Design and Technology- Curriculum Map

Year 1

Topic/themes	Mechanisms: Moving pictures	Cookery: Healthy sandwiches	Freestanding Structures: Bridges
Steps to Success *Research* *Knowledge* *Design* *Develop* *Evaluate*	What are the stages of a DT project? What moving pictures already exist? What is a slider mechanism? What is a lever mechanism? Design a moving picture using a slider and lever mechanism What tools will I need and how do I use them safely? What materials will I need? Make a moving picture following your design. Evaluate - How does my design fit the criteria? Does my project work? What could I have done differently? How do I clean up and tidy up safely?	What are the stages of a DT project? What kinds of sandwiches are there? Design a healthy sandwich. How can I be safe and clean when working with food? What tools will I need and how do I use them safely? What materials (ingredients) will I need and where do they come from? What is the method for making a sandwich? Make a sandwich following your design. Evaluate - How does my design fit the criteria? Does my project work? What could I have done differently? How do I clean up and tidy up after using food and cooking equipment?	What are the stages of a DT project? What is a structure? What structures do we know about? That we can see out and about? How can I make a structure stronger, stiffer and more stable? What tools will I need and how do I use them safely? What materials will I need? How can I combine materials together? Design a free standing bridge Make a free standing bridge by assembling, joining and combining materials and components. How do I clean up and tidy up safely? Evaluate - How does my design fit the criteria? Does my project work? What could I have done differently?
Knowledge	-To recognise the stages of a DT project: Design, Make, Evaluate -To know about the movement of levers and slider mechanisms and how they work. -To know how to use a labelled drawing when designing -To know how to transport and use tool safely and effectively eg. scissors, split pins - To understand that a template can be used when making -To understand that 3D textile products can be assembled from 2 identical shapes - To understand the simple characteristics of materials and components eg. Fabrics -To know appropriate ways to tidy up and clear away after DT activities.	-To recognise the stages of a DT project: Design, Make, Evaluate -To know where food comes from -To understand about food safety and food hygiene. -To know how to use a labelled drawing when designing -To know how to transport and use tool safely and effectively eg. blunt knife - To understand the simple characteristics of materials and components eg. vegetables, butter -Know appropriate ways to tidy up and clear away after DT activities.	-To recognise the stages of a DT project: Design, Make, Evaluate - To know that existing products are available -To know how freestanding structures can be made stronger, stiffer and more stable -To know how to produce a design based on design criteria -To know how to transport and use tool safely and effectively eg. scissors -To understand that the ways materials are combined and manipulated effects the produced item - To understand the simple characteristics of materials and components eg. -To know appropriate ways to tidy up and clear away after DT activities.
Skills	- Join a variety of materials (including fabric) accurately, e.g. using glue or tape. (KPI)	- Select and explain why they have chosen a particular tool for the task.	- Join a variety of materials (including fabric) accurately, e.g. using glue or tape. (KPI)

	- Create and use levers and sliders. - Draw a simple picture of an intended design with basic labelling. (KPI) - With help put ideas into practice - Describe how an existing product works (e.g. the toy moves when I turn the handle') -Talk about their own and others' work identifying strengths and/or weaknesses - Order products or designs chronologically and begin to explain reasons why they are ordered in that way. - Select and explain why they have chosen a particular tool for the task. - Select and explain their choices of materials, sometimes with help (KPI) - Explain how to keep safe	- Select and explain their choices of materials, sometimes with help (KPI) - Explain how to keep safe during a practical task. - Draw a simple picture of an intended design with basic labelling. -With help put ideas into practice - Describe how an existing product works) -Talk about their own and others' work identifying strengths and/or weaknesses - Cut accurately and safely with blunt knife - Measure and weigh food items using nonstandard measures (e.g. spoons and cups) to produce a dish safely. (KPI) - Identify the main food groups, including fruit and vegetables - Identify the source for common foods.	- Create and use levers and sliders. - Draw a simple picture of an intended design with basic labelling. (KPI) - With help put ideas into practice - Describe how an existing product works (e.g. the toy moves when I turn the handle') -Talk about their own and others' work identifying strengths and/or weaknesses - Order products or designs chronologically and begin to explain reasons why they are ordered in that way. - Select and explain why they have chosen a particular tool for the task. - Select and explain their choices of materials, sometimes with help (KPI) - Explain how to keep safe - Produce detailed, labelled drawings or models of products based on design criteria (KPI) - Use ICT packages to create a labelled design or plan - Think of ideas and plan what to do next, based on experience of working with materials and components. - Compare and contrast great bridge/tower designs, explaining why a particular design is significant in engineering history. - Understanding of different mechanisms - Explain how closely finished products meet their design criteria and say what they could do better in the future. - Understanding of different designers (e.g. Isambard Brunel) - Use tools safely for cutting and joining - With support choose appropriate materials and suggest ways of manipulating them to achieve a desired effect. (KPI) - know how to cut and join safely -cutting materials - Attach features and join appropriately, with glue and/or tape, for different materials and situations. (KPI) - Build simple structures & Understanding of language stiffer, stronger, more stable
Vocabulary	• Levers • Sliders • Push Pull • Directional Language	• Cutting • Gratin • Slicing • Names of tools	• Stiffer • Stronger • More stable • Names of resource e.g. Glue types

