

Design Technology



Know more, remember more



Know yourself, grow yourself

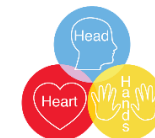


Use your learning, develop your skills



Curriculum overview

	Mechanisms/mechanical systems	Structures/textiles	Food technology
Reception	Across the year the children will: use a range of tools including scissors, hole punch, stapler, glue spreader, rolling pin, cutter and grater, discuss reasons that make activities safe or unsafe, discuss appropriate use of senses. Making own puppets for characters in the stories we are reading about. Card, and lolly pop sticks. improve work and understand how we can join and build, not just with construction pieces but with card and cardboard – using l-brace, flange, tabs, split pins, hole punch and string and slots. (For example building a pirate ship). Discuss foods, healthy eating and hygiene.		
Year 1	<p>Mechanisms - Sliders and levers</p> <p>For example – moving pictures (basic slider and one point lever)</p>	<p>Textiles - Templates and joining techniques</p> <p>For example – sock puppets or Coat/T-shirt for teddy (Joining identical 2D shapes)</p>	<p>Food - Preparing fruit and vegetables (including cooking and nutrition requirements for KS1)</p> <p>For example - Fruit Salad/Kebabs</p>
Year 2	<p>Mechanisms - Wheels and axles</p> <p>For example - Vehicles or Winding Up</p>	<p>Structures - Freestanding structures</p> <p>For example - shelters or Homes (frames from straws and strengthen with triangles)</p>	<p>Food - Preparing fruit and vegetables (including cooking, nutrition and hygiene requirements for KS1)</p> <p>Eat More Fruit and Veg. (Vegetable salad to accompany ready-made main dish e.g. quiche)</p>
Year 3	<p>Mechanical Systems - pneumatics</p> <p>For example - Moving Monsters, opening flowers</p>	<p>Structures - Shell structures (including computer-aided design)</p> <p>For example - Packaging (nets)</p>	<p>Food - Healthy and varied diet (including cooking and nutrition requirements for KS2)</p> <p>For example - Sandwich Snacks or simple dishes</p>
Year 4	<p>Mechanical Systems - Levers and linkages</p> <p>For example – Story books (complex linkages and levers)</p>	<p>Textiles - 2-D shape to 3-D product</p> <p>For example - Money Containers</p>	<p>Electrical Systems - Simple circuits and switches (including programming and control)</p> <p>For example – alarms, circuits to control lights</p>
Year 5	<p>Mechanical Systems - Pulleys or gears</p> <p>For example - Fairground rides/Moving Toys (cams)</p>	<p>Structures - Frame structures</p> <p>For example - Bridges</p>	<p>Food - Celebrating culture/history and seasonality (including cooking and nutrition requirements for KS2)</p> <p>For example – dishes from history e.g. Tudor pottage or baking Bread or Biscuits, foods from other cultures</p>
Year 6	<p>Electrical Systems</p> <p>More complex switches and circuits (including programming, monitoring and control)</p> <p>For example – controllable vehicles</p>	<p>Textiles - Combining different fabric shapes (including computer-aided design)</p> <p>For example – toys (make do and mend)</p>	<p>Food - Celebrating culture/History and seasonality (including cooking and nutrition requirements for KS2)</p> <p>Prepare and cook a predominately savoury meal using a range of cooking techniques.</p>



The school's intent for Design & Technology is to provide the children with a wide range of transferable skills over a range of technological foci that enable them to plan, design and evaluate products that have been made for a real purpose whilst using and applying technical knowledge. The curriculum covers five areas: mechanisms, structures, food, textiles and electrical systems.

Mechanisms develop into Mechanical systems and will then impact upon the development of an electrical mechanism in the form of fairground rides or controllable vehicles in Y6. Mechanisms are revisited frequently because this links to industry and life skills.

Structures are revisited every two years moving from simple structures made from straws and strengthened by triangles, to the use of nets and then how nets and frames can be developed to make a shelter in Year 5. The development of mechanisms will also impact upon the structures and electrical systems units e.g. mechanisms to open doors in Alarms unit – this is why mechanisms are taught first.

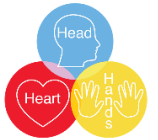
Food is revisited frequently throughout the curriculum because healthy eating and encouraging children to be active and healthy is a priority of the school. We intend that, by teaching about healthy food and preparing simple meals, the children will have a better understanding of healthy lifestyles and apply this knowledge to their home lives.

Electrical systems have clear links with careers in industry and construction as well as developing children's life skills. There are clear links with the Science curriculum e.g. In Year 4 the DT unit will consolidate the Electricity Science Unit taught in the Autumn Term focussing upon simple circuits. In Year 6 the children will have the opportunity to construct products based upon their previous learning and add speed, sound and light intensity.

Textiles develops skills from simple sewing to following a pattern to create a 3D product. These units develop skills for life – they may also be applied in Art.

