



DT Curriculum

	Autumn	Spring	Summer
Year 1	Structures and mechanisms Mechanism skills – sliders and levers Freestanding structure – reclaimed materials	Textiles Weaving and cutting	Cooking and nutrition Fruit Kebabs
Year 2	Textiles Running stitch	Structures and mechanisms Mechanism skills – wheels and axles Frame structures – reclaimed materials	Cooking and nutrition Savoury Salad
Year 3	Cooking and nutrition Healthy Snacks	Textiles Stitching skills and cross stitch pattern	Structures and mechanisms Mechanism skills – Linkages and cams Structure – cardboard
Year 4	Cooking and nutrition Leftovers – Bubble and Squeak	Structures and mechanisms Electronic mechanisms controlled by remote	Textiles Puppet
Year 5	Cooking and nutrition Seasonal Food Fruit Crumble	Structures and mechanisms Mechanism skills – pulleys, gears and different shaped cams. Structure – Freestanding wooden structure with a circuit	Textiles Stuffed bean bag toy
Year 6	Textiles Narrative Textiles	Cooking and nutrition Vegetarian one pot	Innovation product The DT process

Year one

Cooking and nutrition				
Can Is	Disciplinary	Substantive	Subject clarity	Vocabulary
Can I identify if food is from a plant or an animal?	Identify whether food is from an animal or a plant.	<p>Fruit and vegetables are an important part of a balanced diet. You should aim to eat at least 5 different ones a day.</p> <p>Some food comes from animals and some comes from plants.</p>	<p>Children should be able to explain that the food we eat comes from different places. If they look at a plate of food, they should recognise that food will have originated from either animals or plants.</p> <p>Children will need to understand that some food is created by mixing ingredients together and therefore you have to say whether the ingredients have come from a plant or an animal.</p> <p>Children should understand that one animal can produce a number of different products such as a pig.</p> <p>Children should understand that one part of a plant we can eat is the fruit.</p> <p>Children should understand that not all fruit can be safely eaten.</p>	<p>Plant</p> <p>Animal</p> <p>Ingredient</p> <p>Examples of fruit</p>
Can I name different types of fruit and identify which parts can be eaten?	Identify which parts of fruit we eat.	<p>Fruit and vegetables are an important part of a balanced diet. You should aim to eat at least 5 different ones a day.</p> <p>We eat some part of fruit but not all parts.</p>	<p>Children should be able to name a variety of different fruits. They should recognise that the same fruit can come in different varieties with slightly different appearances.</p> <p>Children should understand that there are parts of the fruit which we eat and other parts that we do not. Children understand that different fruits have different parts that we eat or not. For example, we eat the skin of an apple but not the peel of a banana. You eat the seeds in a banana but not the pips in an orange.</p>	<p>Plant</p> <p>Edible</p> <p>Skin / Peel</p> <p>Seeds / pips / stone</p>
Can I taste and evaluate a range of fruits?		<p>A strength is a good quality of a piece of work.</p> <p>A weakness is an area that could be improved.</p> <p>Two products can be compared by looking at a set of criteria and</p>	<p>Children should understand that different fruits have different flavours and textures.</p> <p>They should understand that taste is a preference and that some people prefer different flavours more than other flavours.</p> <p>Children should be able to give simple evaluations of the fruit. These should be based on taste of texture.</p>	<p>Sensory vocabulary:</p> <p>Hard / Soft</p> <p>Juicy</p> <p>Crunchy</p> <p>Sour / sweet</p> <p>Bland</p> <p>Watery</p>

		scoring both products against each one.		
Can I design a fruit kebab?	Explore the range of careers that are included in D+T.	Design criteria are the explicit goals that a project must achieve.	<p>Children can take their evaluations and design a fruit kebab.</p> <p>Set simple design criteria such as:</p> <ul style="list-style-type: none"> • Fruits they liked. • Hard and soft textures • Bite size pieces <p>Children do not need to produce accurate drawings of fruit in their design. Their design should be more about the order, colour and taste of their kebab.</p>	<p>Sensory vocabulary:</p> <p>Hard / Soft</p> <p>Juicy</p> <p>Crunchy</p> <p>Sour / sweet</p> <p>Bland</p> <p>Watery</p> <p>Design</p> <p>Bite size pieces</p>
Can I follow health and safety rules to cut fruit and make a kebab?	<p>Cut / chop food into half or bitesize piece.</p> <p>Identify which parts of fruit we eat.</p> <p>Follow health and safety rules.</p>	<p>The size something needs to be cut to can be described by how easy it would be to eat.</p> <p>We eat some part of fruit but not all parts.</p> <p>Rules keep people safe. Safety includes always listening carefully and following instructions.</p> <p>Equipment is to be used in the way shown and only when told to.</p> <p>Adults will have cleaned the classroom before food is prepared.</p>	<p>Children should have health and safety rules clearly explained to them. They should understand the risk of these not being followed. It is a good opportunity to introduce the idea of risk assessment. Children understand that equipment like a knife can be dangerous but if we use it properly and follow some rules it is not as dangerous anymore.</p> <p>Children should understand that they want to create flat surfaces when they chop as they are more stable. They can use a bridging hold of the fruit to keep it still whilst they cut.</p> <p>Children can make bite size pieces of fruit.</p>	<p>Knife</p> <p>Bridge</p> <p>Chopping board</p> <p>Health and safety</p> <p>Bite size</p>

		<p>Children should wash hands before and after touching food.</p> <p>Hair must be tied back and loose clothing should be out of the way.</p>		
Can I evaluate a fruit kebab with strengths and weaknesses?		<p>A strength is a good quality of a piece of work.</p> <p>A weakness is an area that could be improved.</p> <p>Two products can be compared by looking at a set of criteria and scoring both products against each one.</p>	<p>Children should understand that the evaluation should be done against the success criteria. This means they are saying whether what they made matched what they set out to produce. Children in year 1 do not need to evaluate and improve just evaluate. Their strengths and weaknesses should use subject specific vocabulary.</p>	<p>Evaluate</p> <p>Design</p> <p>Sensory vocabulary:</p> <p>Hard / Soft</p> <p>Juicy</p> <p>Crunchy</p> <p>Sour / sweet</p> <p>Bland</p> <p>Watery</p> <p>Bite size pieces</p>

Weaving and cutting				
Can Is	Disciplinary	Substantive	Subject clarity	Vocabulary
Can I cut to follow lines on a piece of paper?	<p>Cut pre-marked strips to use in weaving.</p> <p>Cut paper and card to have straight lines.</p> <p>Follow health and safety rules.</p>	Using and carrying scissors appropriately.	<p>Children should be confident with how scissors need to be held. They understand how to move around the classroom with them and how to pass and accept them. Children are aware of hair and clothing.</p> <p>Children should be able to use scissors to follow lines beginning with straight and progressing to straight lines that zig-zag or on a diagonal.</p> <p>Children should understand about smooth cuts and creating straight lines.</p>	<p>Straight</p> <p>Lines</p> <p>Diagonal</p> <p>Zig-zag</p>

<p>Can I cut strips of paper to be different and the same length?</p>	<p>Cut pre-marked strips to use in weaving.</p> <p>Cut paper and card to have straight lines.</p> <p>Follow health and safety rules.</p>		<p>Children need to be able to use a template to cut strips of paper which are the same length as each other. To weave, the strips should have straight cuts or else the weave will not look as need.</p> <p>Children practise marking and cutting strips of paper to be the same length. Children understand that cutting right up to the mark will get the strips to be the same size but mean that the mark is not visible at the end.</p>	<p>Mark Cut Strips</p>
<p>Can I practise the technique of weaving with paper?</p>	<p>Weave using card, paper, string and strips of fabric to learn the under and over technique for sewing.</p> <p>Follow health and safety rules.</p>	<p>A weave uses card, paper, string and strips of fabric with an under and over technique.</p> <p>Using and carrying scissors appropriately.</p>	<p>Paper Weaving Craft For Kids - Step By Step Fun Paper Craft</p> <p>The frame piece of paper will need to be made in advance for children to practise with. Children understand the under and over technique to be able to create a weave pattern.</p> <p>Children understand that this is just about learning the skill and the colours do not matter at this point.</p> <p>Children can experiment with thicker and shorter strips to weave with.</p>	<p>Over Under Weave</p>
<p>Can I create a contrasting colour paper weave?</p>	<p>Weave using card, paper, string and strips of fabric to learn the under and over technique for sewing.</p> <p>Select contrasting colours to weave with.</p> <p>Follow health and safety rules.</p>	<p>A weave uses card, paper, string and strips of fabric with an under and over technique.</p> <p>Contrasting colours in weaves stand out compared to each other.</p> <p>Using and carrying scissors appropriately.</p>	<p>Paper Weaving Craft For Kids - Step By Step Fun Paper Craft</p> <p>Children understand that for the weave to look better they need to pick two colours which contrast. This means both colours with stand out more against each other.</p> <p>Children can create a weave design that follows the under over technique and looks neat.</p>	<p>Over Under Weave</p>
<p>Can I weave with</p>	<p>Weave using card, paper, string and strips of fabric to</p>	<p>A weave uses card, paper, string and strips of fabric with an</p>	<p>Children can experiment with weaving different materials through a paper frame. This could include card and string but they may be able to experiment with other options.</p>	<p>Over Under Weave</p>

different materials?	learn the under and over technique for sewing. Follow health and safety rules.	under and over technique. Using and carrying scissors appropriately.		Materials
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Structures and Mechanisms – Nursery Rhyme Characters