Key assessments			

Year 2

	Textiles: Templates & joining techniques- felt Christmas decoration	Cookery: Prepare and serve rock cakes/muffins	Mechanisms: Wheels and Axles
Steps to Success *Research* *Knowledge* *Design* *Develop* *Evaluate*	What are the stages of a DT project? What puppets are out there? How are they used? What is a textile? What materials will I need? What tools will I need and how do I use them safely? What different joining techniques are there? What different stitches can we learn? Design a bookmark using different joining and stitching techniques How can I join/combine materials together? Make a puppet following your design How do I clean up and tidy up safely? Evaluate - How does my design fit the criteria? Does my project work? What could I have done differently?	What are the stages of a DT project? What healthy options are there for sweet snacks? Where does some of the food we eat come from? Design rock cakes/ muffins What tools will I need and how do I use them safely? What materials (ingredients) will I need? How can I join/combine food materials together? What happens when they get mixed together? What does it mean to have a healthy balance of food? Make rock cakes/muffins following a recipe and your design How can I be safe and clean when working with food? How do I clean up and tidy up after using food and cooking equipment? Evaluate - How does my design fit the criteria? Does my project work? What could I have done differently?	What are the stages of a DT project? What is a wheel? What is an axle? How does the wheel and axle mechanism work? Why are they important and where would we find them? Design a moving vehicle with a wheel and axle What tools will I need and how do I use them safely? What materials will I need? How can I join/combine materials together? Make a moving vehicle following their design How do I clean up and tidy up safely? Evaluate - How does my design fit the criteria? Does my project work? What could I have done differently?

Knowledge	-To recognise the stages of a DT project: Design, Make, Evaluate -To know how to use a labelled drawing when designing -To know how to transport and use tool safely and effectively eg. scissors, needles - To understand that a template can be used when making -To understand that 3D textile products can be assembled from 2 identical shapes - To understand the simple characteristics of materials and components eg. Fabrics -To know appropriate ways to tidy up and clear away after DT activities.	- To recognise the stages of a DT project: Design, Make, Evaluate - To know that existing products are available - To know where food comes from - To understand about food safety and food hygiene. - To know how to produce a design based on design criteria - To know how to transport and use tool safely & effectively eg. table knife, grater To understand that the ways materials are combined and manipulated effects the produced item - To understand the simple characteristics of materials and components eg. basic and combined ingredient - To know appropriate ways to tidy up and clear away after DT activities. - To recognise the need for a healthy balance of foods in a meal	-To recognise the stages of a DT project: Design, Make, Evaluate - To know that existing products are available - To know about the movement of wheel and axle mechanisms and how they work - To know how to produce a design based on design criteria - To know how to transport and use tool safely and effectively eg. Scissors - To understand that the ways materials are combined and manipulated effects the produced item - To understand the simple characteristics of materials and components eg. - To know appropriate ways to tidy up and clear away after DT activities.
Skills	- Draw a simple picture of an intended design with basic labelling. (KPI) - With help put ideas into practice - Talk about their own & others' work identifying strengths and/or weaknesses - Order products or designs chronologically and begin to explain reasons why they are ordered in that way. - Cut out shapes from a range of fabrics & papers. Join fabrics using running stitch, glue, staples, oversewing & tape. - Cut accurately & safely with scissors - Join a variety of materials (including fabric) accurately, e.g. using glue or tape. (KPI) - Select & explain why they have chosen a particular tool for the task. - Select and explain their choices of materials, sometimes with help (KPI) - Explain how to keep safe during a practical task	Produce detailed, labelled drawings or models of products based on design criteria (KPI) - Think of ideas and plan what to do next, based on experience of working with materials/ tools. - Investigate a range of existing products and talk about them - Explain how closely finished products meet their design criteria and say what they could do better in the future. - Use equipment safely for cutting components. - With support choose appropriate materials and suggest ways of manipulating them to achieve a desired effect. (KPI) - Work safely & hygienically. - Begin to cut, peel, grate and chop a range of ingredients. Measure ingredients with increased independence to make healthy dishes. (KPI) - Recognise the need for a variety of foods in a diet. - Explain where the food they eat comes from (e.g. by referring to countries, counties, animals & plants	D1- Produce detailed, labelled drawings or models of products based on design criteria (KPI) D2- Use ICT packages to create a labelled design or plan D3- Think of ideas and plan what to do next, based on experience of working with materials and components. D4- Compare and contrast great designs, explaining why a particular design is significant in engineering history. M1- Use tools safely for cutting and joining materials and components. M2 - With support choose appropriate materials and suggest ways of manipulating them to achieve a desired effect. (KPI) M3- know how to cut and join safely E1 - Understanding of different mechanisms E2- Explain how closely finished products meet their design criteria & say what they could do better in the future. E3- Describe why a design, or a designer is important. T2 -cutting materials T3- Attach features to a vehicle (e.g.an axle and wheels). Join appropriately, with glue and/or tape, for different materials and situations. (KPI) T4- Understanding of language stiffer, stronger, more stable. T4 Evaluate and improve structure using criteria. - T5 knowledge of different wheels.
Vocabulary	• Names of equipment • Felt • running stitch • Needle • Thread • fabric	• Bridge cut hold • Names of equipment • Names of fruits • Equal portions • Balanced diet	• Wheels • Axels • 'stopper' • Chassis • Stiffer • Stronger