Year 1 – Mechanisms

Mechanisms	<p>NC Links:</p> <p><u>Design</u></p> <ul style="list-style-type: none"> - 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 <p><u>Make</u></p> <ul style="list-style-type: none"> - 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 <p><u>Evaluate</u></p> <ul style="list-style-type: none"> - explore and evaluate a range of existing products - evaluate their ideas and products against design criteria 	<p><u>Skills to be developed in this unit:</u></p> <ul style="list-style-type: none"> - Explore using a slider and lever to make a picture move. - Make simple levers and sliders - Design a lever/slider product - Make a lever/slider product - Evaluate product 	<p><u>Background Crucial Knowledge for this unit:</u></p> <p>D.T stands for design and technology.</p> <p>D.T is learning about the design and production of man-made products.</p> <p>It is helpful if the children have:</p> <ul style="list-style-type: none"> · Used scissors safely to cut paper and thin card · Joined materials using tape, glue and paper fasteners · Drawn pictures that they can cut out · Followed simple oral instructions
	<p><u>Crucial Knowledge for individual lessons</u></p> <ul style="list-style-type: none"> - Mechanism – An item that creates movement - A slider moves backwards and forwards through a slit - A slider can move from side to side or up and down 	<p><u>Vocabulary</u></p> <p>Hole punches - make round holes in paper or card.</p>	<p><u>Application of skills/ proof I have learnt this crucial knowledge:</u></p>

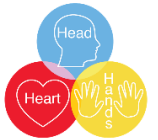


	<ul style="list-style-type: none"> - A lever is fixed at one point and moves from side to side in an arch - By attaching a picture to the end of the slider or lever you can make the picture move 	<p>Card - A flat piece of thick paper</p> <p>Scissors - can cut paper and card.</p> <p>Double sided tape - goes under the join for a neat finish.</p> <p>Paper fasteners (split pins) - join paper or card to make a moving part.</p> <p>Sticky pads - lift the join up to make it 3D.</p>	<p>Designed, created and evaluated their own moving picture using sliders</p>
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Year 1 - Textiles

Textiles	<p><u>National Curriculum links:</u></p> <p><u>Design</u></p> <ul style="list-style-type: none"> - 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 <p><u>Make</u></p> <ul style="list-style-type: none"> - 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 <p><u>Evaluate</u></p> <ul style="list-style-type: none"> - explore and evaluate a range of existing products 	<p><u>Skills developed in this unit:</u></p> <p>To understand what textiles is.</p> <p>To use a template to draw around and cut out.</p> <p>To experiment with joining 2 pieces of material together using different techniques.</p> <p>To create a sock puppet design.</p> <p>To use joining techniques to make a sock puppet.</p> <p>To evaluate our products and suggest changes for next time.</p>	<p><u>Background Crucial Knowledge for this unit:</u></p> <p>D.T stands for design and technology.</p> <p>D.T is learning about the design and production of man-made products.</p> <p>It is helpful if the children have:</p> <ul style="list-style-type: none"> · Drawn around a template · Joined sheet materials using glue · Discussed ideas with others · Drawn products
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	<ul style="list-style-type: none"> - evaluate their ideas and products against design criteria 		
	<p><u>Crucial Knowledge for individual lessons:</u></p> <ul style="list-style-type: none"> - A template is shape that you draw around that is the same shape as the item being made. - The template is drawn around and then the lines are cut along. - 2 pieces of material can be joined by sewing, gluing or stapling. - Sewing joins the materials using pieces of thread pulled by a sharp needle - Stapling joins using pieces of metal. <p>Gluing joins the material by spreading glue between the pieces being joined.</p>	<p><u>Vocabulary</u></p> <p>Beads - small items used for decoration</p> <p>Cotton - a fabric used for sewing</p> <p>Felt a fabric - which doesn't fray which can be joined by gluing, stapling or sewing</p> <p>Needle - used for sewing. Has a hole (eye) to put the thread through</p> <p>Needle threader - helps to put the thread through the eye of the needle</p> <p>Ribbon - thin lengths of fabric used for fastening or decoration.</p> <p>Thimble - protects fingers wen sewing</p>	<p><u>Application of skills/ proof I have learnt this crucial knowledge:</u></p> <p>Designed, created and evaluated their own sock puppet</p>



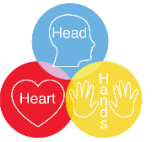
		<p>Thread - used to join fabrics when sewing</p> <p>Wool - used for weaving, knitting and decoration</p>	
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Year 1 – Food Technology

Food technology	<p><u>National Curriculum links:</u></p> <p><u>Design</u></p> <ul style="list-style-type: none">- 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 <p><u>Make</u></p> <ul style="list-style-type: none">- 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 <p><u>Evaluate</u></p> <ul style="list-style-type: none">- explore and evaluate a range of existing products	<p><u>Skills developed in this unit:</u></p> <ul style="list-style-type: none">- Cut a range of fruit carefully- Taste a range of fruit and explain the flavours- Create your own fruit salad/kebab-	<p><u>Background Crucial Knowledge for this unit:</u></p> <p>D.T stands for design and technology.</p> <p>D.T is learning about the design and production of man-made products.</p> <p>It is helpful if the children have:</p> <ul style="list-style-type: none">· Listened to stories/poems about fruit and vegetables· Seen and handled common fruit and vegetables· Developed ideas through discussion
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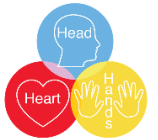
	<p>evaluate their ideas and products against design criteria</p> <p><u>Food</u></p> <ul style="list-style-type: none">- use the basic principles of a healthy and varied diet to prepare dishes- understand where food comes from.		<ul style="list-style-type: none">· Cut soft fruit and vegetables
	<p><u>Crucial Knowledge for individual lessons:</u></p> <ul style="list-style-type: none">- Fruit and vegetables can be eaten without cooking them- Some fruit and vegetables need to be peeled before we eat them- Peeling is when the outside layer (skin) is removed- Some fruits have hard stones in the centre – These can't be eaten- Some fruits have small seeds or pips inside – These can be eaten but we don't usually eat them	<p><u>Vocabulary</u></p> <p>Slice - cut into thin, flat pieces with a knife</p> <p>A measuring jug has levels marked for quantities of liquid or solids such as flour.</p> <p>Colander allows liquid to drain while solid stays inside</p> <p>Juicer squeezes the juice out of fruits like oranges</p> <p>A chopping board is used as a base for cutting, slicing, dicing and chopping foods.</p> <p>Clean the tables before and after preparing food</p>	<p><u>Application of skills/ proof I have learnt this crucial knowledge:</u></p> <p>Create their own fruit salad/kebab</p>



