DT Medium Term Plan

FS1 DT Curriculum			
Term	**Autumn**	**Spring**	**Summer**
Unit	**Marvellous Me** **Colours of the Rainbow**	**Mirror Mirror…** **Animal Kingdoms**	**Enchanted Gardens** **Let's Explore**
Sequence of learning N1	- To be able to stack blocks carefully to make a tower. (Maths Aut 1 and Understanding of the World Aut 1) - To be able to explore the tinker table/loose parts area. (Maths Aut 1, Expressive Arts and Design Aut 1 and Understanding of the World Aut 1) -To be able to use different loose parts to create a picture. (Maths Aut 2 and Understanding of the World Aut 2) - To be able to build an enclosure e.g. for a farm animal. (Maths Aut 2) -To use small world play and experiment building with a range of different sized blocks. (Maths Aut 2) - To begin to explore block play. (Maths Aut 1) - Explore different materials, using all their senses to investigate them. (Expressive Arts and Design Aut 1) - To be able to balance blocks on top of each other. (Expressive Arts and Design Aut 2) - To be able to substitute an object for another. (Expressive Arts and Design Aut 1) - To begin to know or understand simple differences between materials. (Expressive Arts and Design Aut 1) - To be able to use construction equipment and loose parts to create a representation of something. (Expressive Arts and Design Aut 2) - To explore media with my senses e.g., with my fingers, brushes. (Understanding of the World Aut 1) - To be able to use different tools to create a simple effect. (Understanding of the World Spr 1) - Follow a one key word instruction e.g. Sit, jump. (Communication and Language Aut 1) - To understand simple instructions. (Communication and Language Aut 1) - To be able to stack blocks carefully to make a tower. (Physical Development Aut 1) - To be able to stack blocks carefully to make a tower. (Physical Development Spr 1) - To learn about different fine motor activities, e.g. threading, cutting, using tools, holding a pencil, mark making, Dough Disco etc. (Physical Development Spr 1)	- To use small world play and experiment building with a range of different sized blocks.(Maths Aut 2) - To know that some shapes are more appropriate than others when building. (Maths Spr 1) - To be able to use different tools to create an effect. (Expressive Arts and Design Spr 1) - To be able to balance blocks on top of each other. (Expressive Arts and Design Spr 1) - Work with a friend to build something. (Expressive Arts and Design Spr 2) - To be able to use knowledge of balancing and building to create a structure. (Expressive Arts and Design Spr 1) - To be able to follow simple instructions. (Communication and Language Spr 1) - To understand and follow simple instructions. (Communication and Language Spr 1) - To develop an understanding that it is important to drink water and brush my teeth. (Physical Development Spr 2) - Build independently with a range of appropriate resources. (Physical Development Spr 2)	- Make simple models which express their ideas. (Expressive Arts and Design Sum 1) - To build with a purpose e.g., make a house using Lego. (Expressive Arts and Design Sum 2) - To explore different materials freely, and develop their ideas about how to use them and what to make. (Expressive Arts and Design Sum 2) - To understand how to join things together. (Expressive Arts and Design Sum 1) - To follow simple verbal instructions e.g. Go and get your coat please. (Communication and Language Sum 2) - To understand instructions. (Communication and Language Sum 2) - To try an increasing range of food. (PSED Sum 1) - To be able to use scissors to make straight cuts in paper. (Physical Development Sum 1) - Can shape and mould malleable materials using hands. (Physical Development Sum 1)
Sequence of learning N2	- Use their imagination as they consider what they can do with different materials. (Expressive Arts and Design Aut 1)	- To be able to choose a tool to create a specific effect. (Expressive Arts and Design Spr 1)	- To be able to join pieces in different ways. (Expressive Arts and Design Sum 1)

