the screen, clear LED panel, sensor controlled on and off light.</p> <p><b>Question 4: A template is...</b> a sheet of paper, a cutter, a circle shape, <b>a stencil to help you draw the same shape on material</b></p>	<p><b>Question 3: Why is it important to write a design criteria?</b> To stick to one design only, to ensure you make a beautiful product, to avoid making mistakes when building the product, <b>to ensure the product meets the intended design brief.</b></p> <p><b>Question 4: Name an electrical device we use in school and explain why it is useful.</b></p>
Learning Objective:	To understand the impact of the digital revolution in the world of (D & T) product design.	To write a program to initiate a flashing LED panel.	To design, create and decorate a foam pouch for the eCharm, using a template.	To design a display badge and/or stand using CAD (computer-aided design) software for an eCharm product.	To evaluate an eCharm product.
Key vocabulary	<p><b>Tier 2</b></p> <ul style="list-style-type: none"> <li>• Revolution</li> <li>• Technology</li> <li>• Analogue</li> <li>• Digital</li> <li>• Features</li> <li>• Function</li> </ul> <p><b>Tier 3</b></p> <ul style="list-style-type: none"> <li>• Smart wearables</li> <li>• Micro:bit</li> </ul>	<p><b>Tier 2</b></p> <ul style="list-style-type: none"> <li>• Program</li> <li>• Initiate</li> <li>• Electronic</li> <li>• Simulator</li> <li>• Control</li> <li>• Monitor</li> </ul> <p><b>Tier 3</b></p> <ul style="list-style-type: none"> <li>• Smart wearables</li> <li>• Micro: bit</li> <li>• Loops</li> <li>• Electronic products</li> <li>• LED Panel</li> </ul>	<p><b>Tier 2</b></p> <ul style="list-style-type: none"> <li>• Template</li> <li>• Develop</li> <li>• Fasten</li> <li>• User</li> <li>• Features</li> </ul> <p><b>Tier 3</b></p> <ul style="list-style-type: none"> <li>• Pouch</li> <li>• eCharm</li> </ul>	<p><b>Tier 2</b></p> <ul style="list-style-type: none"> <li>• Justify</li> <li>• Technology</li> <li>• Program</li> <li>• Attractive</li> <li>• Persuasive</li> <li>• Product</li> </ul> <p><b>Tier 3</b></p> <ul style="list-style-type: none"> <li>• CAD</li> <li>• eCharm</li> </ul>	<p><b>Tier 2</b></p> <ul style="list-style-type: none"> <li>• Justify</li> <li>• Technology</li> <li>• Program</li> <li>• Attractive</li> <li>• Persuasive</li> <li>• Product</li> </ul> <p><b>Tier 3</b></p> <ul style="list-style-type: none"> <li>• CAD</li> <li>• eCharm</li> </ul>
Possible outcome	Children will complete the design criteria for their eCharms.	Children will write a program for the Micro:bit, to make the LED panel flash on and off, for their road-safety eCharm.	Children will create their pouches for the eCharm using the design criteria.	Children will create a point of sale display badge to accompany their eCharm. he design requirements for the POS badge are to include: A powerful statement or word; bright, eye-catching colours; a one or two shape background.	Children will test and evaluate their eCharm product. Does it meet the design brief? Does the product work effectively? What would they change from the original design brief?

Year 3		Summer 1 - Cooking and Nutrition (Eating Seasonally)	
National Curriculum			
<b>National Curriculum objectives:</b> <ul style="list-style-type: none"><li>• 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.</li><li>• Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</li><li>• Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.</li><li>• 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.</li><li>• Investigate and analyse a range of existing products.</li><li>• Understand and apply the principles of a healthy and varied diet.</li><li>• Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.</li><li>• Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processes.</li></ul>			
Cross-Curricular Links:			
<ul style="list-style-type: none"><li>• <b>Geography:</b> Physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle. Human geography, including: types of settlement and land use, economic activity including trade links, and the distribution of natural resources including energy, food, minerals and water.</li></ul>			
Prior Learning		Future Learning	
<p>EYFS</p> <ul style="list-style-type: none"><li>• Know the names of different types of fruit and vegetables.</li><li>• Know how to safely use a knife to cut up foods into smaller pieces.</li><li>• Know that different ingredients can be put together to make meal.</li><li>• Know it is important to wash hands before preparing food.</li><li>• Know different equipment can be used to cook equipment.</li></ul> <p>Year 1</p> <ul style="list-style-type: none"><li>• Understand the difference between fruit and vegetables.</li><li>• Know a blender mixes ingredients together into a liquid.</li><li>• Know vegetables grow either above or below the ground.</li><li>• Know some foods typically known as vegetables are actually fruits (e.g., cucumber)</li><li>• Know fruits grow on trees or vines.</li><li>• Know fruits have seeds and vegetables do not.</li><li>• Know vegetables can come from different parts of a plant.</li></ul> <p>Year 2</p> <ul style="list-style-type: none"><li>• Know what ‘hidden sugars’ are.</li><li>• Know where to find the nutritional information on a drinks container,</li><li>• Know that there are five food groups.</li><li>• Know roughly how much of each food group I should eat each day.</li><li>• Know that the most ideal ingredient combinations for my wrap will contain foods from more than one food group.</li><li>• Know how to prepare food safely using the correct tools.</li></ul>		<p>Year 5</p> <ul style="list-style-type: none"><li>• Know where meat comes from.</li><li>• Know that I can adapt a recipe to make it healthier by substituting ingredients.</li><li>• Know that I can use a nutritional calculator.</li><li>• Know that cross-contamination means that bacteria and germs have been passed onto ready to eat foods.</li></ul> <p>Year 6</p> <ul style="list-style-type: none"><li>• Know that many countries have national dishes which are recipes associated with that country.</li><li>• Know that processed food means food that has been put through multiple changes in a factory.</li><li>• Know it’s important to wash fruit and vegetables before eating to remove any dirt or insecticides.</li></ul>	
Design	Make	Evaluate	Technical Knowledge