		<p>PVC cloth is a plastic cover for the table to protect it</p>	
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Year 2 - Mechanisms

Mechanisms	<p>NC Links:</p> <p><u>Design</u></p> <ul style="list-style-type: none"> - 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 <p><u>Make</u></p> <ul style="list-style-type: none"> - 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 <p><u>Evaluate</u></p> <ul style="list-style-type: none"> - explore and evaluate a range of existing products - evaluate their ideas and products against design criteria 	<p><u>Skills to be developed in this unit:</u></p> <ul style="list-style-type: none"> - To understand there are different types of vehicles that serve different purposes. - To explore how toy vehicles move. - To recognise different parts of vehicles. - To draw and labels the parts of a vehicle. - To explore different ways to make vehicles move using wheels and axels. - Design, create and evaluate a moving vehicle 	<p><u>Background Crucial Knowledge for this unit:</u></p> <p>D.T stands for design and technology.</p> <p>D.T is learning about the design and production of man-made products.</p> <p>It is helpful if the children have:</p> <ul style="list-style-type: none"> · Joined and combined materials · Cut and shaped card and reclaimed materials · Discussed ideas · Made hinges
	<p><u>Crucial Knowledge for individual lessons</u></p> <ul style="list-style-type: none"> - A wheel is a circle that rolls so that a vehicle can move - An axle is a rod that attaches to the wheel and allows the wheel to turn 	<p><u>Vocabulary</u></p> <p>Mechanism - Parts which work together to make movement</p>	<p><u>Application of skills/ proof I have learnt this crucial knowledge:</u></p>

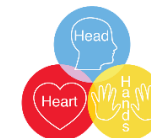


	<ul style="list-style-type: none"> - There are two different types of axel (fixed / moving axels) 	<p>Wheel - A circle that rolls so a vehicle or toy can move</p> <p>Axle - A rod that attaches to the wheel and allows the wheel to turn</p> <p>Off-set - not mounted centrally</p> <p>Zigzag - Move in one direction and then in a different direction</p>	<p>Designed, created and evaluated their own moving vehicle</p>
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Year 2 - Structures

Structures	<p><u>National Curriculum links:</u></p> <p><u>Design</u></p> <ul style="list-style-type: none"> - 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 <p><u>Make</u></p> <ul style="list-style-type: none"> - 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 	<p><u>Skills developed in this unit:</u></p> <p>Explore different techniques for joining materials together</p> <p>Create a basic frame structure</p> <p>Explore ways to make a structure stronger</p>	<p><u>Background Crucial Knowledge for this unit:</u></p> <p>D.T stands for design and technology.</p> <p>D.T is learning about the design and production of man-made products.</p> <p>It is helpful if the children have:</p> <ul style="list-style-type: none"> · Used construction kits to construct models · Assembled and joined framework structures
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<p><u>Evaluate</u></p> <ul style="list-style-type: none"> - explore and evaluate a range of existing products - evaluate their ideas and products against design criteria 		
<p><u>Crucial Knowledge for individual lessons:</u></p> <ul style="list-style-type: none"> - A frame is a structure that surrounds something such as a picture, door or windowpane. - Straws can be joined to make a frame. - Straws can be joined by using pipe cleaners. - The frame can be made stronger by gluing triangles in the corners of the straws. 	<p><u>Vocabulary</u></p> <p>Card - A flat piece of thick paper</p> <p>Sellotape is transparent and shiny. You can't draw or colour over it. It can give a neat finish.</p> <p>PVA joins thicker card, wood and plastic. It needs to be held in place until it is dry.</p> <p>Double sided tape is hidden under the join and gives a neat finish.</p> <p>Masking tape is white. It tears easily and can be drawn on. It is good for models.</p> <p>Staplers put staples into paper, card or fabrics to join them</p> <p>Ruler for measuring accurately and drawing straight lines</p> <p>Single hole punch make a round hole in card or paper</p> <p>Scissors- can cut card and paper</p>	<p><u>Application of skills/ proof I have learnt this crucial knowledge:</u></p> <p>Designed, created and evaluated their own freestanding structure</p>



		Reclaimed materials – reusing items like boxes and bottles	
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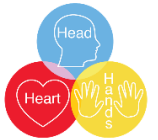
Year 2 – Food Technology

Food technology	<p><u>National Curriculum links:</u></p> <p><u>Design</u></p> <ul style="list-style-type: none">- 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 <p><u>Make</u></p> <ul style="list-style-type: none">- 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 <p><u>Evaluate</u></p> <ul style="list-style-type: none">- explore and evaluate a range of existing products	<p><u>Skills developed in this unit:</u></p> <p>Creating and evaluating a salad dish</p> <p><u>Skill development:</u></p> <p>Slice Grate Dice Spiralizer Julienne</p>	<p><u>Background Crucial Knowledge for this unit:</u></p> <p>D.T stands for design and technology.</p> <p>D.T is learning about the design and production of man-made products.</p>
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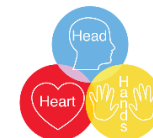
	<p>evaluate their ideas and products against design criteria</p> <p><u>Food</u></p> <ul style="list-style-type: none"> - use the basic principles of a healthy and varied diet to prepare dishes - understand where food comes from. 		
	<p><u>Crucial Knowledge for individual lessons:</u></p> <ul style="list-style-type: none"> • Vegetables can be prepared and mixed together to make a salad. • A salad is served with another item to make a healthy meal. 	<p><u>Vocabulary</u></p> <p>Colander allows liquid to drain while solid stays inside</p> <p>Grate- shred food by rubbing it on a grater</p> <p>A juicer squeezes the juice out of fruits like oranges</p> <p>Cut- to use a tool to make something shorter</p> <p>Slice - cut into thin, flat pieces with a knife</p> <p>Chop - cut something into pieces with repeated cuts</p> <p>Measuring jug has levels marked for quantities of liquid or solids such as flour.</p> <p>Peel - remove the outside layer of skin</p>	<p><u>Application of skills/ proof I have learnt this crucial knowledge:</u></p> <p>Designed, created and evaluated their own salad</p>