			• More stable • Balances • Straight
Key Assessments			

Year 3

	Mechanisms: Levers/linkages pneumatics	**Structures: framed and shell structure (science link)**	**Cookery: Prepare and cook a simple nutritional dish**
Steps to success *Research* *Knowledge* *Design* *Develop* *Evaluate*	What are the stages of a DT project? What is a lever? What is an pneumatic? How does the lever and pneumatic system work to create movement? Where can you find levers and linkages? What tools will I need and how do I use them safely? What materials will I need and what are their functional properties? How can I join/combine the materials together? Design a history booklet with moving parts Make a history booklet following your design Evaluate - How does my design fit the criteria? Does my project work? What could I have done differently? How do I clean up and tidy up safely?	What are the stages of a DT project? What is a shell structure? What is the difference between a shell and framed structure? Where will I find a shell structure? How can I make a shell structure? Design a shelter for seeds to germinate in using a shell structure What tools will I need and how do I use them safely? What materials will I need and what are their functional properties? How can I join/combine the materials together? Make a shell structure using your design Evaluate - How does my design fit the criteria? Does my project work? What could I have done differently?	What are the stages of a DT project? How can I be safe and clean when working with food? Where does some of the food we eat come from? What food comes from the UK? What food comes from other countries? What is a kebab? What foods are used in a kebab? Design both a sweet and savoury kebab What materials are best suited to your design? Why? What properties do they have that make them suited for your design? What cooking techniques are there? Make a savoury and sweet kebab What tools will I need and how do I use them safely? How do I clean up and tidy up after using food and cooking equipment? Evaluate - How does my design fit the criteria?

		How do I clean up and tidy up safely?	Does my project work? What could I have done differently?
Knowledge	What are the stages of a DT project? What is a lever? What is an pneumatic? How does the lever and pneumatic system work to create movement? Where can you find levers and linkages? What tools will I need and how do I use them safely? What materials will I need and what are their functional properties? How can I join/combine the materials together? Design a history booklet with moving parts Make a history booklet following your design Evaluate - How does my design fit the criteria? Does my project work? What could I have done differently? How do I clean up and tidy up safely?	- To recognise the stages of a DT project: Research, Design, Make, Evaluate - To know how to make strong, stiff shell structures - To understand about safety and preparing/ clearing up from activity - To know how to produce a design based on design criteria to meet a range of needs and be fit for purpose - To recognise that materials have functional properties which makes them better suited to different designs - To know how to select, transport and use tool safely and effectively eg hack saws - To understand the simple characteristics of materials and components eg cool melt glue	-To recognise the stages of a DT project: Research, Design, Make, Evaluate - To know where food comes from (UK and other countries) -To understand about food safety, hygiene & preparing/ clearing up from activity - To know how to produce a design based on design criteria to meet a range of needs and be fit for purpose - To recognise that materials have functional properties which makes them better suited to different designs - To understand that there is a range of cooking techniques - To know how to select, transport and use tool safely and effectively eg. veg knife, grater, skewer - To understand that the ways materials are combined and manipulated effects the produced item - To know what a balanced diet is.
Skills	- To recognise the stages of a DT project: Research, Design, Make, Evaluate - To know how levers, levers and pneumatic systems create movement - To understand about safety and preparing/ clearing up from activity - To know how to produce a design based on design criteria to meet a range of needs and be fit for purpose - To recognise that materials have functional properties which makes them better suited to different designs - To know how to select, transport and use tool safely and effectively eg	- Share ideas through words, labelled sketches and models, recognising that designs have to meet a range of needs, including being fit for purpose (KPI) -Use ICT packages to create a labelled design or plan, in detail - Make realistic plans, identifying processes, equipment & materials needed. -Investigate the design features of familiar existing products. - Suggest improvements to products made & describe how to implement them (taking the views of others into account) M1- Select the appropriate tools & explain choices. - Use an understanding of different materials to choose which materials will be needed for a task and explain why. (KPI) - Follow health & safety rules. - Measure & mark wood /dowel - Attach features to a design using appropriate joining techniques. Being to use a glue gun with close supervision (KPI) - Create a shell structure using diagonal struts to strengthen	- Share ideas through words, labelled sketches and models, recognising that designs have to meet a range of needs, including being fit for purpose (KPI) - Make realistic plans, identifying processes, equipment and materials needed. -Investigate the design features (including identifying ingredients) of familiar existing products. - Suggest improvements to products made and describe how to implement them (taking the views of others into account) - Select the appropriate tools and explain choices. - Use an understanding of different materials to choose which materials will be needed for a task and explain why. (KPI) - Follow health and safety rules for cooking activities. - Begin to understand different cooking techniques and use one to combine a variety of ingredients to cook a nutritious meal. (KPI) - Describe what a balanced diet is. - Identify food which comes from the UK and other countries
Vocabulary	- Share ideas through words, labelled sketches and models, recognising that designs have to meet a range of needs, including being fit for purpose (KPI) - Make realistic plans, identifying processes, equipment and materials needed. -Investigate the design features of familiar existing products. - Suggest improvements to products made and describe how to implement them (taking the views of others into account) - Explain the impact of a design or designer on design history and how this has helped to shape the world. - Select the appropriate tools/ explain choices.	• Glue gun • Junior hacksaw • G clamp • Bench hook • Joint • Attaching • Joining • Strengthen • Jinks corner • Prototype • Modify • Design brief/purpose	• Peeling • Thread • Claw grip • Bridge hold • Vegetable knife • Assemble • Combine • Serve • Portion • Garnish • Assemble • Visually appealing