<ul style="list-style-type: none"> <li>• Creating a healthy and nutritious recipe for a savoury tart using seasonal ingredients, considering the taste, texture, smell and appearance of the dish</li> </ul>	<ul style="list-style-type: none"> <li>• Knowing how to prepare themselves and a work space to cook safely in, learning the basic rules to avoid food contamination</li> <li>• Following the instructions within a recipe</li> </ul>	<ul style="list-style-type: none"> <li>• Establishing and using design criteria to help test and review dishes</li> <li>• Describing the benefits of seasonal fruits and vegetables and the impact on the environment</li> <li>• Suggesting points for improvement when making a seasonal tart</li> </ul>	<ul style="list-style-type: none"> <li>• Learning that climate affects food growth</li> <li>• Working with cooking equipment safely and hygienically</li> <li>• Learning that imported foods travel from far away and this can negatively impact the environment</li> <li>• Learning that vegetables and fruit grow in certain seasons</li> <li>• Learning that each fruit and vegetable gives us nutritional benefits</li> </ul>
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## Substantive Knowledge Acquired in the Unit

- Know that not all fruits and vegetables can be grown in the UK.
- Know that climate affects food growth.
- Know that vegetables and fruit grow in certain seasons.
- Know that cooking instructions are known as a 'recipe'.
- Know that imported food is food that has been brought into the country.

## Disciplinary Knowledge Acquired in the Unit

### Food Hygiene

- Understanding of food preparation techniques (tearing, cutting, slicing, grating) ways to combine food for a particular purpose.
- Combining foods based on taste, appearance, and texture.

## Key Skills Acquired in the Unit

- Creating a healthy and nutritious recipe, considering taste, texture, smell and appearance.
- Knowing how to prepare themselves and a workspace to cook in.
- Following instructions within a recipe.
- Describe the benefits of seasonal fruits and vegetables and the impact on the environment.
- Suggesting points for improvement when making the seasonal tarte.

## Misconceptions

Some children may think:

- That crops only grow in certain climates conditions that have sun, rain (water).
- That every country can grow all fruit and vegetables.
- That a general knife is used for all purposes e.g., cutting, slicing, tearing.
- That all food comes from a shop.
- Only eating vegetables is healthy.
- That all vegetables grow underground.
- That all vegetables grow from a seed.

## By the end of this unit pupils will:

- Explain that fruits and vegetables grow in different countries based on their climates.
- Understand that 'seasonal' fruits and vegetables are those that grow in a given season and taste best then.
- Know that eating seasonal fruit and vegetables has a positive effect on the environment.

- Design their own tart recipe using seasonal ingredients.
- Understand the basic rules of food hygiene and safety.
- Follow the instructions within a recipe.