Year 3 – Mechanical Structures

Mechanical systems	<p>NC Links:</p> <p><u>Design</u></p> <ul style="list-style-type: none"> - 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 <p><u>Make</u></p> <ul style="list-style-type: none"> - 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 <p><u>Evaluate</u></p> <ul style="list-style-type: none"> - explore and evaluate a range of existing products - evaluate their ideas and products against design criteria 	<p><u>Skills to be developed in this unit:</u></p> <ul style="list-style-type: none"> - Create a working model using pneumatics - Make a final model and evaluate 	<p><u>Background Crucial Knowledge for this unit:</u></p> <p>D.T stands for design and technology.</p> <p>D.T is learning about the design and production of man-made products.</p> <p>It is helpful if the children have:</p> <ul style="list-style-type: none"> · Learnt how materials can be joined to allow movement · Generated and communicated ideas in a variety of ways · Joined and combined materials using simple hand tools · Evaluated their work as it progresses and at the end
	<p><u>Crucial Knowledge for individual lessons:</u></p> <ul style="list-style-type: none"> - Objects can be moved by pushing it with air - If the air is pushed through a narrower tube in the syringe, it passes through it quickly and moves whatever is attached to the tube. 	<p><u>Vocabulary</u></p> <p>Syringe - a simple pump with a plunger and barrel</p>	<p><u>Application of skills/ proof I have learnt this crucial knowledge:</u></p> <p>Designed, created and evaluated their own pneumatics monster/model</p>



		<p>Tubing is flexible pipe to connect syringes</p> <p>Reclaimed materials - using items like boxes again instead of throwing them away.</p> <p>PVA glue joins thicker card, wood and plastic. It needs to be held in place until it is dry</p> <p>Masking tape is white. (opaque). It tears easily and can be drawn on. It is good for models.</p> <p>Double sided tape is hidden under the join and gives a neat finish.</p>	
<p>Year 3 – Structures</p>			
<p>Structures</p>	<p><u>National Curriculum links:</u></p> <p><u>Design</u></p> <ul style="list-style-type: none"> - 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 <p><u>Make</u></p>	<p><u>Skills developed in this unit:</u></p> <p>How to design and create a net</p> <p>Nets are used for packaging</p> <p>Design, create and evaluate my own Net for packaging</p>	<p><u>Background Crucial Knowledge for this unit:</u></p> <p>D.T stands for design and technology.</p> <p>D.T is learning about the design and production of man-made products.</p>



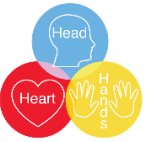
	<ul style="list-style-type: none">- select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]- select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics <p><u>Evaluate</u></p> <ul style="list-style-type: none">- explore and evaluate a range of existing products- evaluate their ideas and products against design criteria		
	<p><u>Crucial Knowledge for individual lessons:</u></p> <ul style="list-style-type: none">- A shell structure is made from a net- A net is what a 3D shape would look like when it has been flattened out- The net is folded to make the 3D shape- Nets are used to make boxes to package items in e.g. cereal	<p><u>Vocabulary</u></p> <p>Acetate sheet is plastic film that can be used to make a window in a package.</p> <p>Card A flat piece of thick paper</p> <p>Masking tape is white. (opaque). It tears easily and can be drawn on. It is good for models.</p> <p>PVA glue joins thicker card, wood and plastic. It needs to be held in place until it is dry</p>	<p><u>Application of skills/ proof I have learnt this crucial knowledge:</u></p> <p>Children will design, create and evaluate their own shell structure (NET for packaging)</p>

		<p>Cutting mat - protects tables from damage when scoring or cutting with a safety knife</p> <p>junior craft knife A sharp knife with a retractable blade</p> <p>Safety ruler - a ruler with a raised centre and groove to protect fingers</p> <p>Snips for adults to use to cut thick card</p>	
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Year 3 – Food Technology

