Waterhouses CE
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Design and Technology progression

	Designing	Making	Evaluating	Technical Knowledge/Sticky knowledge	Food Technology
EYFS	Think of what they want to make with a given set of resources • Begin to be aware that the resources they have will limit what they can make • Talk to an adult about what they want to make • Make decisions about how to approach a task before starting • Start to choose the resources they need to make a product	Handle equipment safely • Explore a variety of materials, tools and techniques, for example know how lego joins together • Begin to appreciate that glue does not work on all materials • Show increasing levels of independence in the making stage	Be prepared to stop to check how well their product is developing • Changing strategy as needed when they know their product is not turning out the way they wanted • Be able to explain to others how they made their product and be able to offer a simple explanation as to how they would improve on it	Think of a range of ways of joining two resources together • Begin to use a wider range of tools carefully and skilfully • Begin to understand which materials are suitable for certain tasks.	Know why it is important to wash their hands before handling food • Begin to understand which foods go together and which do not • Begin to name certain foods such as sandwich, samosas etc.

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Design and Technology progression

YEAR 1	Begin to research existing products before designing their own • When researching, find out how products work and which materials have been used. • Use own ideas to design something • Describe how their own idea works • Design a product which moves • Explain to someone else how they want to make their product • Make a simple plan before making • Begin to develop their own ideas through drawings, and where appropriate, make templates or mock ups of their initial ideas using ICT (if needed).	Use own ideas to make something • Assemble and join materials using a variety of methods • Begin to build structures, exploring how they can be made stronger, stiffer and more stable. • Explore the use of different mechanisms (for example sliders, wheels and axles) in their products. • With help, measure, mark out and cut a range of materials. • Use tools safely (e.g. scissors and a hole punch). • Begin to assemble, join and combine materials and components together using a variety of temporary methods (e.g. glue or sellotape). • Begin to use simple finishing techniques to improve the appearance of their products	Describe how something works • Explain what works well and not so well in the model they have made • Begin to evaluate their products as they are developed, identifying strengths and possible changes they might make.	Make their own model stronger • Make a product that has at least one moving part e.g. wind/ simple motor powered boat	Cut food safely • Know that all food comes from either plants or animals. • Use basic food handling, hygiene practices and personal hygiene • Know how to prepare simple dishes safely and hygienically without using a heat source. • Know how to use techniques such as cutting, peeling and grating.

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Design and Technology progression

YEAR 2	• Begin to develop their design ideas using research and discussion with peers and adults. • Understand the purpose of their product • Have an identified target group in mind when designing and making a simple product. • Think of an idea and plan what to do next • Explain why they have chosen specific textiles or materials • Draw a simple design and label the parts of their product • develop their own ideas through drawings, and where appropriate, make templates or mock ups of their initial ideas using ICT (if needed).	Choose tools and materials and explain why they have chosen them • Join materials and components in different ways, including glue, sellotape and masking tape. • Can identify and name a simple selection of hand tools (e.g. scissors). • Carry out finishing techniques that have been modelled by the teacher • Use simple sewing techniques including cutting, shaping and joining fabric to make a simple product. • build structures, exploring how they can be made stronger, stiffer and more stable. • With help, measure, cut and score with some accuracy. • Start to assemble, join and combine materials in order to make a product. • Start to choose and use appropriate finishing	Evaluate their work against their design criteria. • Look at a range of existing products and what they like and dislike about products and why. • Start to evaluate their products as they are developed, identifying strengths and possible changes they might make. • With confidence talk about their ideas, saying what they like and dislike about their product.	Make a model stronger and more stable • Use wheels and axles, when appropriate to do so • Know how simple mechanisms work e.g. sliders and linkages • Make a product that has at least two moving parts.	Know that everyone should eat at least five portions of fruit and vegetables each day. • Demonstrate how to prepare simple dishes safely and hygienically without using a heat source. • Demonstrate how to use techniques such as cutting, peeling and grating. • Weigh ingredients to use in a recipe • Describe the ingredients used when making a dish or cake • Can talk about which food is healthy and which is not • Follow safe procedures for food safety and hygiene.

		techniques based on their own ideas.			

