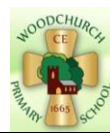
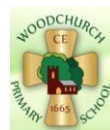


Design and Technology End Points							
	Design Knowledge	Design Skills	Make				Evaluate EYFS
			Structures/ Textiles Knowledge	Structures/ Textiles Skills	Cooking and nutrition Knowledge	Cooking and nutrition Skills	
F2	Know that a drawing of a design can be called a 'plan'.	<p>To suggest own ideas for a design and decide which materials to use to express them.</p> <p>To use pictures verbally explain what they would like to design/make.</p> <p>To begin to make suggestions for changes to different materials/ different joining or preparation techniques and think about how this would change a design.</p>	<p>Know that a structure is anything that is made up of parts held together.</p> <p>Know different techniques for joining materials and fabrics, e.g., gluing, folding, taping, tying, slotting, flanging.</p> <p>Know how to use a range of cutting tools with increasing care and precision and how to transport/store them safely e.g., scissors, hole punch, pencil.</p> <p>Know that objects can be made from materials and give examples of how certain ones can be used in their work e.g., cardboard, paper, wood, string.</p> <p>Know why tools need to be used safely.</p> <p>Know what crafts people do, e.g., potter, bushcraft</p>	<p>To create imaginative examples of structures using blocks/ construction kits.</p> <p>To join materials together using different techniques and give reasons for their choice.</p> <p>To be able to transport, store and use tools, such as scissors safely. To be able to name the tools that are being used.</p> <p>To use ideas and basic techniques from existing products</p>	<p>Know that it is important to wash their hands to remove any germs, tie hair back and clean tables.</p> <p>Know that if food has been dropped on the floor, touched with dirty hands or has turned mouldy it should not be eaten and can make people ill.</p> <p>Know that some food needs to be washed as part of the preparation process to remove any germs.</p> <p>Know vocabulary associated with textures of food e.g. lumpy, smooth, crunchy</p> <p>Know vocabulary associated with the taste of food e.g. sweet, sour, salty, spicy, bland (plain)</p> <p>Know that a varied diet means eating certain types of food in moderation.</p> <p>Know that eating food and drinking water regularly helps you grow, be healthy and have more energy.</p> <p>Know that food comes from plants or animals.</p> <p>Know that a fork can be used to secure an object when cutting with a knife.</p> <p>Know that a sieve or a colander has holes that allow liquid to pass through.</p>	<p>To correctly follow guides when washing hands before and after preparing food.</p> <p>To identify if food is safe to be eaten.</p> <p>To talk about different textures and flavours thinking about likes and dislikes.</p> <p>To verbally explain why it is important to eat regularly and drink water.</p> <p>To explain where food comes from and give examples how it can be prepared.</p> <p>To use a fork secure hold when cutting correctly.</p> <p>To drain away liquids from packaged food safely.</p>	<p>To discuss how a product works and suggest changes for improvements using 'good' / 'bad' points.</p>
F2	Disciplinary knowledge	<ul style="list-style-type: none"> <li>Return to and build on their previous learning, refining ideas and developing their ability to express their opinion.</li> <li>Use vocabulary 'like and dislike' when discussing existing designs.</li> <li>out their likes and dislikes of existing design and their own, using knowledge of joining/cutting techniques, choice of materials and health and safety requirements.</li> </ul>					