<p>Food technology</p>	<p><u>National Curriculum links:</u></p> <p><u>Design</u></p> <ul style="list-style-type: none"> - 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 <p><u>Make</u></p> <ul style="list-style-type: none"> - select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] 	<p><u>Skills developed in this unit:</u></p> <p><u>Children will learn:</u></p> <p>How a sandwich is made</p> <p>Sampling flavours</p> <p>There are different choices for fillings</p> <p>Design, create and evaluate my own sandwich</p>	<p><u>Background Crucial Knowledge for this unit:</u></p> <p>D.T stands for design and technology.</p> <p>D.T is learning about the design and production of man-made products.</p> <p>It is helpful if the children have:</p> <ul style="list-style-type: none"> · Learnt that food products are made of several components · Learnt that there is a need for a variety of foods in a healthy diet · Learnt about personal hygiene when working with food
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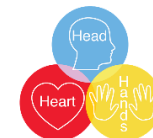
	<ul style="list-style-type: none"> - select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics <p><u>Evaluate</u></p> <ul style="list-style-type: none"> - explore and evaluate a range of existing products <p>evaluate their ideas and products against design criteria</p> <p><u>Food</u></p> <ul style="list-style-type: none"> - use the basic principles of a healthy and varied diet to prepare dishes - understand where food comes from. 		
	<p><u>Crucial Knowledge for individual lessons:</u></p> <ul style="list-style-type: none"> - A sandwich is made by putting a filling between two slices of bread. - A sandwich filling can be made up of one type of food or several foods. - A sandwich filling can be any food item that you like but some foods are better than others. 	<p><u>Vocabulary</u></p> <p>Antibacterial spray kills bacteria on work surfaces, PVC table covers and aprons</p> <p>An apron is worn to protect clothes</p> <p>A chopping board is used as a base for cutting, slicing, dicing and chopping food products</p> <p>Grate - shred food by rubbing it on a grater</p>	<p><u>Application of skills/ proof I have learnt this crucial knowledge:</u></p> <p>Design, create and evaluate my own sandwich</p>



		<p>Chop cut something into pieces with repeated cuts</p> <p>Slice - cut into thin, flat pieces</p> <p>PVC cloth is a plastic cover for the table to protect it</p> <p>Peel - remove the outer skin of a fruit or vegetable</p>	
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Year 4 – Mechanical Systems – Levers and Linkages (Story book)

Mechanical systems	<p>NC Links:</p> <p><u>Design</u></p> <ul style="list-style-type: none"> - 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 <p><u>Make</u></p> <ul style="list-style-type: none"> - 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 <p><u>Evaluate</u></p> <ul style="list-style-type: none"> - explore and evaluate a range of existing products - evaluate their ideas and products against design criteria 	<p><u>Skills to be developed in this unit:</u></p> <ul style="list-style-type: none"> - Research and experiment with how to use different styles of levers and linkages - Created fixed and loose pivots - Design create and evaluate their own story book 	<p><u>Background Crucial Knowledge for this unit:</u></p> <p>D.T stands for design and technology.</p> <p>D.T is learning about the design and production of man-made products.</p> <p>It is helpful if the children have:</p> <ul style="list-style-type: none"> · Learnt about hinges and sliders · Used different joining and cutting techniques with paper and card · Used basic cutting tools suitable for a variety of paper and card
	<p><u>Crucial Knowledge for individual lessons</u></p> <ul style="list-style-type: none"> - A fixed pivot is where the lever is fixed to the base it is attached to. - A loose pivot attaches two levers together but it is not attached to the base. 	<p><u>Vocabulary</u></p> <p>Card A flat piece of thick paper</p> <p>Glue stick – solid glue for sticking paper and thin card.</p>	<p><u>Application of skills/ proof I have learnt this crucial knowledge:</u></p> <p>Designed, created and evaluated their own story book</p>

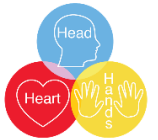


	<ul style="list-style-type: none">- Using fixed and loose pivots in one mechanism makes different types of movement than just side to side or up and down.	<p>Masking tape is white. (opaque). It tears easily and can be drawn on. It is good for models.</p> <p>Paper fasteners (split pins) join paper or card to make a moving part.</p> <p>Cutting mat protect tables from damage when scoring or cutting with a safety knife</p> <p>Sticky pads lift the join up to make it 3D.</p> <p>Single hole punches make a round hole in card or paper</p> <p>Safety ruler - a ruler with a raised centre and groove to guard fingers</p>	
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Year 4 – Electrical Systems (Torch)

Electrical systems	<u>National Curriculum links:</u>	<u>Skills developed in this unit:</u>	<u>Background Crucial Knowledge for this unit:</u>
	<u>Design</u> <ul style="list-style-type: none">- design purposeful, functional, appealing products for themselves and other users based on design criteria	Building a basic circuit to light a bulb Adding in a switch to the circuit	<u>It is helpful if the children have:</u> D.T stands for design and technology.

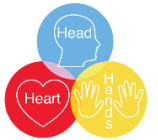
	<ul style="list-style-type: none"> - generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology <p>Make</p> <ul style="list-style-type: none"> - select from and use a range of tools and equipment 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 <p>Evaluate</p> <ul style="list-style-type: none"> - explore and evaluate a range of existing products - evaluate their ideas and products against design criteria 	<p>Design, create and evaluate their own torch (Link with NETS from year 3)</p>	<p>D.T is learning about the design and production of man-made products.</p> <ul style="list-style-type: none"> · Constructed simple electrical circuits and rectified any faults that occur · Cut and joined a variety of materials including reclaimed materials · Learnt how the components work and have used simple tools required to connect these together
	<p><u>Crucial Knowledge for individual lessons:</u></p> <ul style="list-style-type: none"> - A circuit is made up of a battery and a wire - An electrical circuit carries electricity from the battery along the wires - The circuit needs something to power like a bulb or a motor - A switch can be added to the circuit so that it can be switched on or off 	<p><u>Vocabulary</u></p> <p>A battery is used for powering bulbs, motors and buzzers in a circuit.</p> <p>A battery holder holds batteries in a circuit</p>	<p><u>Application of skills/ proof I have learnt this crucial knowledge:</u></p> <p>Children will design, create and evaluate their own torch</p>