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Design and Technology progression

YEAR 3	Research independently and generate some ideas before thinking about resources. • Consider the purpose and audience for their product • Order the main stages of making a product, continually referring to purpose and establish criteria for a successful product. • Prove that a design meets the specification • Design a product and make sure that it meets the design criteria including looking attractive (if needed) • Draw annotated designs with labels that detail their material choices and suitability of the given materials • Learn about inventors, designers, engineers, chefs and manufacturers who have developed ground breaking products. • Start to understand whether their products can be	Follow a step-by-step plan, choosing the right equipment and materials • Select the most appropriate tools and techniques for a given task • Work accurately to measure, mark out, make cuts, score, make holes and assemble components with more accuracy. • Start to work safely and accurately with a range of simple tools. • Choose finishing techniques to improve the appearance of their products using a range of equipment including ICT • Start to understand that mechanical systems (such as levers and linkages) create movement. • Start to think about their ideas as they make their product and be willing to change things if they help them to improve their work. • Start to measure,	Explain how to improve a finished model • Know why a model has or has not been successful • Evaluate their product against their original design criteria (e.g. how well it meets its intended purpose). • Begin to disassemble and evaluate familiar products and consider the views of others to improve them. • Evaluate the key designs of individuals in DT has helped shaped the world.	Know how to strengthen a product by stiffening a given part or reinforce a part of the structure • Use a simple IT program within the design • Create a product that incorporates a pulley mechanism.	Describe how food ingredients come together • Weigh out ingredients and follow a given recipe to create a dish • Know when food is ready for harvesting • Demonstrate hygienic food preparation • Understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of heat source. • Begin to understand how to use a range of techniques, such as peeling, chopping, slicing, gracing, mixing, spreading, kneading and baking. • Begin to know that to be active and healthy, food and drink are needed to provide energy for the body.

	recycled or reused. • When planning, explain their choices of materials and components, including function. • develop their own ideas through drawings, making templates or mock ups of their initial ideas using ICT (if needed).	tape or pin, cut and join fabric with some accuracy.			

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Design and Technology progression

YEAR 4	Research as a matter of course before considering designing a product. • Use ideas from other people when designing e.g. creating a mood board of existing products • Confidently make labelled drawings from different views, showing specific features. • Produce a plan and explain the use of materials, equipment and processes • Persevere and adapt work when original ideas do not work • If the first attempt fails, identify strengths and future areas for development. • Communicate ideas through annotated sketches that show different viewpoints of the product • Begin to very familiar with different inventors, designers, engineers, chefs and manufacturers who have	Know which tools to use for a particular task and show knowledge of handling the tool accurately and safely. • Know which material is likely to give the best outcome based on its properties • Mark, measure and cut accurately a range of materials using appropriate tools, equipment and techniques. • Start to join and combine materials and components accurately in temporary and permanent ways. • Sew, weave or knit using a range of stitches • Show high levels of perseverance when things do not go as they would wish in the first instance. • Start to understand the mechanical and electrical systems have an input, process and output. •	Evaluate and suggest improvements for designs • Evaluate products for both their purpose and appearance • Evaluate their own and others work • Evaluate their product, carrying out appropriate tests. • Evaluate their product both during and at the end of the assignment. • Present a product in an interesting way • Be able to disassemble and evaluate familiar products and consider the views of others to improve them.	Link scientific knowledge by using lights, switches or buzzers • Use IT where appropriate to add to the quality of the product • Create a product that incorporates at least one lever.	Bring a creative element to the food product being designed • Know which season various foods are available for harvesting • Know where and how a variety of ingredients are grown, reared, caught and processed. Recognise safe practices in the kitchen and can identify hazards e.g. hazards when using an oven • Know how to use a range of techniques, such as peeling, chopping, slicing, gracing, mixing, spreading, kneading and baking. • know that to be active and healthy, food and drink are needed to provide energy for the body

	developed ground breaking products.	Know how mechanical systems (such as pulleys or gears) create movement. • Know how simple electrical circuit and components can be used to create functional products. • Understand how to reinforce and strengthen a 3d framework. • Begin to use finishing techniques to strengthen and improve their appearance of their product using a range of equipment, including ICT			