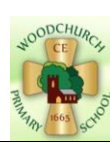


Design and Technology End Points

Design and Technology End Points									
	Design Knowledge	Design Skills	Make						Evaluate
			Structures Knowledge	Structures Skills	Mechanisms Knowledge	Mechanisms Skills	Cooking and nutrition Knowledge	Cooking and nutrition Skills	
Y1	<p>Know that a design criteria is a precise set of goals that a project must achieve in order to be successful.</p> <p>Know that annotating a sketch means to label each feature.</p> <p>Know that a user is a person who uses or operates something.</p> <p>Know that the term functional means that something is designed to be practical and useful.</p> <p>Know that using different materials/ingredients can create different outcomes.</p>	<p>To be able to use a design criteria to help inform their design.</p> <p>To draw a plan and discuss what the steps are for making the design, using first, next etc.</p> <p>To be able to create an annotated sketch.</p> <p>To be able to propose more than one idea for a product.</p> <p>To be able to explain how a product will be used and how it works.</p> <p>To explain how their product is functional.</p> <p>Explore ideas by using different materials/ingredients from a limited range to meet the design criteria.</p>	<p>Know that free standing means that the structure is not attached to or supported by another structure.</p> <p>Know that a 'stable' structure is one which is firmly fixed and unlikely to change or move.</p> <p>Know how to make structures stronger.</p> <p>Know that brick bonding is staggering the bricks.</p> <p>Know that measuring and marking before cutting gives a more precise measurement.</p> <p>Know that different joining methods are only purposeful for different materials.</p>	<p>To be able to make free standing structures that meet the design criteria.</p> <p>To be able to design a stable structure.</p> <p>To be using cutting and joining techniques to strengthen a structure.</p> <p>To think about the appropriateness and arrangement of different materials for specific tasks.</p> <p>To be able to measure, mark, cut and shape materials and components.</p> <p>To be able to compare and evaluate different joining materials.</p>	<p>Know that mechanisms are the parts of something that make it work.</p> <p>Know that a lever is a right bar that rests on a pivot and is used to move one end when pressure is applied to the other.</p> <p>Know that a pivot is the central point on which an object turns.</p> <p>Know that mechanisms can produce different types of movement; linear motion (in a straight line in one direction) or reciprocating motion (repeated up and down or back and forth motion).</p>	<p>To be able to use a lever correctly in a design.</p> <p>To be able to use a pivot correctly in a design.</p> <p>To be able to show linear and reciprocating motions within a mechanism.</p> <p>To be able to construct a slider and lever movement.</p>	<p>Know where a range of fruit and vegetables comes from and how these are grown in different places e.g. farmed or grown at home.</p> <p>Know that fruit and vegetables are part of a healthy diet and 5 a day is recommended.</p> <p>Know a bridge cutting technique allows you to prepare food safely by keeping your fingers an equal distance from the knife.</p> <p>Know that grating involves rubbing an item of food on a grater to reduce it to small shreds.</p> <p>Know that fingers must not be pressed against a grater.</p> <p>Know that some food needs to be stored in the freezer / fridge to stop germs growing.</p> <p>Know that mashing food involves crushing/beating it with a masher.</p>	<p>To briefly explain the process of farm to table.</p> <p>To refer to the Eatwell plate (knowing that fruit and vegetables take up a third of the plate) and give examples of how fruit vegetables can be eaten throughout the day with regular meals.</p> <p>To safely use a bridge technique when preparing food.</p> <p>To be able to use free standing a grater safely, leaving a small chunk of food at the end.</p> <p>To explain where some foods need to be stored.</p> <p>To be able to mash soft food</p>	<p>To be able to discuss how well their product works in relation to the design criteria and how it meets the needs of the user.</p> <p>To explore and evaluate a range of existing products.</p> <p>To say what they like and do not like about items they have made and to say why.</p>
Y1	Disciplinary knowledge	<ul style="list-style-type: none"> <li>Record and develop ideas in a sketchbook from first hand observation, experience and imagination.</li> <li>Describe what they can see, like and dislike in their work and of another designer/ existing design, using their knowledge of structure, motion and food preparation.</li> <li>Begin to form a question about an existing design.</li> <li>Use vocabulary 'compare' when discussing existing designs.</li> </ul>							