Can Is	Disciplinary	Substantive	Subject clarity	Vocabulary
Can I explore objects with slides and levers?		<p>A slider can be used to move things in different directions in a mechanism.</p> <p>A lever moves things up and down across a fixed point.</p>	<p>Children should look at picture books and toys which use sliders and levers. The idea is understanding the simple concept of input and output. Children should understand that using their hand they move the mechanism and as a result the mechanism does something. Children should identify the difference in movement from a slider and a lever.</p> <p>Within a picture book, children should explore how different parts of the story need the characters do different movements. Children should be able to explain this such as if they are running then they need to move across the page but if they are jumping, they need to move up and down.</p>	<p>Sliders</p> <p>Lever</p> <p>Movement</p> <p>Input</p> <p>Output</p> <p>Mechanism</p>
Can I make prototype slides and leavers?	<p>Make sliders and levers.</p> <p>Follow health and safety rules.</p>	<p>A slider can be used to move things in different directions in a mechanism.</p> <p>A lever moves things up and down across a fixed point.</p> <p>Rules keep people safe. Safety includes always listening carefully and following instructions.</p> <p>Equipment is to be used in the way shown and only when told to.</p>	<p>Children can have a go at making simple slider and lever mechanisms. They can use paper and lollypop sticks to do this.</p> <p>Children need to think about how they are going to create the fixed point of the lever mechanism. This is often done with a split pin.</p>	<p>Sliders</p> <p>Lever</p> <p>Movement</p> <p>Input</p> <p>Output</p> <p>Mechanism</p> <p>Fixed point</p>

		Equipment used to cut needs to be handled and stored correctly.		
Can I design the characters from a nursery rhyme on the computer?	Design and alter designs using a computer.	Designs can be made on a computer to allow them to look consistent and make quick changes.	<p>Children can use computer programmes or apps to create the characters from a nursery rhyme. They are going to need to be able to make the characters move to be able to retell the nursery rhyme.</p> <p>Children understand that the benefit of using a computer to do the design is that they can edit things quickly and change things.</p> <p>Children understand that the size of their design will have to fit on the end of lollypop stick for it to work.</p>	<p>Sliders</p> <p>Levers</p> <p>Movement</p> <p>Input</p> <p>Output</p> <p>Mechanism</p> <p>Fixed point</p>
Can I make a sliders and leavers for my nursery rhyme characters?	<p>Make sliders and levers.</p> <p>Follow health and safety rules.</p>	<p>A slider can be used to move things in different directions in a mechanism.</p> <p>A lever moves things up and down across a fixed point.</p> <p>Rules keep people safe. Safety includes always listening carefully and following instructions.</p> <p>Equipment is to be used in the way shown and only when told to.</p> <p>Equipment used to cut needs to be handled and stored correctly.</p>	<p>Children will need to consider the materials which they use to assemble their nursery rhyme scene. This will include the idea of mounting. Children should understand that a piece of paper can be decorated and then mounted onto a piece of card by gluing it on. Paper is easier to decorate but card is far strong and allows things to be stuck together.</p> <p>Children should be clear that the design brief must include:</p> <ul style="list-style-type: none"> • Telling the story in a nursery rhyme • Levers and sliders • Strong enough to hold together <p>Children should assemble their nursery rhyme scenes and think about how they use scissors to cut things out. Children understand the health and safety rules of using scissors. Children understand that there will be parts where they might need to ask an adult so that they can cut out certain parts.</p>	<p>Sliders</p> <p>Levers</p> <p>Movement</p> <p>Input</p> <p>Output</p> <p>Mechanism</p> <p>Materials</p>
Can I explore what makes a good		Different materials have different properties.	Children understand that freestanding means it stands without needing to be held. This means it either has a base or legs . Children explore different structures which stand without needing to be supported. Children should understand that structures with	<p>Freestanding</p> <p>Structure</p> <p>Base</p>

<p>freestanding structure?</p>		<p>Certain materials are stronger than others and allow a structure to stand.</p>	<p>more legs tend to stand better. Children should understand that the legs have to be strong enough to hold the weight.</p> <p>Children will recognise that a base is usually wider than what it is holding and again it needs to be strong enough to support the weight.</p>	<p>Legs Weight</p>
<p>Can I attach my nursery rhyme mechanism to a freestanding structure?</p>	<p>Build a copy of a freestanding structure using reclaimed materials thinking about which would allow it to stand.</p> <p>Follow health and safety rules.</p>	<p>Different materials have different properties.</p> <p>Certain materials are stronger than others and allow a structure to stand.</p> <p>Rules keep people safe. Safety includes always listening carefully and following instructions.</p> <p>Equipment is to be used in the way shown and only when told to.</p> <p>Equipment used to cut needs to be handled and stored correctly.</p>	<p>Children should combine the learning together to build a structure which their nursery rhyme mechanism can be held up by.</p> <p>They should understand that the mechanism still needs to work even when it is on the structure. The structure should allow them to tell the story without having to hold the scene up.</p>	<p>Vocabulary from the topic</p>


Year two

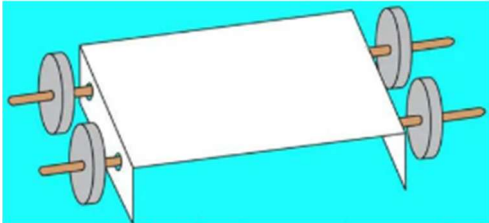
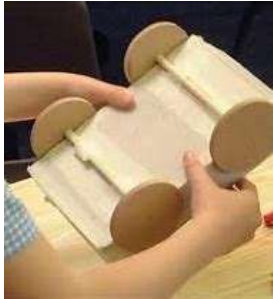
Cooking and nutrition				
Can Is	Disciplinary	Substantive	Subject clarity	Vocabulary
Can I explain whether food is from an animal and plant and name different products?	Identify if a product is from an animal or plant and name different food.	Food comes from animals or plants. When it comes from plants, it can be different parts of the plant. When it comes from an animal, it can be a product of the animal. When we eat animals, the meat has a different name.	<p>Children have completed the same can I in year 1 but this is important knowledge them to secure. They should be able to go into more detail than the previous year and realise that they can be more specific in the part of the plant or the name of meat.</p> <p>Children should understand that from a plant food can be the leaf, root, stem or fruit and be able to give examples of each of these. They should recognise that the same plant can be cooked and prepared in different ways and this will make it look different. They should also recognise different varieties of the same plant.</p> <p>Children should understand that meat has different names sometimes to the animal it comes from. Children understand that the same animal can produce different cuts of meat.</p>	Plant Meat Leaf Root Stem Fruit
Can I explain the different foods I need to eat in a balanced diet?	Explain balanced diets.	Fruit and vegetables are an important part of a balanced diet and so are meat and carbohydrates.	<p>Children should understand that plants and meat provide different food groups. They should understand that all foods need to be eaten in moderation and this is called a balanced diet. Children understand that food gives the body energy. Different foods give the body energy better than others. One group that does this are called carbohydrate.</p> <p>Children understand that fats and sugars are often considered bad for you but they are ok in moderation. If you eat too much of any type of food and do not exercise then your body will store the energy you do not burn as fat.</p>	Moderation Balanced Carbohydrates Energy
Can I taste and evaluate different salad ingredients?		<p>Research includes trying already existing products out.</p> <p>Products can be compared by looking at particular characteristics of each and deciding which is better suited to the purpose.</p>	<p>Children have tasted fruit in year 1 and focused on making sure their evaluation concentrated on sensory language. Children should be able to link their prior learning around fruit to be able to compare the difference between the vegetables and their taste.</p> <p>Children understand that in a salad you have fruits and vegetables and know that whether there are seeds allows you to be able to tell the difference.</p> <p>Children can taste a range of different salad ingredients and evaluate them.</p>	
Can I practise the skills of	Prepare food by cleaning and washing.	There is a difference between chopping and slicing motion.	Children can practise all of the skills listed in the Can I. Carrots provide a good choice of cheap vegetable that allows for the practising of all of the skills. Children should also understand that	Chop Slice Peel


peeling, grating, cutting and slicing?	Use the skills of peeling, grating and chopping into smaller pieces. Chop and slice.		<p>fruit and vegetables should be washed before being eaten. This is to remove any mud and chemicals which may have been used when it was growing.</p> <p>Children should understand that there is a difference between a chopping motion and a slicing motion and when each is more appropriate. Children should use a bridge hold to keep things in place. Children should aim to create a flat part to what they are chopping.</p> <p>Children will need to understand the health and safety aspects of using a knife, peeler and grater. This particular should involve making sure they are always paying attention.</p>	Grate
Can I design a salad with a protein source?		<p>Ideas can be communicated in a variety of ways, including written work, drawings and diagrams, modelling, speaking and using information and communication technology.</p> <p>Labels can be added to designs for clarity.</p>	<p>Children should be able to design a healthy salad with a protein sauce as the topping. Children do not need to try and sketch the ingredients they should understand that labels and key will help to represent the ingredients.</p> <p>Children should include in the labels a description of the preparation methods for what they are including such as: grated, sliced, chopped and peeled.</p> <p>Children should have design criteria to work towards so that they can evaluate the product at the end. This could include:</p> <ul style="list-style-type: none"> • Salad with a protein source. • Uses peeling, chopping, slicing and grating. • Use a range of different coloured ingredients. • A range of textures 	Chop Slice Peel Grate Ingredients
Can I make my healthy salad with a protein source?	<p>Prepare food by cleaning and washing.</p> <p>Use the skills of peeling, grating and chopping into smaller pieces. Chop and slice.</p>	<p>There is a difference between chopping and slicing motion.</p> <p>Fruit and vegetables are an important part of a balanced diet and so are meat and carbohydrates.</p>	<p>Children need to prepare their ingredients in a logical manner and using a range of the skills taught. This would include ideas such as grating everything they need grating first.</p> <p>Children should think about hygiene and safety. This includes understanding the basics of cross-contamination such as washing equipment in between handling different food types such as vegetables and meat.</p> <p>Children should be able to risk assess different parts of the activity for themselves and understand the measures which are in place to reduce the risk.</p>	Chop Slice Peel Grate Ingredients
Can I evaluate my		Finished products can be compared with design criteria to see	Children should eat their healthy salad and then evaluate it. They should build off evaluation in year 1 by understanding that the positives and negatives need to be linked to the design criteria. They should be able to make suggestions of how they improve their product linked to	Chop Slice Peel

healthy salad?		<p>how closely they match.</p> <p>Suggest improvements that could be made to make things closer to the design criteria.</p> <p>Products can be compared by looking at particular characteristics of each and deciding which is better suited to the purpose.</p>	the design criteria. This should include the inclusion of different ingredients and the refining of technique.	Grate Ingredients Evaluate Technique
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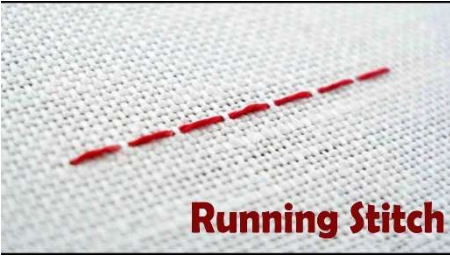
Structures and Mechanisms – Vehicles				
Can Is	Disciplinary	Substantive	Subject clarity	Vocabulary
Can I investigate objects with wheel mechanisms and explain how they work?		<p>A wheel can be added to a mechanism to give a rotary movement.</p> <p>A wheel can move on an axle which can be free or fixed.</p> <p>Research includes trying already existing products out.</p>	Children should explore different toys with wheels and axles. This could include taking old toys apart so that they can see how the mechanism and structure is put together. They should explore the concept of fixed and free axles. Children should be able to explain how pushing the toy makes it move and understand this is called the input. Children should be able to explain the output is how the toy moves because the movement of certain parts.	Input Output Wheel Axle Mechanism