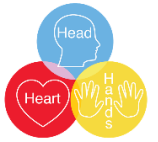
		<p>A bulb is an electrically powered light.</p> <p>A bulb holder holds a bulb in a circuit</p> <p>A buzzer makes a noise when connected to a circuit.</p> <p>Wire is a thread made of metal and covered in plastic for safety</p> <p>Crocodile clips are shaped like clothes pegs and used to attach wires to electrical components.</p> <p>Wire strippers remove the plastic coating from electrical</p>	
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Year 4 – Textiles – 2D shape to 3D product

Textiles	<p><u>National Curriculum links:</u></p> <p><u>Design</u></p> <ul style="list-style-type: none">- 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	<p><u>Skills developed in this unit:</u></p> <p><u>Children will learn:</u></p> <ul style="list-style-type: none">- Investigate and evaluate the purpose of a textile product.- Design a suitable textile product.- Consider different ways to join fabrics.- Evaluate a final product	<p><u>Background Crucial Knowledge for this unit:</u></p> <p>D.T stands for design and technology.</p> <p>D.T is learning about the design and production of man-made products.</p> <p>It is helpful if the children have:</p>
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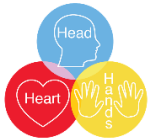
<p><u>Make</u></p> <ul style="list-style-type: none">- select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]- select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics <p><u>Evaluate</u></p> <ul style="list-style-type: none">- explore and evaluate a range of existing products- evaluate their ideas and products against design criteria		<ul style="list-style-type: none">· Joined fabrics in simple ways by gluing and stitching· Used simple patterns/templates for measuring and marking out· Evaluated products
<p><u>Crucial Knowledge for individual lessons:</u></p> <ul style="list-style-type: none">- Textiles are flexible materials woven from fibres.- Designers of textile products need to think about the purpose (what does it do?) and the user (who will use it?).- Sewing is the joining of different textile fabrics using a needle and thread.- Sewers can use a range of different sewing styles to produce strong joins.- Some basic sewing stitches are: the running stitch, back stitch, overstitch and blanket stitch.- Seams are lines of stitching joining fabrics together.- Templates should be used to cut around producing accurate shapes and patterns.- Aesthetics is the appearance and attraction of a textile product.	<p><u>Vocabulary</u></p> <p>Needles are used for sewing. They have a hole (eye) to put the thread through</p> <p>Needle threader - helps to put the thread through the eye of the needle</p> <p>Thimble protects fingers when sewing</p>	<p><u>Application of skills/ proof I have learnt this crucial knowledge:</u></p> <p>Design, create and evaluate my own textile product.</p>



	<ul style="list-style-type: none">- Embroidery is decorating fabric using a needle to apply thread or yarn.- Appliqué is ornamental needlework in which pieces or patches of fabric are sewn or stuck onto a larger piece to form a pattern or picture. It is commonly used for decoration.	<p>Thread used to join fabrics when sewing</p> <p>Hook and eye is used for fastening</p> <p>Press stud is used for fastening</p> <p>Velcro is used for fastening. It can be sewn or glued on.</p> <p>Zip is used for fastening.</p>	
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Year 5 – Mechanical systems – Pulleys or gears (Fairground rides/Moving Toys)

Mechanical systems	<p>NC Links:</p> <p><u>Design</u></p> <ul style="list-style-type: none"> - 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 <p><u>Make</u></p> <ul style="list-style-type: none"> - 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 <p><u>Evaluate</u></p> <ul style="list-style-type: none"> - explore and evaluate a range of existing products - evaluate their ideas and products against design criteria 	<p><u>Skills to be developed in this unit:</u></p> <ul style="list-style-type: none"> - understand the difference between wheel and axel - Design, create and evaluate their own fairground ride/moving toys using CAMS 	<p><u>Background Crucial Knowledge for this unit:</u></p> <p>D.T stands for design and technology.</p> <p>D.T is learning about the design and production of man-made products.</p> <p>It is helpful if the children have:</p> <ul style="list-style-type: none"> • Learnt how to handle tools safely • Learnt about the working characteristics of some sheet materials • Made models with construction kits
	<p><u>Crucial Knowledge for individual lessons</u></p> <ul style="list-style-type: none"> - A wheel is a circle that rolls so that a vehicle can move - An axel is a rod that attaches to a wheel and allows the wheel to turn 	<p><u>Vocabulary</u></p> <p>Bench hook- hooks over the edge of a table to provide a platform on which to work with materials.</p>	<p><u>Application of skills/ proof I have learnt this crucial knowledge:</u></p> <p>Designed, created and evaluated their own moving toy</p>

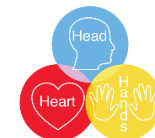


		<p>Cutting mat – A protective surface on which to cut paper or card without scoring through it</p> <p>Dowel - Wood cut in a cylindrical shape</p> <p>Jointer - holds pieces of wood together when making a joint</p> <p>Junior hack saw A small saw for cutting small sections of wood, metal or plastic</p> <p>Motor -A device that turns and controls wheels, gears or pulleys,</p> <p>Safety knife - A sharp knife with a retractable blade</p> <p>Safety ruler - A ruler with a raised centre and groove to guard fingers</p> <p>Wire stripper - removes the plastic insulation from wire</p> <p>Pulley - A grooved wheel over which a cord or belt can run</p>	
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Year 5 – Structures – Frame Structures (Bridges)