Design and Technology End Points									
	Design Knowledge	Design Skills	Make						Evaluate
			Structures Knowledge	Structures Skills	Mechanisms Knowledge	Mechanisms Skills	Cooking and nutrition Knowledge	Cooking and nutrition Skills	
Y2	<p>Know that the term purposeful means to have a useful purpose.</p> <p>Know how a template is purposeful as it helps to mark out shapes accurately and can be repeated.</p> <p>Know that a prototype is a first design from which it can be developed.</p>	<p>To explain how their design is purposeful.</p> <p>To be able to design a purposeful template and use to create their product.</p> <p>To be able to design a prototype, test the design and make justifications.</p> <p>To be able to discuss their design as it progresses.</p> <p>To explain which materials/ingredients have been used/rearranged and why, in relation to the design criteria.</p>	<p>Know that shapes and structures with wide, flat bases or legs are the most stable.</p> <p>Know that the shape of a structure can affect its strength.</p> <p>Know that a 'strong' structure is one which does not break easily.</p> <p>Know that a 'stiff' structure is one which does not bend easily.</p>	<p>To be able to create and adapt a structure that is stable.</p> <p>To be able to experiment with the shape of a structure to test the strength.</p> <p>To be able to test a structure to see the strength.</p> <p>To be able to test a structure based upon how stiff it is.</p>	<p>Know that wheels need to be round to rotate and move. This is called rotary motion.</p> <p>Know that an axle is a rod/spindle that passes through the centre of a wheel or group of wheels on a chassis.</p> <p>Know that a fixed axle is stuck to the body and the wheels move along whereas a freely moving axle is where the axle moves with the wheels.</p> <p>Know that the frame of a vehicle is called a chassis and needs to be balanced.</p>	<p>To be able to use wheels that move successfully in a rotary motion.</p> <p>To be able to use an axle with wheels to create rotational movement in a design.</p> <p>To explore and justify their choice of axle holders compared to axles attached to the body.</p> <p>To explore a range of materials to create an axle and wheels and evaluate their performance.</p> <p>To explore different frames in real life that have a chassis and wheels.</p>	<p>Know a claw grip cutting technique allows you to cut accurately whilst keeping your fingertips safe from the knife.</p> <p>Know that peeling involves removing the outer covering of the fruit/vegetable and to peel away from yourself.</p> <p>Know that a varied diet involves eating a wide variety of foods in the right proportions.</p> <p>Know that foods need to be organised in sections within a fridge to stop any germs transferring.</p>	<p>To be able to use a claw grip cutting technique safely using a vegetable knife</p> <p>To be able to use peeling safely.</p> <p>Give examples of a varied diet and explain why it is important.</p> <p>To explain how foods need to be organised in the fridge.</p>	<p>To explore and evaluate a range of existing products thinking about how they have been made.</p> <p>To think about if existing products are purposeful.</p> <p>To consider and explain how the finished product could be improved.</p>
			<p>Know that sewing is a method of joining fabric.</p> <p>Know that a knot must be tied before sewing and after sewing the final stitch.</p> <p>Know that a running stitch involves passing the needle in and out of the fabric at regular intervals in a line.</p> <p>Know that stitches need to be pulled taut (tight) to ensure that the design is strong.</p> <p>Know that a needle is used to create a passage in the material for the thread to pass through.</p> <p>Know that different finishing techniques can be used to make the design more aesthetically pleasing.</p>				<p>To be able to use sewing as a joining technique.</p> <p>To try to tie a knot when sewing a thread.</p> <p>To be able to use a running stitch on a piece of fabric.</p> <p>To try to thread a needle and use it to create a passage in material.</p> <p>Use fabric materials such as beads, ribbons, stitching, sequins, fabric crayons to add to their designs.</p>		
Y2	Disciplinary knowledge	<ul style="list-style-type: none"> <li>Keep annotations in sketchbooks showing how they have changed their designs.</li> <li>Record and explore ideas from first hand observation, experience and imagination.</li> <li>Explain how other designers have made their designs purposeful and use prototypes to develop this.</li> <li>Use vocabulary 'justify and examine' when discussing existing designs.</li> </ul>							