<p>Can I build fixed and free wheel mechanisms?</p>	<p>Make mechanisms with free and fixed axels</p>	<p>A wheel can be added to a mechanism to give a rotary movement.</p> <p>A wheel can move on an axle which can be free or fixed.</p> <p>Hair and loose clothing need to be kept away from equipment and parts of a mechanism.</p> <p>If equipment is damaged, then an adult must be told as it could be no longer safe to use.</p> <p>When constructing, areas should be kept tidy to avoid injury.</p>	 <p>Children can build simple prototype bottle top cars. This will allow them to experiment with fixed and free wheel mechanisms. This includes how the axle is attached to allow it to move and how the wheels stay secure if the axle is fixed.</p> <p>Children should understand that in DT we often build a prototype. This is a cheap model of what we are going to make. It allows us to see if something is going to work before we make it and helps us to discover problems in advance. Designers make prototypes because it can save them money and time before making the final product.</p> <p>Children should understand how to work safely and measure accurately. They will need to understand that the axle can not be too long or too short. It is also important that the axle is attached so that it is straight. If it is not then the car will not roll in a straight line. Children will also need to make sure the wheels are spread apart enough that they do not catch on each other.</p>	<p>Input Output Wheel Axle Fixed Free Mechanism Prototype</p>
<p>Can I design a vehicle to build?</p>		<p>Ideas can be communicated in a variety of ways, including written work, drawings and diagrams, modelling, speaking and using information and communication technology.</p>	<p>Children will need a design brief for the vehicle they are going to make. This should include specifics which they must include in their design.</p> <p>Children need to understand the relationship between wheel size and how big the vehicle can be. Children also will need to think about the length of the vehicle and where the wheels will be spaced.</p> <p>Children should produce a labelled diagram of what they are going to produce. This could include the use of ICT to help make the drawing more accurate.</p> <p>The design should think about the frame that the wheel mechanism is going to sit upon and will allow them to build the vehicle structure round.</p>	<p>Wheel Axle Fixed Free Frame Structure Mechanism</p>

<p>Can I build a 3D frame using tape on the joins?</p>	<p>Build a frame structure out of reclaimed materials thinking about how to strengthen certain key parts.</p> <p>Follow rules on staying safe.</p>	<p>Structures in the world often have a frame to make them stronger.</p> <p>Where these structures hold weight, other materials can be used to strengthen and support the weight.</p> <p>Hair and loose clothing need to be kept away from equipment and parts of a mechanism.</p> <p>If equipment is damaged, then an adult must be told as it could be no longer safe to use.</p> <p>When constructing, areas should be kept tidy to avoid injury.</p>	<p>Children can build the frame and mechanism for their vehicle. They should understand that the frame needs to be strong as it is going to hold the wheel mechanism and allow them to build things up upon it. Masking tape can be use to fix parts of the frame together.</p> <p>Children will need to measure parts of the frame out. This will include measuring the axles out so that they are the right length for the frame.</p> <p>Children should have a frame and mechanism built which they can test and ensure that it is working. They can make adaptations at this point before adding more of the structure.</p>  	<p>Wheel Axle Fixed Free Frame Structure Mechanism</p>
<p>Can I cut out parts of the structure to attach to the frame?</p>	<p>Design sections of a structure on a computer.</p> <p>Follow rules on staying safe.</p>	<p>When exact shapes are needed these can be produced on a computer as it is more accurate.</p> <p>Hair and loose clothing need to be kept away from equipment and parts of a mechanism.</p>	<p>Children will need to make and attach their structure to their frame. There may be aspects of the structure design which are done on a computer.</p> <p>Children should understand that the structure is easier to alter and design before it is attached to the frame. Children should think about how they attach the structure to the frame whilst making it still look good. This could be with glue or double-sided tape.</p> <p>Children should be able to test their vehicle at different stages of making it and make any alterations accordingly.</p>	<p>Wheel Axle Fixed Free Frame Structure Mechanism Attach</p>

		<p>If equipment is damaged, then an adult must be told as it could be no longer safe to use.</p> <p>When constructing, areas should be kept tidy to avoid injury.</p> <p>Different tools and equipment have characteristics that make them suitable for specific purposes.</p>		
<p>Can I evaluate my push vehicle?</p>		<p>Finished products can be compared with design criteria to see how closely they match.</p> <p>Suggest improvements that could be made to make things closer to the design criteria.</p> <p>Products can be compared by looking at particular characteristics of each and deciding which is better suited to the purpose</p>	<p>Children should understand that an evaluation is made against the design criteria they were set. This is why it is important that these were really clear at the start of the unit.</p> <p>Children should be able to offer suggestions of where they can improve towards a specific design criterion. This should include technical improvements.</p> <p>Children can also compare their product with their peers and explain why certain products meet certain criterion better than others.</p>	<p>Wheel Axle Fixed Free Frame Structure Mechanism Attach</p>

Textiles – Running Stich

Can Is	Disciplinary	Substantive	Subject clarity	Vocabulary
Can I thread and tie a need and cut thread safely?	<p>Using needles and scissors safely.</p> <p>Using scissors to cut through a material.</p> <p>Keeping clothing away from needles and scissors.</p>	<p>Sewing is one way of adding detail.</p> <p>Needles and scissors can both be dangerous if not careful.</p> <p>Needles are small but very sharp so need to stay aware of where they are.</p>	<p>Children should understand the health and safety aspects of using needles and scissors. They should be able to cut a piece of thread from a spool without fraying the edges.</p> <p>Children should be able to thread a needle, using a needle threader if required, with a fine piece of thread.</p> <p>Children should learn a simple knot to tie the end of the thread of so that it will catch as it is pulled.</p>	<p>Thread</p> <p>Needle</p> <p>Needle threader</p> <p>Knot</p>
Can I use a running stitch?	<p>Use running stitch on binca using large eyed needles to sew.</p> <p>Using needles and scissors safely.</p>	<p>Sewing is one way of adding detail.</p> <p>In sewing, there are different types of stitch.</p> <p>Running stitch can be used to add patterns to binka.</p> <p>Needles and scissors can both be dangerous if not careful.</p> <p>Needles are small but very sharp so need to stay aware of where they are.</p>	<p>Children can use running stitch on a piece of binca. They understand the up and down motion which they need to follow. Children need to make sure they remember which side of the binca they need to go back through. Children should you their threading and knot tying knowledge from previous lesson to ensure the thread catches.</p> 	<p>Thread</p> <p>Needle</p> <p>Needle threader</p> <p>Knot</p> <p>Running stitch</p>
Can I sew running stitches of	<p>Use running stitch on binca using large eyed needles to sew.</p>	<p>Sewing is one way of adding detail.</p>	<p>Children should understand the up and down motion of sewing the running stitch. They should be able to produce running stitches of different sizes by missing a greater number or fewer number of holes in the binca. Children can also produce running stitches in different directions</p>	<p>Thread</p> <p>Needle</p> <p>Needle threader</p>

<p>different sizes?</p>	<p>Using needles and scissors safely.</p> <p>Sew longer and shorter stitches.</p>	<p>In sewing, there are different types of stitch.</p> <p>Running stitch can be used to add patterns to binca.</p> <p>Needles and scissors can both be dangerous if not careful.</p> <p>Needles are small but very sharp so need to stay aware of where they are.</p>	<p>to include shapes in their sewing. This will allow them to produce different designs when they sew in future.</p> 	<p>Knot Running stitch</p>
<p>Can I make a pattern using running stitch? (Will take multiple lessons)</p>	<p>Use running stitch on binca using large eyed needles to sew.</p> <p>Using needles and scissors safely.</p> <p>Sew longer and shorter stitches.</p> <p>Pick colours for a theme.</p>	<p>Sewing is one way of adding detail.</p> <p>In sewing, there are different types of stitch.</p> <p>Running stitch can be used to add patterns to binca.</p> <p>Needles and scissors can both be dangerous if not careful.</p> <p>Needles are small but very sharp so need to stay aware of where they are.</p>	<p>Children should design a piece of binca with a thought through pattern. This should demonstrate their ability to use the running stitch with different lengths and directions. Children should think about the different colours they pick and how they match the theme they have been set to work towards.</p> <p>Children should also think about how they work effectively. It may be easier to sew all of the parts which have the same colour first before switching the thread to a different colour.</p> <p>Children should take care to make sure that they are clear which side of their binca is the front and always start on the back so that the knots are hidden.</p> 	<p>Thread Needle Needle threader Knot Running stitch</p>