	- Use an understanding of different materials to choose which materials will be needed for a task and explain why. (KPI) - Follow health and safety rules activities. T2- Measure & mark wood/dowel - Attach features to a design using appropriate joining techniques. Being to use a glue gun with close supervision (KPI) • - Create & use levers and/or pneumatics in their products		
Key assessments			

Year 3 & 4

	Mechanisms: Levers/linkages (catapults) pneumatics	**Electrical Systems: Simple circuits & switches (Torches or Pressure pad for biosphere)**	**Cooking: Healthy & varied diet Design & serve a savoury scone for an afternoon tea Egyptian food and Greek food**
Steps to success *Research* *Knowledge* *Design* *Develop* *Evaluate*	What are the stages of a DT project? What is a lever? What is an pneumatic? How does the lever and pneumatic system work to create movement? Where can you find levers and linkages? What tools will I need and how do I use them safely? What materials will I need and what are their functional properties? How can I join/combine the materials together? Design a … Make a … Evaluate - How does my design fit the criteria? Does my project work? What could I have done differently? How do I clean up and tidy up safely?	- What are the stages of a DT project? To know how existing products meet the need of users. Where can I collect and find information to inform my design ideas? How do I know if a design is fit for purpose and meets the needs of the user? What is a success criteria? How can simple circuits be made? How can I create my design step by step? Understand how to use tools safely, demonstrating awareness of health and safety. Know how to choose from a range of tools and materials, reflecting on their understanding of characteristics of components and tools. Demonstrate their understanding of joining techniques.	What are the stages of a DT project? How can I be safe and clean when working with food? Where does some of the food we eat come from? What food comes from the UK? What food comes from other countries? What food can you find in Greece? What food can you find in Egypt? What is the same about these foods? What is different about these foods? What cooking techniques are there? Make a savoury and sweet Greek food/Egyptian food What tools will I need and how do I use them safely? How do I clean up and tidy up after using food and cooking equipment? Evaluate - How does my design fit the criteria? Does my project work? What could I have done differently?
Knowledge	- To recognise the stages of a DT project: Research, Design, Make, Evaluate	-To recognise the stages of a DT project: Research, Design, Make, Evaluate -To know how existing products meet the need of users. - To know that information can be collected different sources and is	-To recognise the stages of a DT project: Research, Design, Make, Evaluate -To know how existing products meet the need of users. - To know that information can be collected different sources and is