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Design and Technology End Points									
	Design Knowledge	Design Skills	Make					Evaluate	
			Textiles Knowledge	Textiles Skills	Mechanisms Knowledge	Mechanisms Skills	Cooking and nutrition Knowledge		Cooking and nutrition Skills
<b>Y3</b>	<p>Know that an exploded diagram shows how a product can be assembled and fitted together.</p> <p>Know that fit for purpose means that the product is designed to do what it is meant to do.</p> <p>Know that designs can be adapted and changed throughout the designing and making process.</p>	<p>To be able to produce an annotated exploded diagram.</p> <p>To be able to design a product that is fit for purpose.</p> <p>Develop more than one design or adaptation of an initial design.</p>	<p>Know how to securely join two pieces of fabric together.</p> <p>Know that when two edges of fabric has been joined together it is called a seam.</p> <p>Know that seam allowance is the area between the fabric edge and stitching line.</p> <p>Know that a whipstitch is a stitch that sews two pieces of fabric together by passing over an edge.</p> <p>Know that a pattern is a flat template that is used as a key instruction guide for cutting the separate pieces of a textile piece. It can be reused.</p> <p>Know that some products are turned inside out after sewing so the stitching is hidden.</p>	<p>To be able to use a range of joining techniques, including different stitches, to join fabric together.</p> <p>To create seam allowance within design.</p> <p>To be able to use a whipstitch to join two pieces of fabric together.</p> <p>To be able to use a premade pattern to measure out separate pieces of a textile piece.</p> <p>To be able to use different techniques to make a product more aesthetically pleasing.</p> <p>To be able to thread a needle with greater independence.</p>	<p>Know that exploded diagrams are used to show how different parts of a product fit together.</p> <p>Know that a pneumatic system uses compressed air.</p> <p>Know that pneumatic systems can be used as part of a mechanism.</p> <p>Know that everyday objects use pneumatics for movement.</p>	<p>To be able to use an exploded diagram within the designing process.</p> <p>To explore how movement can be created using compressed air.</p> <p>To recall and explore objects that use pneumatic systems, such as pneumatic delivery tubes, exercise equipment, air brakes etc.</p>	<p>Know where the ingredients come from (e.g. ham from a pig).</p> <p>Know that foods can be grown, reared, caught and processed.</p> <p>Know that spreading involves extending the area of a particular object, such as butter.</p> <p>Know that there are a variety of influences on the food we choose to eat (e.g. who we are with, season, health, occasion)</p> <p>Know that different foods require different cutting techniques based upon how hard they are and their surface.</p> <p>Know what types of food can be served together to make a balanced meal.</p>	<p>To explain the process of farm to table for a particular food.</p> <p>To be able to spread using a cutlery knife.</p> <p>To be able to choose between the bridge hold and claw grip to cut food into even chunks/strips.</p>	<p>To explore existing products to consider if they are fit for purpose and give suggestions for improvements.</p> <p>To investigate key events and individuals in Design and Technology.</p> <p>To identify the strengths and weaknesses of their design in relation to the purpose/user.</p>



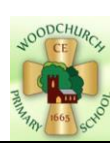
<b>Y3</b>	Disciplinary knowledge	<ul style="list-style-type: none"> <li>● Suggests improvements to work by keeping notes in sketchbooks.</li> <li>● Independently research a designer/ crafts person using the web or books.</li> <li>● Compare the work of different designers and cultures.</li> <li>● Make notes about specific techniques used by designers</li> </ul>
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Design and Technology End Points									
	Design Knowledge	Design Skills	Make						Evaluate
			Structures Knowledge	Structures Skills	Electrical systems Knowledge	Electrical systems Skills	Cooking and nutrition Knowledge	Cooking and nutrition Skills	
Y4	<p>Know that a cross-sectional diagram shows a view of an object as if it has been cut.</p> <p>Know that the choice of tools can affect the finish of the material.</p>	<p>To be able to use a cross-sectional diagram as part of the designing process.</p> <p>To be able to choose appropriate tools to give the best finish to make it aesthetically pleasing.</p>	<p>Know that a shell structure is a hollow structure made from a thin outer layer.</p> <p>Know that a net is a pattern on a flat sheet which can be folded to form a 3-dimensional object.</p> <p>Know how to construct strong, stiff shell structures.</p> <p>Know that the weight of a structure needs to be evenly spread on the base to make it secure.</p>	<p>To be able to use appropriate materials to form a shell structure.</p> <p>To be able to test and design a net suited to the design specification.</p> <p>To be able to use appropriate materials and joining techniques to create a strong, stiff structure.</p> <p>To be able to experiment with the weight displacement of the product to ensure that it is secure.</p>	<p>Know that an electrical system consists of various components that allow electrical energy to be transported.</p> <p>Know that a series circuit is where all series elements are arranged in a single path.</p> <p>Know that a bulb gives out light when electricity is passed through it.</p> <p>To know that a switch connects and breaks the connections within a circuit.</p> <p>Know that batteries contain acid, which can be dangerous if they leak.</p>	<p>To be able to explain how electrical systems are used in everyday products.</p> <p>To be able to demonstrate how to make a successful circuit.</p> <p>To be able to include a bulb in a circuit design.</p> <p>To explore how a switch can be used to make and break a circuit.</p> <p>To understand how to be safe when using a battery.</p>	<p>Know that food is caught or farmed and changed to make it safe and palatable/tasty to eat.</p> <p>Know that people have different views on how food is produced and that this influences the food they buy.</p> <p>Know that kneading dough helps ingredients in the flour to combine to form gluten which makes it more elastic with a better structure.</p> <p>Know how to read the increments on mechanical scales to the nearest 10g.</p> <p>Know how to read the increments on a jug to the nearest 10ml.</p>	<p>To mix, stir and combine wet and dry ingredients uniformly to form a dough.</p> <p>To measure accurately to the nearest 10 grams using mechanical scales.</p> <p>To measure accurately to the nearest 10ml using a jug.</p>	<p>To sketch/annotate products to help analyse and understand how products are made.</p>