		Picking colours carefully is important to create a theme.		
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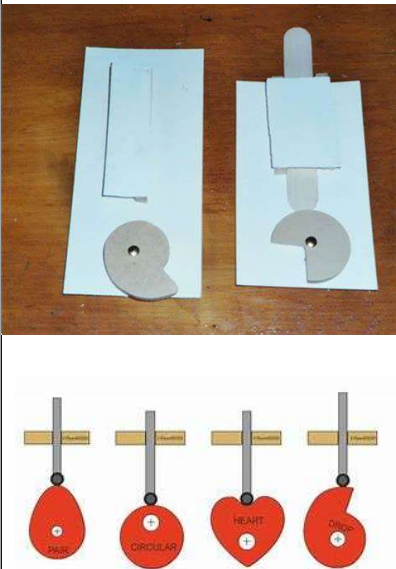
Year 3

Cooking and nutrition				
Can Is	Disciplinary	Substantive	Subject clarity	Vocabulary
Can I explain different sources of protein and why I need it in my diet?	Explain where food comes from.	<p>Meat and other products give us protein.</p> <p>Animals produce food like eggs and milk that we eat.</p> <p>We eat the eggs of different animals.</p> <p>Animals are reared and farmed in different ways. This can affect the quality of the product and the welfare of the animals.</p>	<p>Children have learnt about a balanced diet and will have talked about protein in science in year 2 and DT when they made their salad.</p> <p>Children should remember some of the toppings which they used on their salads as a protein source. They should understand that protein is important part of our diet for growth and repair.</p> <p>Children understand that meat is often the most common source of protein in our diet but there are other sources. These include products which also come from animals like milk and eggs. Other sources of protein can include pulses and beans. Some children might recognise food products such as tofu.</p>	<p>Protein</p> <p>Diet</p> <p>Animal Products</p> <p>Sources</p>
Can I investigate different ways of cooking with a pan?	<p>Boil, Fry and poach using a pan</p> <p>Apply health and safety rules.</p> <p>Carry out a risk assessment.</p> <p>Use tools and equipment effectively and safely making simple risk assessments.</p>	<p>Learn different cooking techniques including: boiling, frying and poaching.</p> <p>Cooking appliances get hot and can stay hot for a long period after their use.</p> <p>Oil and water used to cook in can spit if it gets very hot.</p> <p>Devices used for cooking often need electricity. This does</p>	<p>Eggs are always a good bet</p> <p>Children understand that a pan can be used to cook the same product in different ways. Eggs can be boiled by leaving the shell on and putting them into water. Children understand that the longer you boil the egg for the more set the inside will be. Some people eat boiled eggs warm whereas others have them as a cold snack. Children can peel a boiled egg by gently cracking it and removing the shell.</p> <p>Children can poach an egg by getting water to boil in a pan and dropping the egg into the water. They should understand that it cooks quicker than a boiled egg because there is no shell. Again, the longer it is cooked for the more set the egg will be. In boiling and poaching, you can undercook and overcook the egg but you can't burn it.</p> <p>If you put oil in a pan, you can fry an egg. The longer you fry the egg for the more set it will become but also it will burn if you cook the egg for too long. If you whisk the egg together first, you can make what we call scrambled egg.</p>	<p>Boil</p> <p>Poach</p> <p>Fry</p> <p>Equipment</p> <p>Risk Assessment</p>



		<p>not mix with water. They usually have a cord that provides a trips hazard.</p> <p>How food is cooked affects its nutritional value. Foods cooked in oil are not as healthy as those in water.</p>	<p>Children should understand that how we cook food affects how healthy it is. When we cook using water, we do not add anything to the original product. When we fry, we have to add oil to the pan to stop it sticking and oil is a fat.</p> <p>Children should have the teacher's risk assessment shared with them. They should understand that a risk assessment means thinking about the dangers and putting steps in place to stop it being as dangerous. When a teacher risk assesses something, it will be safe as long as the steps are followed.</p>	
Can I design a healthy egg snack?	Explain the health impact of cooking decisions	<p>Design criteria are the exact goals a project must achieve to be successful.</p> <p>These criteria might include the product's use, appearance, cost and target user.</p> <p>We eat the eggs of different animals.</p> <p>How food is cooked affects its nutritional value. Foods cooked in oil are not as healthy as those in water.</p>	<p>Children should develop their understanding of design criteria from KS1 to include the concept of cost and user. Within the design phase, children should have a set amount which their product can cost and they should make decisions about what they are going to include based on this. They should also be clear who they are making the product for and how that affects the design criteria.</p> <p>Children are going to design a healthy snack with eggs. They need to think about the style of egg they are going to make and what it is going to be served with. Their plan should consider the precise ingredients and the methods of preparation.</p> <p>Children should be able to produce a short method of the steps they are going to take to prepare their snack.</p> <p>Children should be able to complete a risk assessment of the activities they are going to need to do in a similar style to what the teacher produced previously.</p>	<p>Design criteria</p> <p>Produce</p> <p>Snack</p> <p>Ingredients</p> <p>Preparation</p> <p>Method</p> <p>Risk assessment</p>
Can I make my healthy egg snack?	Use tools and equipment effectively and safely making simple risk assessments.	<p>You can season food by adding salt and pepper.</p> <p>Cooking appliances get hot and can stay</p>	<p>Children should be able to follow their method to produce their egg snack. They should think about the timings and what can be prepared first so that things are ready at the same time.</p> <p>Children can be introducing to the idea of seasoning. Seasoning involves adding things to food to change the flavour. Some seasonings can be unhealthy if you use too much like salt. If you over use a seasoning, the food will not taste very nice.</p>	<p>Seasoning</p> <p>Ingredients</p> <p>Preparation</p> <p>Method</p> <p>Risk assessment</p>

	<p>Boil, Fry and poach using a pan</p> <p>Season food to have the correct taste</p> <p>Apply health and safety rules.</p> <p>Carry out a risk assessment.</p>	<p>hot for a long period after their use.</p> <p>Oil and water used to cook in can spit if it gets very hot.</p> <p>Devices used for cooking often need electricity. This does not mix with water. They usually have a cord that provides a trips hazard.</p>		
<p>Can I evaluate my egg snack?</p>		<p>Asking questions can help others to evaluate their products, such as asking them whether the selected materials achieved the purpose of the model.</p> <p>Suggest improvements to their products and describe how to implement them, beginning to take the views of others into account.</p>	<p>Children have had experience of evaluating their finished items against the design criteria in previous years and should be able to suggest strengths and areas to improve linked to the criteria.</p> <p>Children should include in the evaluation an understanding of cost of what they have produced and whether they were under or over budget. This includes whether they could have made a better product if they had spent a bit more.</p> <p>Children understand that self-evaluation does not always produce the same ideas as the views of other people. Children can ask others whether they feel their product met the design criteria.</p>	<p>Evaluate Design criteria Improvement Budget</p>

Structures and Mechanisms


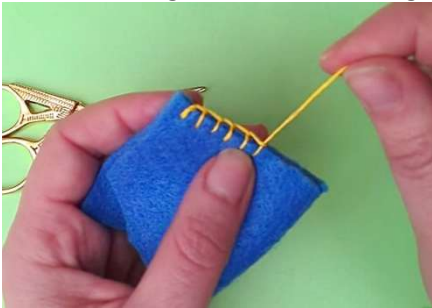

Can Is	Disciplinary	Substantive	Subject clarity	Vocabulary
Can I make levers and linkages?	Build linkages and levers	<p>Lever can be joined together by different linkages. This allows different movements around fixed points.</p> <p>Children understand input force/ motion to a mechanism can produce a different output force or motion.</p>	 <p>Children understand that you can make different levers and linkages by changing the pivot and fixed points in a mechanism. When you move these around, the input movement will cause a different output movement.</p> <p>Children can build different levers and linkages out of cardboard. They can experiment with moving the fixed and pivot points around and how it changes how the mechanism works. They can also experiment with changing the length of different levers and linkages and how that changes the mechanism's movement.</p>	<p>Lever Linkage Mechanism Pivot Fixed</p>
Can I make a cam turn a slider?	Use cams for circular motions	<p>Cams are devices that turn a circular motion into an up and down one.</p> <p>Children understand input force/ motion to a mechanism can produce a different output force or motion.</p>	 <p>Children have learnt about a wheel turning to produce an output of allowing a vehicle to roll in KS1. Children should explore cams which are different shapes and sizes. As shown the picture, they can make simple mechanisms which allow a cam to turn a slider.</p> <p>Children should understand the shape of the cam will alter the movement of the slider. Children can experiment with creating different motions of the slider and think about why they would be useful in a mechanism.</p>	<p>Cam Slider Mechanism Motion Input Output</p>
Can I explore different packaging how it is made stronger?	<p>Apply health and safety rules.</p> <p>Carry out a risk assessment.</p>	Shell structures use a net so that they can be produced a transported easily.	Children look at the packaging their food comes in. They can investigate which packaging is the strongest and think about the reason behind the strength. This will recap on some of the work in KS1 with properties of materials.	<p>Structures Corrugates Score Cut</p>