## Medium Term Planning

	Lesson 1	Lesson 2	Lesson 3	Lesson 4	Lesson 5
Retrieval	<b>Flashback 4</b> <b>Question 1:</b> Which one of these foods is a fruit? (broccoli, onion, spinach, <b>grapes</b> ) <b>Question 2:</b> Which one of these is a vegetable? (strawberry, <b>potato</b> , pineapple, blueberry) <b>Question 3:</b> To keep healthy, what is the maximum of teaspoons of sugar you should have? (2, 3, 4, <b>5</b> ) <b>Question 4:</b> How many portions of fruit should we aim to eat per day? (3, 5, 4, <b>2</b> )	<b>Flashback 4</b> <b>Question 1:</b> Where do fruits grow? (above or below the ground, <b>on trees or vines</b> ) <b>Question 2:</b> Where do vegetables grow? ( <b>above or below the ground</b> , on trees or vines) <b>Question 3:</b> Which food group does milk belong to? (carbohydrates, <b>dairy</b> , protein, fruits) <b>Question 4:</b> Which climate are bananas grown in? (Polar, <b>Tropical</b> , Mediterranean, Dry)	<b>Flashback 4</b> <b>Question 1:</b> When fully grown, sugar cane plants get _____ by a tractor. (crushed, packaged, <b>harvested</b> , washed) <b>Question 2:</b> Which food group does rice belong to? (protein, fruit, dairy, <b>carbohydrates</b> ) <b>Question 3:</b> Which climate are potatoes grown in? (Polar, <b>Temperate</b> , Mediterranean, Dry) <b>Question 4:</b> What do we use to mix ingredients together into a smooth liquid? (oven, <b>blender</b> , knife, microwave)	<b>Flashback 4</b> <b>Question 1:</b> What are nutrients? The bacteria in rotten food that makes you poorly, The colour of different food, <b>substances in food that make energy, grow and develop</b> <b>Question 2:</b> Which statement is <b>false</b> ? <b>Vitamins, minerals and fibre help you see in the dark</b> , Vitamins, minerals and fibre help you grow, Vitamins, minerals and fibre keeps your body healthy, Vitamins, minerals and fibre gives you energy <b>Question 3:</b> Which word best describes foods that can be harvest and ready to eat in a particular season ( <b>seasonal</b> , climate, import, export) <b>Question 4:</b> Which word describes foods being brought into the country? (climate, seasonal, <b>import</b> , exports)	<b>Flashback 4</b> <b>Question 1:</b> The _____ affects which fruit and vegetables can grow. <b>Climate</b> , farm, ground, factory. <b>Question 2:</b> If food is 'in season' it is... rotten and decomposing, <b>ready to be harvested and eaten</b> , not growing, a small sapling plant <b>Question 3:</b> What do we call the cooking instructions? Manual, plan, diagram, <b>recipe</b> <b>Question 4:</b> Which word describes foods being sent to other countries? (climate, seasonal, import, <b>exports</b> )
Learning Objective:	To know that climate affects food growth.	To know that importing food impacts the environment and is one of the reasons why we should eat seasonal foods grown in the UK.	To create a recipe that is healthy and nutritious using seasonal vegetables and fruits.	To safely follow a recipe when cooking.	To evaluate the product and make suggestions on improvements.
Key vocabulary	<b>Tier 2</b> <ul style="list-style-type: none"> <li>• Climate</li> <li>• Countries</li> <li>• Produce</li> <li>• Import</li> <li>• Sourced</li> </ul>	<b>Tier 2</b> <ul style="list-style-type: none"> <li>• Climate</li> <li>• Countries</li> <li>• Produce</li> <li>• Import</li> <li>• Seasonal</li> </ul>	<b>Tier 2</b> <ul style="list-style-type: none"> <li>• Climate</li> <li>• Natural</li> <li>• Seasonal</li> <li>• Ingredients</li> </ul> <b>Tier 3</b>	<b>Tier 2</b> <ul style="list-style-type: none"> <li>• Climate</li> <li>• Natural</li> <li>• Seasonal</li> <li>• Ingredients</li> <li>• Contamination</li> </ul>	<b>Tier 2</b> <ul style="list-style-type: none"> <li>• Climate</li> <li>• Natural</li> <li>• Seasonal</li> <li>• Ingredients</li> <li>• Contamination</li> </ul>

	<ul style="list-style-type: none"> <li>Ingredients</li> </ul> <b>Tier 3</b> <ul style="list-style-type: none"> <li>Skewers</li> <li>Hygiene</li> <li>Recipe</li> <li>Fruit</li> <li>Vegetables</li> </ul>	<ul style="list-style-type: none"> <li>Ingredients</li> </ul> <b>Tier 3</b> <ul style="list-style-type: none"> <li>Crumble</li> <li>Hygiene</li> <li>Fruit</li> </ul>	<ul style="list-style-type: none"> <li>Hygiene</li> <li>Fruit</li> <li>Vegetables</li> <li>Puff pastry</li> <li>Recipe</li> </ul>	<b>Tier 3</b> <ul style="list-style-type: none"> <li>Hygiene</li> <li>Fruit</li> <li>Vegetables</li> <li>Puff pastry</li> <li>Recipe</li> </ul>	<b>Tier 3</b> <ul style="list-style-type: none"> <li>Fruit</li> <li>Vegetables</li> <li>Puff pastry</li> <li>Recipe</li> </ul>
Possible outcome	Children research where foods are grown and place these on a map. Children follow this activity by making their own skewers using fruits from around the world.	Children research which foods are eaten in the different seasons. The children use their new knowledge of seasonality to choose a fruit that is currently in season, to make a simple fruit crumble.	Children design a nutritious savoury tart recipe using seasonal UK vegetables and fruits	Children follow the recipe to make their own puff pastry tart.	Children evaluate their product. Does it taste as they expected? Does it look appetizing? Does it reflect a balanced diet?