Structures	<p><u>National Curriculum links:</u></p> <p><u>Design</u></p>	<p><u>Skills developed in this unit:</u></p> <p>Learn what a structure is</p>	<p><u>Background Crucial Knowledge for this unit:</u></p> <p>D.T stands for design and technology.</p>
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	<ul style="list-style-type: none"> - 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 <p><u>Make</u></p> <ul style="list-style-type: none"> - 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 <p><u>Evaluate</u></p> <ul style="list-style-type: none"> - explore and evaluate a range of existing products - evaluate their ideas and products against design criteria 	<p>Design, create and evaluate a structure</p>	<p>D.T is learning about the design and production of man-made products.</p>
	<p><u>Crucial Knowledge for individual lessons:</u></p> <ul style="list-style-type: none"> - A frame is made by joining rigid pieces of material together like wood or metal - The material can be joined using glue - Gluing triangles in the corner of the frame makes the frame stronger 	<p><u>Vocabulary</u></p> <p>Card triangles used to strengthen and support joints</p>	<p><u>Application of skills/ proof I have learnt this crucial knowledge:</u></p> <p>Children will design, create and evaluate their own</p>

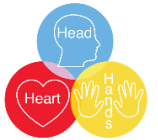


		<p>Bench hook- hooks over the edge of a table to provide a platform on which to work with materials.</p> <p>Junior hack saw A small saw for cutting small sections of wood, metal or plastic</p> <p>Glass paper rough paper used for smoothing and polishing</p> <p>Art straws Bendable straws which be used for making frameworks</p> <p>Square section wood used for making frames</p> <p>Dowel - Wood cut in a cylindrical shape</p> <p>Jointer - holds pieces of wood together when making a joint</p>	
<p>Year 5 – Food Technology – Celebrating culture/History and seasonality (Bread)</p>			
<p>Food technology</p>	<p><u>National Curriculum links:</u></p> <p><u>Design</u></p> <ul style="list-style-type: none">- design purposeful, functional, appealing products for themselves and other users based on design criteria	<p><u>Skills developed in this unit:</u></p> <p><u>Children will learn:</u></p> <ul style="list-style-type: none">- Bread is made by mixing flour, salt, water and yeast	<p><u>Background Crucial Knowledge for this unit:</u></p> <p>D.T stands for design and technology.</p>

<ul style="list-style-type: none"> - generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology <p>Make</p> <ul style="list-style-type: none"> - 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 <p>Evaluate</p> <ul style="list-style-type: none"> - explore and evaluate a range of existing products <p>evaluate their ideas and products against design criteria</p> <p>Food</p> <ul style="list-style-type: none"> - use the basic principles of a healthy and varied diet to prepare dishes - understand where food comes from. 	<p>together and baking it in an oven</p> <ul style="list-style-type: none"> - Different ingredients can be added to bread to change its flavour - Bread can be white or brown – brown bread is healthier than white bread - Design, make and evaluate bread making 	<p>D.T is learning about the design and production of man-made products.</p> <p>It is helpful if the children have:</p> <ul style="list-style-type: none"> · Experience of describing the characteristics of food · Skills in using equipment safely · Awareness of food hygiene · Used criteria to inform their design · Used simple evaluation techniques · Used weighing and measuring skills
<p><u>Crucial Knowledge for individual lessons:</u></p> <ul style="list-style-type: none"> - Bread is made by mixing flour, salt, water and yeast together and baking it in an oven 	<p><u>Vocabulary</u></p> <p>Peel – remove the outside layer of skin</p>	<p><u>Application of skills/ proof I have learnt this crucial knowledge:</u></p> <p>Design, create and evaluate my own bread</p>

	<ul style="list-style-type: none">- Different ingredients can be added to bread to change its flavour- Bread can be white or brown – brown bread is healthier than white bread-	<p>Grate- shred food by rubbing it on a grater</p> <p>Chop - cut something into pieces with repeated cuts</p> <p>Slice - cut into thin, flat pieces with a knife</p> <p>Measuring jug has levels marked for quantities of liquid or solids such as flour.</p> <p>Measuring spoons A set of spoons to measure amounts of ingredients, such as a teaspoonful</p> <p>Baking sheet - flat metal sheet for baking pizzas, rolls etc</p> <p>Rolling pin Used for rolling out pastry, biscuit dough and fondant icing</p> <p>Scales - A device for weighing ingredients</p> <p>Spatula - A smooth edged, flat hand tool for smoothing cake fillings etc</p>	
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Year 6			
Electrical systems	<p>NC Links:</p> <p><u>Design</u></p> <ul style="list-style-type: none"> - 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 <p><u>Make</u></p> <ul style="list-style-type: none"> - 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 <p><u>Evaluate</u></p> <ul style="list-style-type: none"> - explore and evaluate a range of existing products - evaluate their ideas and products against design criteria 	<p><u>Skills to be developed in this unit:</u></p> <p>Building a basic circuit to light a bulb</p> <p>Building a basic circuit to power a motor</p> <p>Building a circuit to power multiple motors</p> <p>Adding in a switch to the circuit</p> <p>Design, create and evaluate their own Car (Link with Frames)</p>	<p><u>Background Crucial Knowledge for this unit:</u></p> <p>D.T stands for design and technology.</p> <p>D.T is learning about the design and production of man-made products.</p> <p>It is helpful if the children have:</p> <ul style="list-style-type: none"> · Produced labelled drawings · Used tools safely and accurately · Made simple electrical circuits · Built a framework from square section wood · Fixed wheels and axles to a chassis
	<p><u>Crucial Knowledge for individual lessons</u></p> <ul style="list-style-type: none"> - A circuit is made up of a battery and a wire - An electrical circuit carries electricity from the battery along the wires - The circuit needs something to power like a bulb or a motor 	<p><u>Vocabulary</u></p> <p>Bench hook- hooks over the edge of a table to provide a platform on which to work with materials.</p>	<p><u>Application of skills/ proof I have learnt this crucial knowledge:</u></p> <p>Designed, created and evaluated their own motorised car</p>