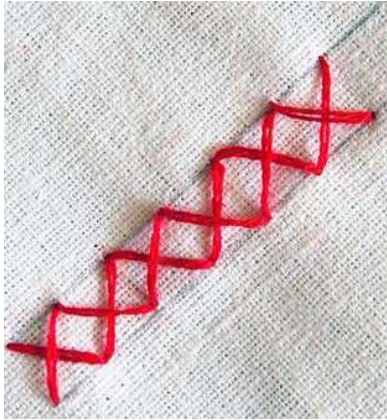

	<p>One tool or piece of equipment can come in different versions.</p> <p>Often, the more effective a tool or piece of equipment is the greater level of risk in using it.</p> <p>Use tools and equipment effectively and safely making simple risk assessments.</p>	<p>Shell structures can be made out of cardboard instead of paper to make them stronger. They are then often used in food packaging.</p> <p>Where a shell structure needs to hold a heavier load, the cardboard will need to be strengthened using a technique such as corrugation.</p> <p>To score and cut out cardboard requires sharper equipment, this needs to be used following instructions and with care to keep hands placed appropriately.</p>	<p>Children will realise that dry foods are often stored in cardboard packaging. The heavier the food the stronger the packaging needs to be. One technique for creating this is called corrugating.</p> <div data-bbox="846 240 1167 719"> </div> <p>Children understand that building up the layers of cardboard with cardboard in between helps to make it much stronger.</p> <p>Children are taught how to cut and score cardboard. They understand that the stronger the cardboard is the harder it is to get through.</p>	
<p>Can I build packaging with different nets?</p>	<p>Make a net of a 3D shape to make a structure</p> <p>Use tools and equipment effectively and safely making simple risk assessments.</p>	<p>Shell structures use a net so that they can be produced a transported easily.</p> <p>To score and cut out cardboard requires sharper equipment, this needs to be used following instructions and with care to keep hands placed appropriately.</p>	<p>Children should understand that food packaging (like cereal boxes) are structures which have been created from 2D nets. This allows the packaging to be made easier and be transported around the world without taking up as much space.</p> <p>Children should be able to build nets from cardboard 2D nets. They should understand that when you score it does not always want to go through the cardboard. Scoring can be used to allow you to fold a join better.</p>	<p>Structures nets Score Cut</p>

<p>Can I make a moving mechanism with levers, linkages and cams?</p>	<p>Build linkages and levers</p> <p>Use cams for circular motions</p> <p>Make a net of a 3D shape to make a structure</p>	<p>Levers can be joined together by different linkages. This allows different movements around fixed points.</p> <p>Children understand input force/ motion to a mechanism can produce a different output force or motion.</p> <p>Cams are devices that turn a circular motion into an up and down one.</p> <p>Children understand input force/ motion to a mechanism can produce a different output force or motion.</p>	<div style="display: flex; justify-content: space-around;">   </div> <p>Children to combine their knowledge from the topic to create a mechanism built into a cardboard structure.</p> <p>Children should think about building the mechanisms first and then build a structure to hold it. This could be built from a net template.</p> <p>Children can use what they have learnt about cardboard to strength.</p>	<p>Full topic vocabulary</p>
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Textiles

Can Is	Disciplinary	Substantive	Subject clarity	Vocabulary
<p>Can I recap a running stitch?</p>	<p>Use large eyed needles and embroidery thread to learn running, blanket, cross and back stitch.</p> <p>Apply health and safety rules.</p>	<p>Understand the purpose of different stitches.</p> <p>Needles and scissors can be dangerous if not used correctly.</p> <p>Needles can easily get lost so they need to be</p>	<p>Children learnt running stitch in year 2 which built on their knowledge of weaving from KS1. They should recap ideas shown in the picture about length of stitch, direction of stitch and creating a pattern. It is likely that children will need to recap the year 2 objectives around threading a needle and tying a knot. Children will need to be reminded about the importance of coming through the correct side of the binca.</p>	<p>Running stitch Needle Thread</p>

	Carry out a risk assessment.	stored correctly when not being used.		
Can I sew using a blanket stitch?	<p>Use large eyed needles and embroidery thread to learn running, blanket, cross and back stitch.</p> <p>Apply health and safety rules.</p> <p>Carry out a risk assessment.</p>	<p>Understand the purpose of different stitches.</p> <p>Needles and scissors can be dangerous if not used correctly.</p> <p>Needles can easily get lost so they need to be stored correctly when not being used.</p>	<p>Children should be introduced to the idea of different stitches for different purposes. They should understand that stitches can be used for decoration and to join fabric together. Children should be taught how to sew using a blanket stitch through felt.</p>  <p>They should understand that it is a stitch that can join materials together and look decorative as it does so. They should understand that the aim is to create a consistent distance between the stitching.</p>	Blanket stitch Needle Thread
Can I sew with back stitch?	<p>Use large eyed needles and embroidery thread to learn running, blanket, cross and back stitch.</p> <p>Apply health and safety rules.</p> <p>Carry out a risk assessment.</p>	<p>Understand the purpose of different stitches.</p> <p>Needles and scissors can be dangerous if not used correctly.</p> <p>Needles can easily get lost so they need to be stored correctly when not being used.</p>	<p>Children should understand that a back stitch can be used effectively for decoration. It allows you to create stitches where there are not gaps between the stitches like there is in a running stitch. It is a stitch which is good to learn on binca first because it gives the spacing needed to stay a stitch apart. Children will need to make sure they are coming through the correct side of the material when they are doing the stitch. Binca will also help them to stay in a straight line when they are doing the stitch.</p> 	Back stitch Needle Thread

<p>Can I sew with a cross stitch?</p>	<p>Use large eyed needles and embroidery thread to learn running, blanket, cross and back stitch.</p> <p>Apply health and safety rules.</p> <p>Carry out a risk assessment.</p> <p>Use cross stitch as a decoration changing the colour of thread to make it look more appealing.</p>	<p>Understand the purpose of different stitches.</p> <p>Needles and scissors can be dangerous if not used correctly.</p> <p>Needles can easily get lost so they need to be stored correctly when not being used.</p> <p>Cross stitch and running stitch can be used to create different decorations.</p>		<p>Children can use a cross stitch for decoration. By putting the stitches close together it allows a pattern to be built up. Binca is a good place to practise this as the holes are in the correct places for children to be able to sew even crosses.</p>	<p>Cross stitch Needle Thread</p>
<p>Can I use different stitches to copy a pattern?</p>	<p>Use large eyed needles and embroidery thread to learn running, blanket, cross and back stitch.</p> <p>Apply health and safety rules.</p> <p>Carry out a risk assessment.</p> <p>Use cross stitch as a decoration changing the colour of thread</p>	<p>Understand the purpose of different stitches.</p> <p>Needles and scissors can be dangerous if not used correctly.</p> <p>Needles can easily get lost so they need to be stored correctly when not being used.</p> <p>Cross stitch and running stitch can be used to create different decorations.</p>		<p>Children can be given a design such as this one and think about how they would create it themselves on a piece of binca. They will need to consider the colours, the stitches and the spacing.</p> <p>Children need to think about working in a systematic way to copy the pattern. This will include making sure the spacing is correct at the start to be able to include the design. This can be achieved by marking the design onto the binca first as an introduction to the idea of chalking a fabric.</p>	<p>Full un</p>

	to make it look more appealing.			
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Year 4

Cooking and nutrition				
Can Is	Disciplinary	Substantive	Subject clarity	Vocabulary
Can I investigate where my weekly shop comes from?	Weigh up the economic effect and environmental effect of the food they choose.	<p>Different plants grow in different climates.</p> <p>A high proportion of the food we eat in the UK does not come from this country as we do not have the right climate.</p> <p>This has an environmental and an economic effect.</p>	<p>Children could bring packaging in from their food which has information about the country of origin. Children should be able to find these countries on maps and use their knowledge from other subjects to explain why the food might grow there. This will include the understanding that the climate affects the type of food which can be grown in a country.</p> <p>Children could look at the idea of Fair Trade, which is covered in the geography curriculum as well, to understand we also buy food from other countries because people will work for less and it makes the food cheaper.</p> <p>Children should understand that food being moved around the world has an environmental impact because it involves ships and planes which cause pollution.</p> <p>Children could calculate the total journey all of their food would have taken to arrive on their plate.</p>	<p>Economic</p> <p>Environmental</p> <p>Pollution</p> <p>Fair Trade</p> <p>Climate</p>
Can I research companies and chefs who reduce food waste?	Weigh up the economic effect and environmental effect of the food they choose.	<p>Different plants grow in different climates.</p> <p>A high proportion of the food we eat in the UK does not come from this country as we do not have the right climate.</p> <p>This has an environmental and an economic effect.</p>	<p>Children could look at business like “Too good to go” and chefs like Dan Barber (examples can do different). They should understand that in the UK we waste on average 3.2kg of food a week which could make up to 8 more meals. This means as a country we waste nearly £19 billion worth of food a year. Most of this food would be edible but people choose to throw it away.</p> <p>Children should understand the difference between dates such as: used by, best before and sell by. They should understand that these have a difference in meaning between being safe to eat or not.</p> <p>Children should understand that food waste has an economic impact on families but also has an environmental effect as food can take years to decompose and contributes to landfill.</p> <p>Children should research clever solutions and ideas people have had to be able to reduce food waste and think about how they could implement some changes in school and family life.</p>	<p>Waste</p> <p>Economic</p> <p>Environmental</p> <p>Landfill</p>
Can I practise slicing, dicing and grating?	Develop slicing skills to make smaller more appealing pieces	<p>A cut involves a downward motion.</p> <p>A slice involves a sideways motion.</p>	<p>Children have covered cutting using a downward motion in previous year groups. They have used a bridge hold of what they are cutting and cut to get a flat surface.</p> <p>Children should understand that with some vegetables you need to slice not cut which is a different motion.</p>	<p>Slicing</p> <p>Cutting</p> <p>Dicing</p> <p>Grating</p> <p>Motion</p>

	<p>and to include dicing.</p> <p>Learn to remove the skin of vegetables.</p> <p>Grate to different sizes.</p> <p>Consider a greater number of hygiene factors. Risk assesses activities themselves and discuss how to reduce the risk.</p> <p>Follow health and safety advice of the adult carefully.</p>	<p>When cooking, the room needs to be well-ventilated. Disinfectant and surface cleaners help to keep our food preparation areas safe but shouldn't contact our face. In particular, our eyes and mouth.</p> <p>Sharper knives require very careful handling.</p>	<p>Children should understand that large chunks of food can be difficult to eat and make food look unappealing. Children should be able to cut food to be finer and understand that food can be diced.</p> <p>Children should be able to grate food to different sizes. Again, they should understand that some food is not very easy to eat if it is thickly grated.</p> <p>Children should understand that if food is not cut to similar sizes, then it is difficult to cook as the food will have different cooking times.</p>	
<p>Can I experiment with how different herbs and spices change the taste of food?</p>		<p>Herbs and spices can alter the flavour of bland food.</p>	<p>Children have learnt about seasoning in year 3 healthy snack where they added salt to taste. They should understand that there are herbs and spices used to make food have a different taste.</p> <p>Children should understand that different world cuisines use different combinations of herbs and spices to create distinctive flavours.</p> <p>Children should understand that herbs and spices come as fresh versions and also dried versions. By drying them, you are able to keep them for longer because they do not go out of date or spoil as quickly.</p> <p>Children can experiment with how adding different herbs and spices to a food changes the flavour and which they prefer. They understand that as well as which herbs or spice they like is a personal choice, they also understand that different quantities are a personal choice.</p>	<p>Flavour Herb Spice Dried</p>