	- To know how levers, Linkages and pneumatic systems create movement - To understand about safety and preparing/ clearing up from activity - To know how to produce a design based on design criteria to meet a range of needs and be fit for purpose - To recognise that materials have functional properties which makes them better suited to different designs - To know how to select, transport and use tool safely and effectively eg	used to inform design ideas. - To understand that a design must be fit for purpose and meet the needs of the user. - To know how to make realistic step by step designs and to understand that designs can be reflected upon through process. -To understand how to prepare/ clear up from activity - To know how to choose from a range of tools and materials, reflecting on their understanding of characteristics of components and tools, -To understand how to use tools safely, demonstrating awareness of health and safety. - To know how to make healthy eating choices and why.	used to inform design ideas. - To understand that a design must be fit for purpose and meet the needs of the user. - To know how to make realistic step by step designs and to understand that designs can be reflected upon through process. -To understand how to prepare/ clear up from activity - To know how to choose from a range of tools and materials, reflecting on their understanding of characteristics of components and tools, -To understand how to use tools safely, demonstrating awareness of health and safety. - To know how to make healthy eating choices and why. -To know some ways in which food can be made more appealing. -To know how to prepare and cook a healthier meal applying previously learnt skills. To know the importance of eating a healt
Skills	- Share ideas through words, labelled sketches and models, recognising that designs have to meet a range of needs, including being fit for purpose (KPI) - Make realistic plans, identifying processes, equipment and materials needed. -Investigate the design features of familiar existing products. - Suggest improvements to products made and describe how to implement them (taking the views of others into account) - Explain the impact of a design or designer on design history and how this has helped to shape the world. - Select the appropriate tools/ explain choices. - Use an understanding of different materials to choose which materials will be needed for a task and explain why. (KPI) - Follow health and safety rules activities. T2- Measure & mark wood/dowel - Attach features to a design using appropriate joining techniques. Being to use a glue gun with close supervision (KPI) - Create & use levers and/or pneumatics in their products	D1 - Collect information from a number of different sources and use this information to inform design ideas in words, labelled sketches, diagrams and models, keeping in mind fit for purpose and the end user. (KPI) D3 - Make realistic, step by step plans, reflecting on designs as the product develops E1 - Describe how an existing product is useful to the user. E2 - Identify what has worked well and what could be improved, evidencing and explain the results of the research. M1 - Analyse the potential of a range of tools and use them with accuracy. M2 - Choose from a range of materials, showing an understanding of their different characteristics and with support begin to combine them. (KPI) M3-- Follow health & safety rules. F1- Showing and awareness of a healthy and varied diet prepare and cook a savoury dishes using the skills previously learnt. (KPI) F2- Make healthy eating choices and explain why. F3- Explain some of the processes that foods go through /make them more appealing.	D1 - Collect information from a number of different sources and use this information to inform design ideas in words, labelled sketches, diagrams and models, keeping in mind fit for purpose and the end user. (KPI) D3 - Make realistic, step by step plans, reflecting on designs as the product develops E1 - Describe how an existing product is useful to the user. E2 - Identify what has worked well and what could be improved, evidencing and explain the results of the research. M1 - Analyse the potential of a range of tools and use them with accuracy. M2 - Choose from a range of materials, showing an understanding of their different characteristics and with support begin to combine them. (KPI) M3-- Follow health & safety rules. F1- Showing and awareness of a healthy and varied diet prepare and cook a savoury dishes using the skills previously learnt. (KPI) F2- Make healthy eating choices and explain why. F3- Explain some of the processes that foods go through /make them more appealing.
Vocabulary	• Lever • Linkage • Cogs • Dowel • Pneumatics • Adhesives • Mechanism	• Circuit • Bulb • bulb holder • buzzer • switches • simple circuit • current • pressure pad • electricity • crocodile clips	• Savoury • Sweet • Additives • Carbohydrates • Proteins • Fibre • Fat • medium resistant food • minerals • blending • juicing • combine • techniques

Key assessments			

Year 4

	Cooking- Healthy & varied diet Design & serve a Savoury scone afternoon tea	**Textiles: Felt puppet**	**Electrical Systems: Simple circuits & switches (Torches or Pressure pad for biosphere)**
Steps to success *Research* *Knowledge* *Design* *Develop* *Evaluate*		What are the stages od a DT project? What materials will I need for my design? What tools will I need for my design? To know how existing products meet the need of users. Where can I collect and find information to inform my design ideas? How do I know if a design is fit for purpose and meets the needs of the user? What is a success criteria? What are the different ways of joining material (eg glue, sewing, weaving, tying) What different types of stitches are there? E.g. a running stitch, a back stitch, hemming stitch. Know and select the most appropriate stitch for a purpose. Know how to select appropriate/ complimentary thread colours. Know how to cut, join and stitch 2 pieces of felt together. Know	- What are the stages of a DT project? To know how existing products meet the need of users. Where can I collect and find information to inform my design ideas? How do I know if a design is fit for purpose and meets the needs of the user? What is a success criteria? How can simple circuits be made? How can I create my design step by step? Understand how to use tools safely, demonstrating awareness of health and safety. Know how to choose from a range of tools and materials, reflecting on their understanding of characteristics of components and tools. Demonstrate their understanding of joining techniques.
Knowledge	-To recognise the stages of a DT project: Research, Design, Make, Evaluate -To know how existing products meet the need of users. - To know that information can be collected different sources and is used to inform design ideas. - To understand that a design must be fit for purpose and meet the needs of the user. - To know how to make realistic step by step designs and to understand that designs can be reflected upon through process. -To understand how to prepare/ clear up from activity - To know how to choose from a range of tools and materials, reflecting on their understanding of characteristics of components and tools, - To understand how to use tools safely, demonstrating awareness of health and safety. - To know how to make healthy eating choices and why. -To know some ways in which food can be made more appealing. -To know how to	To know how to develop detailed designs that are aimed at targeted individuals/ groups. To know how to share ideas for designs in a range of ways and understand how to produce and use prototypes and pattern pieces. To recognise that during the design process their work approaches may need to be modified. To know how to modify products as a result of ongoing evaluations by themselves and others. To know how to consider and evaluate existing products. To recognise how fashions and fabrics have changed over time and how this has affected fashion. To understand how an individual in the field of design and technology has helped shape the world. To demonstrate increasing accuracy using more complex tools. To demonstrate understanding of characteristics of materials by independently selecting best materials for tasks. To know and show how their product takes into account the users safety. To know how to plan, prepare a	-To recognise the stages of a DT project: Research, Design, Make, Evaluate -To know how existing products meet the need of users. - To know that information can be collected different sources and is used to inform design ideas. - To understand that a design must be fit for purpose and meet the needs of the user. - To know how to make realistic step by step designs and to understand that designs can be reflected upon through process. -To understand how to prepare/ clear up from activity - To know how to choose from a range of tools and materials, reflecting on their understanding of characteristics of components and tools, -To understand how to use tools safely, demonstrating awareness of health and safety. - To know how to make healthy eating choices and why.