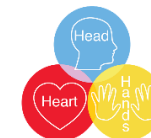


	<p>- A switch can be added to the circuit so that it can be switched on or off</p>	<p>Cutting mat – A protective surface on which to cut paper or card without scoring through it</p> <p>Dowel - Wood cut in a cylindrical shape</p> <p>Jointer - holds pieces of wood together when making a joint</p> <p>Junior hack saw A small saw for cutting small sections of wood, metal or plastic</p> <p>Motor -A device that turns and controls wheels, gears or pulleys,</p> <p>Safety knife - A sharp knife with a retractable blade</p> <p>Safety ruler - A ruler with a raised centre and groove to guard fingers</p> <p>Wire stripper - removes the plastic insulation from wire</p> <p>Pulley - A grooved wheel over which a cord or belt can run</p>	
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Year 6

Textiles	<p><u>National Curriculum links:</u></p> <p><u>Design</u></p>	<p><u>Skills developed in this unit:</u></p> <p>Researching Look at different types of teddys</p> <p>Exploring stitches</p>	<p><u>Background Crucial Knowledge for this unit:</u></p> <p>D.T stands for design and technology.</p>
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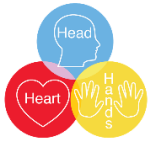
	<ul style="list-style-type: none"> - design purposeful, functional, appealing products for themselves and other users based on design criteria - generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology <p>Make</p> <ul style="list-style-type: none"> - 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 <p>Evaluate</p> <ul style="list-style-type: none"> - explore and evaluate a range of existing products - evaluate their ideas and products against design criteria 	<p>Practising different stitches.</p> <p>Patterns / Designing Creating a design for their bag.</p> <p>Patterns / Designs Looking at different patterns used / templates</p> <p>Making Putting skills together.</p> <p>Evaluating Thinking about their piece of work.</p>	<p>D.T is learning about the design and production of man-made products.</p> <p>It is helpful if the children have:</p> <ul style="list-style-type: none"> · Made and used simple patterns · Stitched and joined textiles · Written simple specifications · Planned their work in a step-by-step approach
	<p><u>Crucial Knowledge for individual lessons:</u></p> <ul style="list-style-type: none"> - A pattern is made up of several templates. - The pieces cut from the pattern are joined together and make a more complicated design. 	<p><u>Vocabulary</u></p> <p>Needles are used for sewing. They have a hole (eye) to put the thread through.</p> <p>Thimble – protects fingers when sewing</p> <p>Hook and eye is used for fastening</p>	<p><u>Application of skills/ proof I have learnt this crucial knowledge:</u></p> <p>Children will design, create and evaluate their own make do and mend toy</p>



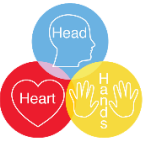
		<p>Velcro is used for fastening. It can be sewn or glued on.</p> <p>Needle threader O helps to put the thread through the eye of the needle.</p> <p>Thread is used to join fabrics when sewing.</p> <p>Press stud is used for fastening</p> <p>Zip's are used for fastening.</p>	
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Year 6

Food technology	<p><u>National Curriculum links:</u></p> <p><u>Design</u></p> <ul style="list-style-type: none"> - 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 <p><u>Make</u></p> <ul style="list-style-type: none"> - select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] 	<p><u>Skills developed in this unit:</u> <u>Children will learn:</u></p> <p>The importance of food hygiene</p> <p>How to correctly measure ingredients</p> <p>A range of cooking techniques, including: grating, mixing, whisking and cutting</p>	<p><u>Background Crucial Knowledge for this unit:</u></p> <p>D.T stands for design and technology.</p> <p>D.T is learning about the design and production of man-made products.</p> <p>Understanding terminology used in recipes (E.g. g, ml, tbsp – tablespoon, tsp – teaspoon)</p> <p>How to follow a recipe</p> <p>That you can alter a recipe to change the flavour.</p>
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	<ul style="list-style-type: none">- select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics <p><u>Evaluate</u></p> <ul style="list-style-type: none">- explore and evaluate a range of existing products <p>evaluate their ideas and products against design criteria</p> <p><u>Food</u></p> <ul style="list-style-type: none">- use the basic principles of a healthy and varied diet to prepare dishes- understand where food comes from.		
	<p><u>Crucial Knowledge for individual lessons:</u></p> <ul style="list-style-type: none">- A meal can be made by cooking vegetables or meat.- Meals can also be made by combining ingredients and cooking or baking them together.- A meal consists of different types of food: protein, fruit, vegetables and grains.- Seasonal food is fresh food that is ready to eat during its preferred season.	<p><u>Vocabulary</u></p> <p>Peel – remove the outside layer of skin</p> <p>Grate- shred food by rubbing it on a grater</p> <p>Chop - cut something into pieces with repeated cuts</p> <p>Slice - cut into thin, flat pieces with a knife</p>	<p><u>Application of skills/ proof I have learnt this crucial knowledge:</u></p> <p>Design, create and evaluate my own buffet</p>



		<p>Measuring jug has levels marked for quantities of liquid or solids such as flour.</p> <p>Measuring spoons A set of spoons to measure amounts of ingredients, such as a teaspoonful</p> <p>Baking sheet - flat metal sheet for baking pizzas, rolls etc</p> <p>Rolling pin Used for rolling out pastry, biscuit dough and fondant icing</p> <p>Scales - A device for weighing ingredients</p> <p>Spatula - A smooth edged, flat hand tool for smoothing cake fillings etc</p>	
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