<p>Can I follow a recipe to create Bubble and Squeak adding herbs and spices for preference?</p>	<p>Develop slicing skills to make smaller more appealing pieces and to include dicing.</p> <p>Learn to remove the skin of vegetables.</p> <p>Grate to different sizes. Combine a number of ingredients together.</p> <p>Weigh ingredients on a set of scales in multiples of 10g.</p> <p>Make healthy swaps with food.</p> <p>Consider a greater number of hygiene factors. Risk assesses activities themselves and discuss how to reduce the risk.</p> <p>Follow health and safety advice of</p>	<p>Herbs and spices can alter the flavour of bland food.</p> <p>A cut involves a downward motion.</p> <p>A slice involves a sideways motion.</p> <p>When preparing ingredients, such as mash potatoes, you can replace high fat items with healthier choices.</p> <p>When cooking, the room needs to be well-ventilated. Disinfectant and surface cleaners help to keep our food preparation areas safe but shouldn't contact our face. In particular, our eyes and mouth.</p> <p>Sharper knives require very careful handling.</p>	<p>Children understand that Bubble and Squeak is a dish that has been invented to use up leftover food. It helps to reduce food waste because the ingredients can be changes based on what is available. It was often eaten by people on a Monday after people had Sunday dinner.</p> <p>Children can follow a recipe to prepare the ingredients including instructions on how they should be prepared and the quantity of them.</p> <p>Children can apply what they have found out about herbs and spices to think about how they would adapt the recipe to their own personal taste for the flavour profile.</p> <p>Children should be able to carry out a risk assessment before they begin to ensure they are working safely at all times.</p> <p>Children will need to think about working systematically so that things are prepared before they start to cook.</p> <p>Children should build on their prior knowledge around frying to understand how this could be over or under cooked. Undercooking should include the idea that if they make it too thick the outside will cook before the middle is warm.</p>	<p>Recipe Waste Prepared Frying Under/over cooked</p>
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	the adult carefully.			
Can I make improvements to my bubble and squeak?	Make healthy swaps with food.	<p>To provide a balanced diet, it may be necessary to supplement the main part of a meal with another food group.</p> <p>When preparing ingredients, such as mash potatoes, you can replace high fat items with healthier choices.</p> <p>Some dishes can be dry without a sauce or topping.</p> <p>Herbs and spices can alter the flavour of bland food.</p>	<p>The evaluation of this will be different as they were following a recipe and did not have specific design criteria.</p> <p>Children should be able to annotate the recipe to show what they would have done differently if they were making it again. This will include the adaptations they made to change the flavour and potentially adding more detail to the instructions where they made mistakes.</p>	Recipe Improvement Adaptations Flavour

Structures and Mechanisms

Can Is	Disciplinary	Substantive	Subject clarity	Vocabulary
Can I recap my knowledge of levers, linkages, slides, wheels, axles, cams and followers?	Make a mechanism using a mixture of levers, linkages, sliders, wheels, axles, cams and followers.	Mechanisms are a mixture of levers, linkages, sliders, wheels, axles, cams and followers.	Children will need to recap the prior knowledge of year 3. Children have built these in year 3 using cardboard. They should recap the idea of fixed and pivot points on linkages and levers.	Levers Linkages Sliders Wheels Axle Cams Followers Fixed Pivot
Can I research freestanding, automated structures?		<p>Mechanisms are a mixture of levers, linkages, sliders, wheels, axles, cams and followers.</p> <p>Frame structures can be strengthened by: using triangular shapes, adding struts and jinks or reducing the length of load bearing supports.</p> <p>This requires different part of the frame to be joined together effectively and these joints to be strengthened.</p>	Children research how frame structures and mechanisms can be used in the real world. This could include the model dinosaurs in the live show of walking with dinosaurs. This would link nicely with the rest of the topic. Children should think about how they think the parts move and how they could be operated.	Mechanism Structure Parts Operated Automated

		Remote control is controlling a machine, mechanism or activity from a distance.		
Can I build a freestanding structure with the linkages, axles and moving parts?	<p>Make a mechanism using a mixture of levers, linkages, sliders, wheels, axles, cams and followers.</p> <p>Build a free-standing frame structure with strengthening aspects.</p>	<p>Mechanisms are a mixture of levers, linkages, sliders, wheels, axles, cams and followers.</p> <p>Frame structures can be strengthened by: using triangular shapes, adding struts and jinks or reducing the length of load bearing supports.</p> <p>This requires different part of the frame to be joined together effectively and these joints to be strengthened.</p>	Children can follow the instructions in a kit to build a structure and install the mechanisms. They understand the need to follow the instructions carefully and the order that is set. Children should be able to explain how different parts of the structure and mechanism will allow certain functions to take place.	Mechanism Structure Parts
Can I use remote control to operate a freestanding structure?	<p>Use a remote control to operate a mechanism.</p> <p>Connect electronic circuits correctly.</p> <p>Carry out risk assessments including the risk of water mixing with electronics.</p>	<p>Remote control is controlling a machine, mechanism or activity from a distance.</p> <p>A remote control gives the input command. It can give more than one input command to produce different outputs.</p>	Children can install the electrical parts of the mechanism to make the kit move. They understand the health and safety aspects of working with electricity. Children are able to explain how the remote control provides an input and the different output they are able to create.	Mechanism Structure Parts Operated Input Output

		<p>Electricity can be used to power a mechanism. The electronic signal has to be turned into an input to make the mechanism move.</p> <p>If the circuit is not connected correctly, then the electronic signal will not work.</p> <p>When working with electrics, you need to be careful to not get water on them.</p>		
Can I label the different parts of the mechanism and structure I have made?		<p>Mechanisms are a mixture of levers, linkages, sliders, wheels, axles, cams and followers.</p>	<p>Children should be given time to explain in detail the different parts of the structure and mechanism they have built and how it is controlled.</p> <p>Focus should be on children being able to explain the different inputs and outputs and how the mechanism moves to produce different directional movements.</p>	<p>Mechanism Structure Parts Operated Input Output</p>

Year 5

Cooking and nutrition				
Can Is	Disciplinary	Substantive	Subject clarity	Vocabulary
Can I explain what is meant by seasonality?		<p>Seasonality is the time of year when you can harvest a certain type of food and it tastes at its best.</p> <p>Eating seasonal food improves the quality because it will not have to travel as far. It tends to be cheaper as there is more available. It will also support the local economy.</p>	<p>Children should already understand that different food requires different conditions to grow in. This includes factors such as the weather but can also be linked to factors like the soil and the amount of sunlight.</p> <p>Children should understand that in the UK we have four seasons and these each have very distinctive types of weather. They should understand that because of this we have to plant crops at certain points in the year for them to be able to grow. Animals we have for meat are typically reared so that their young are born at certain times of year. This production of food based on certain seasons is called seasonality.</p> <p>Children should understand that food being able to grow naturally based on the seasons makes it cheaper as it is readily accessible and can be grown in a large quantity with less work needed.</p> <p>Children understand that when food is grown out of season this has to be done by creating artificial conditions which is expensive as it will require electricity and a space to control the conditions. The other option is that food comes from different countries and this is environmentally not good because of the food miles. This has been covered in the year 4 unit around cooking and nutrition.</p>	<p>Seasonality</p> <p>Environment</p> <p>Artificial</p> <p>Conditions</p>
Can I explain sweet and savoury?	<p>Make decisions about how much healthier a healthy alternative is and whether it affects the taste to the point where it would just be better to have less of the original.</p>	<p>A dish can be either sweet or savoury based on its ingredients and taste.</p> <p>A balanced diet will contain fats and sugars in the right quantity and proportion.</p> <p>We can improve the nutritional value of</p>	<p>Children should understand that in cooking dishes are often split into either sweet or savoury. This is often based on the sugar content. In a traditional three course meal, you would have two savour dishes and one sweet dish to finish. Children might explain that there are some dishes or ingredients that combine the two such as salted caramel.</p> <p>Children should understand that all food has a nutritional value and in the UK this legally has to be shown on the packaging that the food is sold in. The nutritional value is often colour coded and might include information about your recommended daily intake of the food. They should take care with packaging though as they recommended amounts are usually based on the needs of a fully grown adult male and not a child. Children should understand that when you are cooking you are combing the ingredients together and you need to add their nutritional values together. This means you sometimes have to make decisions about the ingredients you use.</p>	<p>Nutritional value</p> <p>Savoury</p> <p>Sweet</p> <p>Ingredients</p>

		food by replacing certain ingredients.	Using something like plain yoghurt , children should explore with how making something sweeter will improve the taste but alter the nutritional value. This could be by using things like sugar, syrup, honey or fruit. Children should understand the sweeter they have made the dish often the worse the nutritional value.	
Can I carry out market research and plan a crumble?	<p>Make decisions about how much healthier a healthy alternative is and whether it affects the taste to the point where it would just be better to have less of the original.</p> <p>Choose seasonally grown food.</p>	<p>A dish can be either sweet or savoury based on its ingredients and taste.</p> <p>A balanced diet will contain fats and sugars in the right quantity and proportion.</p> <p>We can improve the nutritional value of food by replacing certain ingredients.</p> <p>Seasonality is the time of year when you can harvest a certain type of food and it tastes at its best.</p> <p>Eating seasonal food improves the quality because it will not have to travel as far. It tends to be cheaper as there is more available. It will also support the local economy.</p>	<p>Children should understand that in designing a product they need design criteria. These can be set by the teacher for making a crumble. Once they have design criteria, they can carry out market research to inform them of how best they could meet the criteria. This is important because just making things for personal taste might not be the best product to make if you are trying to sell it.</p> <p>Children will need to consider before they begin their market research that options, they offer meet the design criteria. This should include aspects of seasonality.</p> <p>When they have carried out their market research, children should be able to design a crumble which would serve two people. They will need to research the amount of ingredients that they need to do this so that they can come up with the recipe. They should consider that although fruit has natural sugars in some fruits are sweeter than others. They should show they have made some considerations of balancing nutritional value with taste and what they could use to improve the taste of their crumble.</p> <p>Children should be able to calculate simple nutritional information about their dish. One of the design criteria might be that it needs to be under a certain number of calories or have less than a certain amount of sugar.</p>	<p>Nutritional value</p> <p>Savoury</p> <p>Sweet</p> <p>Ingredients</p> <p>Market research</p> <p>Design criteria</p>