Disciplinary knowledge	<ul style="list-style-type: none"> <li>● Keep notes about the purpose of my work and adapt and improve my original ideas.</li> <li>● Make notes about techniques used by designers and crafts people with the different styles.</li> <li>● Identify designs from other cultures pointing out key features.</li> <li>● Present a collection of work justifying choices.</li> <li>● Know and use vocabulary 'argue and judge' when discussing existing designs.</li> </ul>
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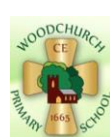
Design and Technology End Points								
	Design Knowledge	Design Skills	Make					Evaluate
			Textiles Knowledge	Textiles Skills	Mechanisms Knowledge	Mechanisms Skills	Cooking and nutrition Knowledge	



<p><b>Y5</b></p>	<p>Know that innovative means new methods and original thinking.</p> <p>Know how to use research to help create a design criteria.</p> <p>Know how a clear step by step structure is needed to create a product in time and to a good standard.</p>	<p>To be able to think about how a design can be innovative.</p> <p>To be able to develop a design criteria that focuses on the purpose and user.</p> <p>To plan the sequence of work to ensure the product is created in time, eg. using a storyboard.</p>	<p>Know that a backstitch follows the pattern of 2 stitches forwards, then one stitch back.</p> <p>Know that a fastening is a device that opens or secures something.</p> <p>Know that consistently sized stitches is important to strengthen the design and make it more aesthetically pleasing.</p> <p>Know that fabrics can be strengthened, stiffened and reinforced.</p> <p>Know that a 3D textile product can be made from a combination of accurately made pattern pieces, fabric shapes and different fabrics.</p> <p>Know that pinning and tacking helps hold fabric in place.</p>	<p>To be able to use a backstitch and give examples when it may be used in a design.</p> <p>To be able to thread a needle independently.</p> <p>To be able to choose and justify a choice of a fastening device.</p> <p>To be able to use consistently sized stitches in a design.</p> <p>To be able to stiffen a fabric to make it more rigid.</p> <p>To be able to pin and tack fabric pieces together.</p>	<p>Know that a cam is a special shaped piece of material that changes rotary motion to linear motion.</p> <p>Know that a linkage is joined to one or more levers to provide movement.</p> <p>Know that a piece of wood/dowel needs to be held in a g-clamp and bench hook when cutting with a junior hacksaw to keep it secure and safe.</p> <p>Know that when using a junior hacksaw, a back and forth steady motion must be maintained with fingers away from the blade.</p> <p>Know how to join 2 pieces of wood</p>	<p>To include a cam within a design.</p> <p>To include a linkage within a design.</p> <p>To make sure that a piece of wood is being held securely prior to cutting with a junior hacksaw.</p> <p>To be able to cut a piece of wood effectively and safely using a junior hacksaw.</p> <p>To cut accurately and safely to a marked line.</p> <p>To explore a range of joining materials, e.g. wood glue, PVA glue, Glue gun.</p>	<p>Know that measurements can be converted to make it easier to measure ingredients.</p> <p>Know that dough must be the same thickness to ensure even cooking.</p> <p>Know appropriate portion sizes and the importance of not skipping meals.</p> <p>Know that ethical dilemmas can affect the food people choose to buy.</p>	<p>To follow a recipe and convert between different units of metric measure, eg. g/kg, ml/l</p> <p>To use a rolling pin to roll out dough to a specific thickness.</p> <p>To use hands to shape measures into evenly sized pieces.</p> <p>To compare different versions of the same dish.</p>	<p>To give a report about the making process and design, using technical vocabulary.</p> <p>To consider and explain how the finished product could be improved relating to the design criteria and tests on the user (user and purpose).</p>
<p><b>Y5</b></p>	<p>Disciplinary knowledge</p>	<ul style="list-style-type: none"> <li>● Explain how designs have changed over periods in history.</li> <li>● Independently select materials and techniques to create a specific outcome.</li> <li>● Know and use vocabulary 'relate and criticise' when discussing existing designs.</li> <li>● Describe technical aspects in their work, e.g. knowledge of cutting in a particular way, joining techniques etc.</li> <li>● Regularly analyse and reflect on progress taking account of what you hope to achieve.</li> </ul>							