	prepare and cook a healthier meal applying previously learnt skills. To know the importance of eating a healthy.	simple meal safely using an awareness of ingredients, cooking techniques and hygiene. To recognise how they can have a healthy and affordable diet. To understand and share with others their knowledge of how ingredients were grown, reared, caught and processed.	
Skills	-To recognise the stages of a DT project: Research, Design, Make, Evaluate -To know how existing products meet the need of users. - To know that information can be collected different sources and is used to inform design ideas. - To understand that a design must be fit for purpose and meet the needs of the user. - To know how to make realistic step by step designs and to understand that designs can be reflected upon through process. -To understand how to prepare/ clear up from activity - To know how to choose from a range of tools and materials, reflecting on their understanding of characteristics of components and tools, - To understand how to use tools safely, demonstrating awareness of health and safety. - To know how to make healthy eating choices and why. -To know some ways in which food can be made more appealing. -To know how to prepare and cook a healthier meal applying previously learnt skills. To know the importance of eating a healt	D1- Develop detailed criteria for designs for products aimed at particular individuals or groups, sharing ideas through cross-sectional and exploded diagrams, prototypes and pattern pieces. (KPI) D3- Check work as it develops & modify their approach in light of progress. D4- Research cultural traditions and evidence their influence in their own work. E1- Explain the form and function of familiar existing products. E2- Demonstrate modifications made to a product, as a result of ongoing evaluation, by themselves and others. E3- Explain how fashions have changed over time and how this has affected fashion. Describe how an individual in the field of design and technology has helped shape the world. M1- Use more complex tools with increasing accuracy. M2- Independently choose the best materials for a task, showing an understanding of their working characteristics. (KPI) M3- Demonstrate how their products take into account the safety of the user., F1- Plan, prepare a simple healthy meal safely using an awareness of ingredients, cooking techniques and hygiene. (KPI) F2- Plan how they can have a healthy/affordable diet. F3- Explain how the ingredients were grown, reared, caught and processed.	D1 - Collect information from a number of different sources and use this information to inform design ideas in words, labelled sketches, diagrams and models, keeping in mind fit for purpose and the end user. (KPI) D3 - Make realistic, step by step plans, reflecting on designs as the product develops E1 - Describe how an existing product is useful to the user. E2 - Identify what has worked well and what could be improved, evidencing and explain the results of the research. M1 - Analyse the potential of a range of tools and use them with accuracy. M2 - Choose from a range of materials, showing an understanding of their different characteristics and with support begin to combine them. (KPI) M3-- Follow health & safety rules. F1- Showing and awareness of a healthy and varied diet prepare and cook a savoury dishes using the skills previously learnt. (KPI) F2- Make healthy eating choices and explain why. F3- Explain some of the processes that foods go through /make them more appealing.
Vocabulary	• D1 - Collect information from a number of different sources and use this information to inform design ideas in words, labelled sketches, diagrams and models, keeping in mind fit for purpose and the end user. (KPI) D3 - Make realistic, step by step plans, reflecting on designs as the product develops E1 - Describe how an existing product is useful to the user. E2 - Identify what has worked well and what could be improved, evidencing and explain the results of the research. M1 - Analyse the potential of a range of tools and use them with accuracy. M2 - Choose from a range of materials, showing an understanding of their different characteristics and with support begin to combine them. (KPI) M3-- Follow health & safety rules. F1- Showing and awareness of a healthy and varied diet prepare and cook a savoury dishes using the skills previously learnt. (KPI) F2- Make healthy eating choices and explain why. F3- Explain some of the processes that foods go through /make them more appealing.	• Levers • Linkages • Mechanism • Cogs • Dowel • Pneumatics • Adhesives • pulley system	• Circuit • Bulb • bulb holder • buzzer • switches • simple circuit • current • pressure pad • electricity • crocodile clips

Key assessments			

Year 5

	Cookery- Celebrating seasonality and making bread (History Link)	Mechanisms: Gears and Pulleys: (Science Link) Space theme	Structures: Frame structures: (History Link) Air raid shelter
Steps to success *Research* *Knowledge* *Design* *Develop* *Evaluate*			
Knowledge	To know how to use information from various sources. To understand that ideas can be presented in a range of ways. To know how to use and modify their own detailed plans. To know that ideas need to meet a range of needs. To know that a design should be considered in context of the culture or society it was designed for. To understand that designs are developed over time and can be shown on a time line. To recognise that developments in technology have impact on designs. To know which tools are used needed during the DT process and know how to use them safely and with precision. To know how to select and use materials with precision. To know how to combine foods in a range of ways. To know how to test and evaluate products against a detailed design specification and make adaptations as products are developed. To know when various foods are in season and how to include seasonal ingredients in dishes planned and prepared. To know how to evaluate meals in terms of their contribution towards a balanced diet.	To know how to use information from various sources. To understand that ideas can be presented in a range of ways. To know how to use and modify their own detailed plans. To know that ideas need to meet a range of needs. To know that a design should be considered in context of the culture or society it was designed for. To understand that designs are developed over time and can be shown on a time line. To recognise that developments in technology have impact on designs. To know which tools are used needed during the DT process and know how to use them safely and with precision. To know how to select and use materials with precision. To know how to test and evaluate products against a detailed design specification and make adaptations as products are developed. To know how to create a frame to support their mechanism.	To know how to use information from various sources. To understand that ideas can be presented in a range of ways. To know how to use and modify their own detailed plans. To know that ideas need to meet a range of needs. To know that a design should be considered in context of the culture or society it was designed for. To understand that designs are developed over time and can be shown on a time line. To recognise that developments in technology have impact on designs. To know which tools are used needed during the DT process and know how to use them safely and with precision. To know how to select and use materials with precision. To know how to test and evaluate products against a detailed design specification and make adaptations as products are developed. To know how to create a frame to support their mechanism. To know how to create cams, gears or pulleys to use in their products.