<p>Can I make a fruit crumble?</p>	<p>Follow health and safety rules Apply food hygiene rules when cooking Risk assesses dangers and alter behaviour appropriately</p>	<p>When you cook, it is important to make sure your work area is clean but also the equipment that you use in food preparation.</p> <p>Certain electrical equipment can be more difficult to clean as it can't be submerged or has areas where dirt collects.</p> <p>Mix, weigh and measure using scales to the nearest gram. Follow a detailed recipe accurately.</p> <p>Understand how adding wet ingredients affects texture and consistency of dry ingredients.</p>	<p>Children should be able to follow a recipe they have created to make a crumble. They should think about how they work systematically to complete the tasks.</p> <p>This could include strategies such as measuring out everything they need first, doing the topping and the filling in stages. Children should be encouraged to keep their areas clean and tidy and to think about avoiding cross-contamination.</p> <p>Children should rub the ingredients together to make the crumble top. They should understand that this needs to be combined completely or else the mixture won't taste as nice.</p> <p>Children should use the skills they have learnt in other year groups about preparing food. This could include: peeling, chopping and slicing. Children should understand that some harder fruits will need to be cooked before going into the oven to cook whereas other fruits will be able to go straight into the oven. It is important that fruit is a similar size as this will affect how it cooks.</p> <p>Children should understand what they are looking for when their crumble is cooked such as a brown top and a bubbling filling.</p>	<p>Recipe Cross-contamination Rubbed Mixture</p>
<p>Can I evaluate my fruit crumble?</p>	<p>Test and evaluate products against a detailed design specification and make adaptations as they develop the product.</p>	<p>We can improve the nutritional value of food by replacing certain ingredients.</p>	<p>Children should understand that evaluations are carried out against the success criteria. This includes explaining positives and negatives they achieved against the criteria. Children should also acknowledge whether they made any adaptations during the process which has altered the original designed product. This would include changes to the quantities of ingredients and the impact this would have on nutritional value.</p>	<p>Nutritional value Savoury Sweet Ingredients Market research Design criteria</p>

Structures and Mechanisms

Can Is	Disciplinary	Substantive	Subject clarity	Vocabulary
Can I recap my knowledge of cams, levers, sliders, wheels axles and followers?	Recap of knowledge from previous year groups.		<p>Children have learnt about all of these parts of a mechanism in previous year groups. They should be able to explain how they work and use the vocabulary of input and output.</p> <p>They should be able to talk about the projects they have completed in previous year groups and how these parts of the mechanism work.</p>	<p>Mechanism Input Output</p>
Can I explore how wheel ratios affect pullies?	Change the ratio of wheels in a pulley	Mechanisms can use pulleys to produce an output. The ratio of the wheels in a pulley affect how it works.	<p>Children should understand that a pulley can be used in different ways within a mechanism. They can be used to pull something up and have been used in history as a way of lifting heavy items up.</p> <p>Children should be able to explore how changing the ratio of the wheels on the pull affects how the pulley works. Children should be able to explain the functions that a pulley might create in a mechanism and why they could use one.</p>	<p>Pulley Ratio Wheels</p>
Can I make a mechanism using gears?	Use gears to turn a mechanism	Gears can be combined to turn parts of a mechanism.	Children have looked at wheels and cams and the inputs and outputs of these parts of a mechanism. Children should be able to explain how the size and shape of a cam works.	
Can I practise cutting wood with precision and accuracy?	Use correct sawing techniques for safety and precision.	Sawing needs to be done following the correct technique and using an appropriate safety equipment.	<p>Children have not worked with wood previously in the curriculum. They should understand that the harder the material which is being cut through the more dangerous the equipment is likely to be.</p> <p>Children should also understand that wood is expensive compared to card and paper and therefore it is important to cut precisely and think about reducing waste.</p> <p>Children should practise marking out where they are going to cut following measuring. They should use a clamp and a junior hacksaw to cut through the wood. Children should understand that sawing is about being efficient in the technique. Children understand that sawing faster and harder will not be precise or accurate.</p>	<p>Precision Accuracy Measuring</p>
Can I research freestanding structures?	Explore the role of architects and engineers in the		Children should research different freestanding structures and the materials they are made from. This should include thinking about how the structure has been put together and how it has been strengthened.	<p>Practical Artistic Freestanding Architects</p>

	creation of lasting landmarks.		This will include looking at famous architects of these freestanding structures. These could include those who have designed structures which have a practical use and those which are just artistic.	
Can I design a freestanding frame structure with an electrical circuit?	Design wooden frame structures Build and attach an electric circuit to a structure	Wood is a building material that is better for building stronger and longer lasting frame structures. Structures need to be strong enough to support the mechanisms to allow them to have a different function. Working with wood requires precise cutting and joining to maintain the strength of the frame structure. An electrical circuit can be added to a structure or a mechanism to perform a function. This could include a light, buzzer or motor in a series or parallel.	Children should design a free-standing structure from wood which can have a circuit attached to it. This could include putting an aspect of the circuit on to a pulley mechanism to combine that aspect of prior knowledge. Children need to think about how the structure will be measured out and how the different parts of the structure will be attached together. Children should think about where on the structure they can attach the electrical circuit to make it look pleasing as well as functional. Children should have thought about the steps they need to take and the order which would work best to complete these.	Freestanding Electrical circuit Functional
Can I make a freestanding frame structure with an electrical circuit?	Use correct sawing techniques for safety and precision.	Sawing needs to be done following the correct technique and using an appropriate safety equipment.	Children will need to work methodically through making their structure and electrical circuit project. They should consider how their structure is being attached together (glued) and how they allow this to set in the position that it needs to be in. Children should think about making sure they are precise and accurate with their cutting. This might include that once they have measured one piece, they use this as a guide as it may be more important that the pieces are all the same length once the first piece has been cut.	Precision Accuracy Measuring Guide piece

	Build and attach an electric circuit to a structure		Electrical circuits, for cost, are going to need to stay in school so these need to be attached in a way which means they can be easily removed at the end.	
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Textiles				
Can Is	Disciplinary	Substantive	Subject clarity	Vocabulary
Can I recap the different types of stitches learnt in the school?	Use running, blanket and back stitch to join fabric together.		<p>Children have been taught a range of stitches in school and should understand that these can be used to hold fabrics together and as decoration on pieces of fabric.</p> <p>They have practised these stitches on binca and fabric but they should progress to practising them on pieces of felt.</p>	Types of stitch Fabric
Can I add decorations and embellishments to a piece of fabric?	<p>Use embellishment to give a product clear feature.</p> <p>Attach decorative features such as a bow and practical features such as a loop.</p>	<p>Decorative features make a product look more appealing to the consumer.</p> <p>When adding decorative features, it is important to think about when they are added.</p>	<p>Children should be taught how to add different types of embellishments to a piece of fabric. This could include buttons and bows and how these would need to be fixed onto the piece of fabric.</p> <p>Children should have an understanding before making their product that the order embellishments are added needs to be thought about because if you have a front and back of a product you do not want to sew through both sides.</p>	Embellishment Fabric
Can I plan and carry out product research for a bean bag toy?		Designs must meet the design criteria but they also reflect the culture and society of the time.	<p>Children should be given design criteria for making a bean bag toy. This could include information about the size of it and the need for embellishment.</p> <p>They should take the design criteria and come up with questions and potential options that could be offered in market research. They should understand that market research is used when you want the opinion of lots of people and not just take personal taste.</p> <p>Would be useful for the evaluation lesson if some of the design criteria had more of a subjective nature to them.</p> <p>Children should be able to take the market research and come up with a design for a bean bag toy. They should be able to use technology to come up with templates for their design so that the front and the back of their design matches.</p>	Embellishment Market Research

			They should think about the embellishments they are going to add to make their design look like what they are going to create.	
Can I make a bean bag toy?	<p>Use running, blanket and back stitch to join fabric together.</p> <p>Use pins to hold two pieces of fabric together before they sew. Use fabric scissors to cut material accurately.</p> <p>Use an appropriate marker on different fabrics before they cut.</p> <p>Use a pattern to mark their own material out. Use embellishment to give a product clear feature.</p> <p>Attach decorative features such as a bow and practical features such as a loop.</p> <p>Using smaller needles which are usually sharper.</p>	<p>Fabrics can be held together with different stitches and each stitch can be used for a different purpose.</p> <p>People working with textiles mark on the material to know exactly where to cut. They use appropriate scissors to be precise and they tack material together before they sew.</p> <p>Decorative features make a product look more appealing to the consumer. When adding decorative features, it is important to think about when they are added.</p> <p>Sharper tools work more efficiently in textiles but come with added dangers.</p>	<p>Children should be able to construct their bean bag toy using their patterns made on the computer and the skills learnt in this and previous units.</p> <p>They will need to think about when they add the beans to the toy so that they can get them in before the finishing stitches are done.</p>	<p>Embellishment</p> <p>Types of stitch</p> <p>Fabric</p>