**Design and Technology End Points**

**Make**



	Design Knowledge	Design Skills	Structures Knowledge	Structures Skills	Electrical systems Knowledge	Electrical systems Skills	Cooking and nutrition Knowledge	Cooking and nutrition Skills	Evaluate
Y6	<p>Know different methods of research, such as surveys and questionnaires, can help gather information to inform a design criteria.</p> <p>Know that Computer Aided Design (CAD) uses computers to digitally create 2D drawings and 3D models before a product is manufactured.</p> <p>Know that isometric drawing is a method for representing 3D models in scale.</p>	<p>To be able to collect suitable information to help inform a product design.</p> <p>To use CAD to help design products.</p> <p>To use isometric drawing to help show 3D representations of a design.</p>	<p>Know that different joining techniques can create different outcomes.</p> <p>Know that triangle joints can be used to strengthen, stiffen and reinforce 3D frameworks.</p> <p>Know that the arm should be in a straight line with the hammer handle. The end of the handle should be held with the weight of the person at the end of it.</p> <p>Know that small taps using the wrist should be used to stabilise the nail before moving onto stronger hits with a hammer. moving the arm at the elbow.</p>	<p>To explore and evaluate a range of joining materials, e.g. wood glue, PVA glue, Glue gun, hammer, nails</p> <p>To be able to reinforce 3D frameworks using triangle joints.</p> <p>To be able to use a hammer correctly and safely.</p> <p>To be able to hit a nail into a piece of a wood safely and correctly with a hammer.</p>	<p>Know that a buzzer is an electrical device that makes a buzzing noise and is used for signalling.</p> <p>Know that an electrical motor converts electrical energy into rotational movement, causing the motor's axle to spin.</p> <p>Know that a motorised product is one which uses a motor to function.</p>	<p>To be able to include a buzzer in a circuit design.</p> <p>To be able to model and explain how an electrical motor works within a circuit.</p> <p>To be able to create a motorised product.</p>	<p>Know that an egg needs to be separated from the shell prior to cooking.</p> <p>Know that when eggs are raw they can contain harmful bacteria.</p> <p>Know that yeast based dough needs to be kneaded in order to spread the carbon dioxide bubbles so that the dough rises.</p> <p>Know that food labels include the relevant nutritional values that relate to the guideline daily amounts for a person.</p>	<p>To crack an egg correctly and safely.</p> <p>To follow hygiene protocols to ensure that the risk of food poisoning is reduced.</p> <p>To be able to use yeast within a recipe.</p> <p>To use information on food labels to inform choice.</p>	<p>To use user product testing and analysis to suggest improvements for a product. Use this to develop a prototype.</p>
Y6	Disciplinary knowledge	<ul style="list-style-type: none"> <li>● Provide a reasoned evaluation of both my own and professionals' work which takes account of the starting points, intentions and context behind the work,</li> <li>● Set out ideas using annotation in sketchbooks and keep notes as to how the ideas have changed and why.</li> <li>● Adapt and refine their work to reflect its meaning and purpose, keeping notes and annotations.</li> <li>● Independently develop ideas using personal choice of existing designs.</li> <li>● Independently select materials and techniques to create a specific outcome.</li> <li>● Describe what their work is influenced by,</li> </ul>							