Skills	D1 - Use various sources of information, clarifying/sharing ideas through discussion, labelled sketches, cross - sectional diagrams and modelling, recognising that ideas have to meet a range of needs. (KPI) D3 - Work form own detailed plans, modifying where appropriate. E1 - Investigate the design features of the recipe in context of culture or society in which it was designed or made E2 - Test and evaluate products against a detailed design specification and make adaptations as they develop their product. E3 - Create a timeline to sequence the development of a design over time and describe how technology has influenced it. M1 - Name and select the appropriate tools for a task and use them with precision. M2 - Select and combine materials with precision for a specific purpose. (KPI) M3- Select and name appropriate tools for specific jobs and demonstrate how to use them safely. F1- Understand that food can be combined in a variety of ways (e.g. kneading, rubbing in and mixing). Using seasonal ingredients plan and create a dish. (KPI) F2- Evaluate meals and consider if they contribute towards a balanced diet. F3- Explain what times of year particular foods are in Season.	D1 - Use various sources of information, clarifying/sharing ideas through discussion, labelled sketches, cross -sectional diagrams and modelling, recognising that ideas have to meet a range of needs. (KPI) D2 - Use computer aided designs to represent designs. D3 - Work form own detailed plans, modifying where appropriate. E1 - Investigate the design features (including identifying components of a familiar existing product in the context of culture or society in which it was designed or made E2 - Test and evaluate products against a detailed design specification and make adaptations as they develop their product. E3 - Create a timeline to sequence the development of a design over time and describe how technology has influenced it. M1- Name and select the appropriate tools for a task and use them with precision. M2- Select and combine materials with precision for a specific purpose. (KPI) M3- Select and name appropriate tools for specific job & demonstrate using them safely. T2- Cut safely & accurately to a marked line. T3- Begin to select the most appropriate methods for joining materials independently. E.g. using a glue gun with increased independence (still supervised) (KPI) T4- Build a framework using a range of materials (e.g. wood, card & corrugated plastic) to support mechanisms. T5- Create cams, gears or pulleys in their products.	D1 - Use various sources of information, clarifying/sharing ideas through discussion, labelled sketches, cross - sectional diagrams and modelling, recognising that ideas have to meet a range of needs. (KPI)D3 - Work form own detailed plans, modifying where appropriate. E1 - Investigate the design features (including identifying components and ingredients) of a familiar existing product in the context of culture or society in which it was designed or made E2 - Test and evaluate products against a detailed design specification and make adaptations as they develop their product. E3 - Create a timeline to sequence the development of a design over time and describe how technology has influenced it. M1 - Name and select the appropriate tools for a task and use them with precision. M2 - Select and combine materials with precision for a specific purpose. (KPI) M3- Select and name appropriate tools for specific jobs and demonstrate how to use them safely. T2- Cut safely & accurately to a marked line. T3- Begin to select the most appropriate methods for joining materials independently. E.g. using a glue gun with increased independence (still supervised) (KPI) T4- Build a framework using a range of materials (e.g. wood, card & corrugated plastic) to support mechanisms.
Vocabulary	• Seasonal, availability, foraging ,knead, prove	• Gear train, cams, cogs, follower, pulleys, systems,	• Triangulation, framework, cladding, modifying,
Key assessments			

Year 6

	Electrical Systems: More complex switches and circuits. (Game including more complex electrical circuit)	**Cooking: Celebrating Culture Design, make, serve a homemade version of foods celebrating our multicultural society.**	**Textile: Combining different fabric shapes Maya inspired bag with Patterns (Use printed fabric from art to then make into a bag)**