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YEAR 5	Competently research products similar to the one they are intending to design and evaluate strengths and weakness to be incorporated into their own design. • Research and use ICT where appropriate • Design, with a range of initial ideas, after collecting information from investigating existing products • Produce a detailed, step-by-step plan • Explain how a product will appeal to a specific audience and how it meets the purpose • Create annotated 3D designs of their design on isometric or squared paper from a range of viewpoints. • With growing confidence, apply a range of finishing techniques including those from art and design. • Start to appreciate how	Name and use a range of tools and equipment competently • Select appropriate materials, tools and technique (e.g. cutting, shaping, joining and finishing) accurately. • Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities. • Incorporate mechanical systems (such as pulleys or gears) to create movement in their products. • Know how more complex electrical circuits and components can be used to create functional products and how to program a computer to monitor changes in the environment and control their products. • Use	Suggest alternative plans; outlining the positive features and drawbacks • Evaluate appearance and function against original criteria • Begin to evaluate their product personally and seek evaluation from others. • Evaluate a product against original design specifications and by carrying out tests.	• Suggest alternative plans; outlining the positive features and drawbacks • Evaluate appearance and function against original criteria • Create a product that incorporates gears	Be both hygienic and safe in the kitchen • Know how to prepare a meal by collecting the ingredients in the first place • Weigh and measure accurately (timings, dry ingredients and liquids) • Begin to understand that seasons may affect the food available. • Understand how food is processed into ingredients that can be eaten or used in cooking. • Know how to prepare and cook a variety of predominantly savoury dishes safely and hygienically, including where appropriate, the use of a heat source. • Begin to understand that different food and drink contain different substances – nutrients, water and fibre – that are needed for health.

	make products cost to make.	finishing techniques to strengthen and improve the appearance of their products using a range of equipment including ICT. • Make a prototype before making a final version • Carry out finishing techniques to enhance the appearance and function of their product			
YEAR 6	When researching, be competent in discriminating as to what would be and would not be helpful for their intended product. • Use market research of existing products to inform their design • Follow and refine original plans, justifying it in a convincing way • Draw	Confidently select appropriate tools, materials, components and techniques and use them efficiently. • Know how to use any tool correctly and safely • Know what each tool is used for • Explain why a specific tool is best for a specific action • Make modifications go along	Test and evaluate designed products with specified audience where possible • Explain how products should be stored and give reasons • Evaluate product against clear criteria • Evaluate their work both during and at the end of the assignment. • Record their	Know which IT product would further enhance a specific product • Use knowledge to improve a made product by strengthening, stiffening or reinforcing • Use electrical systems correctly and accurately to enhance a given product • Know when a product they have made is	Explain how food ingredients should be stored and give reasons • Work within a budget to create a meal • Understand the difference between a savoury and sweet dish • Know how to prepare and cook a variety of predominantly savoury dishes safely and hygienically, including

	detailed 3D designs using exploded diagrams or cross sectional drawing where appropriate to display finer details • Show that culture and society is considered in plans and design specification • Show thought has been given to materials relating to recycling and sustainability. • Know how much products cost and make choices accordingly.	and explain their reasons. • Construct products using permanent joining techniques. • Use mechanical systems such as pulleys and gears competently to create movement in their products. • Know how more complex electrical circuits and components can be used to create functional products and how to program a computer to monitor changes in the environment and control their products. • Use finishing techniques to strengthen and improve the appearance of their products using a range of equipment including ICT. • Pin, sew and stitch materials together to create a product	evaluations using drawing with labels.	improved by either the use of pulleys, levers or gears.	where appropriate, the use of a heat source. • Know different food and drink contain different substances – nutrients, water and fibre – that are needed for health.