	Using fabric scissors that are sharper and more dangerous.			
Can I evaluate the product I have made against the design criteria?		<p>Testing a product against the design criteria will highlight anything that needs improvement or redesign.</p> <p>A focus group is a small group of people whose reactions and opinions about a product are taken and studied. Evaluations can be made by asking product users a selection of questions to obtain data on how the product has met its design criteria. Survey users in a range of focus groups and compare results.</p>	<p>Children should be able to evaluate their product against the design criteria. They should also understand that market research can be useful to get an understanding of what people want in a product a focus group is used by companies to find out whether what they have made matches the design criteria and the market research.</p> <p>Children should be able to work in a focus group evaluating products and how well they have met the design criteria. Children should understand that a focus group is useful for a company when design criteria are more subjective. This is because it is opinion and therefore a group allows you to understand what the majority think. They should understand that one person loves another may hate!</p>	<p>Focus group Evaluate Subjective Majority</p>

Year 6

Cooking and nutrition				
Can Is	Disciplinary	Substantive	Subject clarity	Vocabulary
Can I explain what organic farming is?	Make a decision about the benefits and drawbacks of organic food.	<p>Food can be grown organically. This means it is grown without the use of man-made fertilisers, pesticides, growth regulators or feed additives.</p> <p>Organic food usually costs more because the process is more labour intensive and does not produce the same yield.</p>	<p>Children should understand that there are different ways of growing food. This will link to work that they have done about food miles and seasonality. They should understand that growing food organically will result in the food costing more because it requires more work from farmers. This balanced with what most people would consider benefits to their own health but also being better for the environment because the pesticides kill wildlife which are not intended to be killed.</p> <p>Organic can refer to plants and the way which animals are kept. Some people believe that not only are organic foods healthier they also taste better.</p> <p>Children should understand that organic foods are often seen as a luxury item and adults have to balance the decision of what they can afford compared to the benefits of the food.</p>	Organic Pesticides Environment
Can I calculate the nutritional value of different dishes?	<p>Understand that by changing specific parts of a recipe you will change the nutritional value of a dish.</p> <p>Understand how seasoning and flavouring can be a strategy to include ingredients with high nutritional value but lack in flavour or not enjoyed by personal preference.</p>	<p>Nutritional value is the health benefits a dish gives you.</p> <p>Seasoning can make things taste better but not always healthier.</p>	<p>Children have learnt about nutritional value in year 5 and that when they make things, they need to consider the combined nutritional value. They can expand this to looking at how full dishes are put together and how this adds up to form nutritional value. Children should understand that simple swaps can hugely change the nutritional value. This could include changing the carbohydrate that is in the meal or reducing the portion size.</p> <p>Children understand ways which they can get the nutritional value to a certain level for different aspects of nutrition.</p>	Nutritional value Portion size

<p>Can I research and design a recipe for vegetarian one pot dish?</p>	<p>Understand that by changing specific parts of a recipe you will change the nutritional value of a dish.</p> <p>Understand how seasoning and flavouring can be a strategy to include ingredients with high nutritional value but lack in flavour or not enjoyed by personal preference.</p> <p>Make a decision about the benefits and drawbacks of organic food.</p>	<p>Nutritional value is the health benefits a dish gives you. Seasoning can make things taste better but not always healthier.</p> <p>Food can be grown organically. This means it is grown without the use of man-made fertilisers, pesticides, growth regulators or feed additives.</p> <p>Organic food usually costs more because the process is more labour intensive and does not produce the same yield.</p>	<p>Children should understand that busy people often are looking for dishes which can be all cooked in one pot. This is because they are easy to do and reduce on things like washing up. The idea is that you cook things in the correct order so that they are all abled to be cooked in one pot.</p> <p>Children should understand that some people choose to follow a specific diet. This can be a personal choice, a health requirement, based on an allergy, an ethical decision or a religious requirement. Children should understand that people’s diet can be something that they are very passionate about. We should understand the reasons that people have come to a diet decision even if they do not agree with the decision they have made.</p> <p>Children should research one pot dishes that they could make which are vegetarian. They should be given a design criterion which includes nutritional value and financial limits. Children should understand that the recipes they find might need to be adapted to meet certain design criteria and personal taste.</p>	<p>Financial Nutritional value Design criteria Ethical</p>
<p>Can I cook a vegetarian one pot dish?</p>	<p>Explain the food hygiene considerations for food storage.</p>	<p>Certain food types must be stored in specific conditions. This can affect taste but also the safety of them to eat.</p> <p>Once food is cooked, it needs to be either eaten or stored correctly so that is safe to eat.</p>	<p>Children should be able to follow their recipe to prepare their one pot dish. It should include the skills covered in the DT curriculum of the school and include precise measuring.</p> <p>They should understand that part of cooking is adapting to reduce waste and changing for personal taste. This could include things such as a recipe calling for a certain number of grams of a vegetable but that would leave behind a small amount which might as well be added. They should also understand that taste is a personal choice and that they might alter some of the seasonings as they go through the recipe.</p>	<p>Personal taste Alter Adapt</p>

Can I evaluate my vegetarian one pot dish?		<p>Design is an iterative process, meaning alterations and improvements are made continually throughout the manufacturing process.</p> <p>Evaluating a product while it's being manufactured, and explaining these evaluations to others, can help to refine it.</p> <p>Products and inventions can be compared using a range of criteria, such as the impact on society, ease of use, appearance and value for money.</p>	<p>Children should evaluate the final product which they have made against the design criteria. They should also acknowledge that the product which was planned is unlikely to be the final product which was made as adaptation and alterations will have happened as they were preparing the food.</p>	Evaluation Adaptations
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Textiles				
Can Is	Disciplinary	Substantive	Subject clarity	Vocabulary
Can I research textiles that tell a story?			<p>Children can look at famous pieces of textiles that have been stitched to include a story. This could include tapestries which tell whole events and tapestries which tell single events.</p> <p>They should know examples of the tapestries and designers. They should understand how they were created and why people wanted them.</p>	Tapestries Textiles Narrative
Can we design class textile squares which tell a story?		<p>Design criteria should cover the intended use of the product, age range targeted and final appearance. Ideas can be</p>	<p>Children should think about a class story they want to tell through the individual contribution of their own textile square. This will require them to think about the whole project before then thinking about their own individual contribution to it.</p>	Textile square Narrative

		<p>communicated in a range of ways, including through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.</p>	<p>Children should think about their design and how they can show the specific aspects of their textile square which will help to tell the story. This includes making sure they zoom in on certain aspects of the design which may be crucial to the story being told.</p> <p>Children could use computer aided design if this would make the design more accurate but they should evaluate what is the most efficient way to design their textile square.</p>	
<p>Can I practise embellishment techniques?</p>	<p>Use different stitches, materials and coloured thread to add decoration to work.</p>	<p>When working with textiles, you can reduce waste by making sure materials are marked out correctly. This includes understanding that materials can change in shape and size depending on whether they are slack or stretched.</p> <p>Applique is a technique where pieces of material are attached to another material by stitching or gluing.</p>	<p>Children can look at different ways to embellish a piece of fabric. This could be through the stitches they use and how they can use these stitches to create characterisation for narrative pieces of textiles.</p> <p>Children should look at applique and how this can be used to add texture and form to a piece of textile.</p>	<p>Embellish Texture Form Applique</p>
<p>Can I make my class textile square to tell the class story?</p>	<p>Using smaller needles which are usually sharper. Using fabric scissors that are sharper and more dangerous.</p>	<p>Sharper tools work more efficiently in textiles but come with added dangers.</p>	<p>Children should be able make their design to contribute to the whole class narrative textile piece.</p> <p>This should include fine details and embellishments which help to tell the story. Children should understand that their textile square is quite small which means they can create more detail.</p>	<p>Design Textile Embellishment</p>

			Whole class textile should be able to be displayed together so that they can use it to tell the narrative story.	
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Innovation Project – DT process				
Can Is	Disciplinary	Substantive	Subject clarity	Vocabulary
Can I understand what is meant by innovation?	This unit should focus on the teaching of the DT process strand of the curriculum. Children should understand the Research, Design, Make and Evaluate process.		The project that the children are asked to complete will be hypothetical. This will allow them to demonstrate the concept of innovation far more than if they had to create the actual project.	Innovation Problem Solution
Can I research existing products that solve a problem?			Children should think about Dragon Den style entrepreneur projects and think about how these presentations are structured.	Products Innovation Problem Solution
Can I design an innovation solution to a problem?			They understand that innovation is the drive to find a solution to a problem that does not have one already or to solve a problem in a different way.	Products Innovation Problem Solution
Can I explain how my innovative product would be made?			The solution to a problem can come in many different ways and in solving a problem you can create another problem. Children can use their understanding of processes such as organic farming to explain this. In making food better for the environment and healthier, you make it more expensive and unaffordable to many families.	Products Innovation Problem Solution
Can I pitch my innovation to a consumer?			There are some fundamental concepts to innovation which focus around making a process easier, cheaper, quicker or more environmentally friendly. Children should understand that the best innovations solve a problem that a lot of people face. In business, although something maybe very innovative, if it does not make any money then it won't be made. People will only pay a certain amount of money to solve a problem before they will just carry on with life as it is.	Products Innovation Problem Solution Manufactured Environmental
			During the unit, children should think through their concept from research all the way through evaluation. Children should be able to use skills taught in the curriculum such as design criteria, market research and focus groups to come up with ideas and evaluate their thoughts as they go.	Products Innovation Problem Solution Manufactured Environmental Pitch
			Children should understand how a product might be manufactured. This could include linking it to the understanding of trade and importing and exporting discussed in geography throughout KS2. This should allow them to discuss that fact that many products are made abroad (often in Asia) because labour is cheaper but this means people are not always paid a fair price for the work they are doing. This also has an environmental effect on the products having to be shipped around the world.	