Steps to success *Research* *Knowledge* *Design* *Develop* *Evaluate*			
Knowledge	To know how to develop detailed designs that are aimed at targeted individuals/ groups. To know how to share ideas for designs in a range of ways and understand how to produce and use prototypes and pattern pieces. To recognise that during the design process their work approaches may need to be modified. To know how to modify products as a result of ongoing evaluations by themselves and others. To know how to consider and evaluate existing products. To recognise how fashions and fabrics have changed over time and how this has affected fashion. To understand how an individual in the field of design and technology has helped shape the world. To demonstrate increasing accuracy using more complex tools. To demonstrate understanding of characteristics of materials by independently selecting best materials for tasks. To know and show how their product takes into account the users safety. To know how to join materials using the most appropriate method for the material or purpose. To demonstrate understanding of the most appropriate electrical systems by incorporating it into their design.	To know how to develop detailed designs that are aimed at targeted individuals/ groups. To know how to share ideas for designs in a range of ways and understand how to produce and use prototypes and pattern pieces. To recognise that during the design process their work approaches may need to be modified. To know how to modify products as a result of ongoing evaluations by themselves and others. To know how to consider and evaluate existing products. To recognise how fashions and fabrics have changed over time and how this has affected fashion. To understand how an individual in the field of design and technology has helped shape the world. To demonstrate increasing accuracy using more complex tools. To demonstrate understanding of characteristics of materials by independently selecting best materials for tasks. To know and show how their product takes into account the users safety. To know how to plan, prepare a simple meal safely using an awareness of ingredients, cooking techniques and hygiene. To recognise how they can have a healthy and affordable diet. To understand and share with others their knowledge of how ingredients were grown, reared, caught and processed.	To know how to develop detailed designs that are aimed at targeted individuals/ groups. To know how to share ideas for designs in a range of ways and understand how to produce and use prototypes and pattern pieces. To recognise that during the design process their work approaches may need to be modified. To know how to modify products as a result of ongoing evaluations by themselves and others. To know how to consider and evaluate existing products. To recognise how fashions and fabrics have changed over time and how this has affected fashion. To understand how an individual in the field of design and technology has helped shape the world. To demonstrate increasing accuracy using more complex tools. To demonstrate understanding of characteristics of materials by independently selecting best materials for tasks. To know and show how their product takes into account the users safety. To know how to join materials using the most appropriate method for the material or purpose. To demonstrate understanding of the most appropriate electrical systems by incorporating it into their design.
Skills	D1 - Develop detailed criteria for designs for products aimed at particular individuals or groups, sharing ideas through cross -sectional and exploded diagrams, prototypes and pattern pieces. (KPI) D2 - Use CAD/CAM packages to design. D3 - Check work as it develops and modify their approach in light of progress. E1 - Explain the form and function of familiar existing products. E2 - Demonstrate modifications made to a product, as a result of ongoing evaluation, by themselves and others. E3 - Explain how fashions and fabrics have changed over time and how this has affected fashion. Describe how an individual in the field of design and technology has helped shape the world. M1 - Use more complex tools with increasing accuracy. M2 - Independently choose the best materials for a task, showing an understanding of their working characteristics. (KPI) M3 - Demonstrate how their	D1 - Develop detailed criteria for designs for products aimed at particular individuals or groups, sharing ideas through cross - sectional and exploded diagrams, prototypes and pattern pieces. (KPI) D3 - Check work as it develops & modify their approach in light of progress. D4 - Research cultural traditions and evidence their influence in their own work. E1 - Explain the form and function of familiar existing products. E2 - Demonstrate modifications made to a product, as a result of ongoing evaluation, by themselves and others. E3 - Explain how fashions have changed over time and how this has affected fashion. Describe how an individual in the field of design and technology has helped shape the world. M1 - Use more complex tools with increasing accuracy. M2 - Independently choose the best materials for a task, showing an understanding of their working characteristics. (KPI) M3 - Demonstrate how their products take into account the safety of	D1 - Develop detailed criteria for designs for products aimed at particular individuals or groups, sharing ideas through cross - sectional and exploded diagrams, prototypes and pattern pieces. (KPI) D3 - Check work as it develops and modify their approach in light of progress. D4 - Research cultural traditions and evidence their influence in their work. E1 - Explain the form and function of familiar existing products. E2 - Demonstrate modifications made to a product, as a result of ongoing evaluation, by themselves and others. E3 - Explain how fashions & fabrics have changed over time and how this has affected fashion. Describe how an individual in the field of design & technology has helped shape the world. M1 - Use more complex tools with increasing accuracy. M2 - Independently choose the best materials for a task, showing an understanding of their working characteristics. (KPI) M3 - Demonstrate how their products take into account the safety of

	products take into account the safety of the user. T3 - Join materials using the most appropriate methods for the materials or purpose. (KPI) T6 -Design products incorporating the most appropriate electrical systems.	the user., F1 - Plan, prepare a simple healthy meal safely using an awareness of ingredients, cooking techniques and hygiene. (KPI) F2 - Plan how they can have a health y/affordable diet. F3 - Explain how the ingredients were grown, reared, caught and processed.	the user., T1 - Use a simple pattern to create a life -sized item of clothing. Create a 3 -D product using a range of materials and sewing techniques. T2 - Use a craft knife, cutting mat and safety ruler with 1:1 supervision if needed. T3 - Join materials using the most appropriate methods for the materials or purpose. (KPI)
Vocabulary	• Circuits- parallel, fuse, electrical Symbols, modifications, input/ output, conductor, insulator	• ingredients, grown, cultural, traditional, affordable, social influences, vegetarian, vegan	• Stitch Vocabulary, blanket, cross stitch, embroidery, pattern, tacking, safety pins, sewing machine, thread,
Key assessments			