	- To be able to use different loose parts to create a picture. (Expressive Arts and Design Aut 2 and Understanding of the World Aut 1) - To explore media in a range of ways e.g. with my fingers, brushes. (Understanding the World Aut 1) - To be able to use different tools to create an effect. (Understanding of the World Spr 1) - To be able to stack blocks carefully to make a tower using a variety of resources. (Understanding of the World Aut 1) - To be able to use different loose parts to create a more complex picture. (Understanding of the World Aut 1) - Follow a two key word instruction e.g. Get me a blue pencil. (Communication and Language Aut 2) - Follow a three-word instruction e.g. Give me the blue large square. (Communication and Language Aut 2) - To be able to follow instructions. . (Expressive Arts and Design Aut 1) - To be able to copy a simple design picture/image. (Physical Development Aut 1) - To be able to balance resources to create an effect e.g. a bridge. (Physical Development Spr 1) - To be able to use different fine motor activities with confidence. (Physical Development Spr 1)	- To be able to balance resources to create an effect e.g,. a bridge. (Expressive Arts and Design Spr 1) - Work with a group of friends to build something. (Expressive Arts and Design Spr 2) - To be able to take part in instructional games e.g. Simon Says. (Expressive Arts and Design Spr 1) - I can talk about why it is important to brush my teeth and what might happen if I don't. (Physical Development Spr 2)	- To be able to build using a range of different construction equipment. (Expressive Arts and Design Sum 2) - To develop their own ideas and then decide which materials to use to express them. (Expressive Arts and Design Sum 2) - To make imaginative and complex 'small worlds' with blocks/construction such as a city with different buildings and a park. (Expressive Arts and Design Sum 2) - To begin to understand the importance of a healthy diet. (PSED Sum 1) - To be able to use scissors with increasing control. (Physical Development Sum 1) - To wash my hands independently and talk about why clean hands are important. (Physical Development Sum 2) - Can shape and mould malleable materials using fingers. (Physical Development Sum 1) - Can shape and mould malleable materials using tools. (Physical Development Sum 1)
Vocab	Cut Stick Glue Build Fix Join Make Tall Balance Stack High	Tear Roll Smooth Bumpy Press Connect Design Under On top Plan Heavy Light	Design Measure Attach Position Assemble Edge Wide Add Create Join

FS2 DT Curriculum			
Term	**Autumn**	**Spring**	**Summer**
Unit	**Marvellous Me** **Colours of the Rainbow**	**Mirror Mirror…** **Animal Kingdoms**	**Enchanted Gardens** **Let's Explore**
Early Learning Goals assessed in June	*Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. *Share their creations, explaining the process they have used. *Make use of props and materials when role playing characters in narratives and stories.		
Sequence of learning	- To follow simple verbal instructions e.g. Go and get your coat please. (Communication and Language Aut 1) - To follow more complex instructions e.g. Please put away your pumps and then put on your shoes. (Communication and Language Aut 2) - To understand how to follow simple instructions. (Communication and Language Aut 1) - To understand how to follow a range of instructions. (Communication and Language Aut 2) - To be able to wash hands independently (Physical development Aut 1) - To know and explain why we need to wash our hands regularly. (Physical development Aut 1) - To confidently use a knife and fork to cut food. (Physical development Aut 1) - To know how to use a knife and fork independently and safely. (Physical development Aut 1) - To use scissors safely and independently. (Physical development Aut 2) - To know how to use scissors effectively. (Physical development Aut 2) - Build with a purpose e.g. make a house using Lego. (Expressive Arts & Design Aut 1) - To use a range of materials to make my own model. (Expressive Arts & Design Aut 1) - Build using a range of construction e.g. Lego, wooden blocks, crates outdoors. (Expressive Arts & Design Aut 2) - To be able to safely construct with a purpose. (Expressive Arts & Design Aut 1)	- To follow a simple recipe with adult support. (Communication and Language and Literacy Spr 1) - To follow a simple recipe independently e.g. making a sandwich. (Communication and Language and Literacy Spr 2) - To understand how to follow a recipe. (Communication and Language Spr 1) - To explain about the importance of brushing my teeth and drinking water. (Understanding of the World Spr 2 & Physical development Spr 2) - To know about the importance of brushing our teeth and visiting the Dentist. (Physical development Spr 2) - Use a needle and thread and can confidently follow 'pinch, push, pull' method to sew. (Physical development Spr 2) - To know how to safely use a range of equipment e.g. needles for sewing. (Physical development Spr 2) - Constructs with a purpose in mind, using a variety of resources. (Expressive Arts & Design Spr 1) - To use resources to create own props. (Expressive Arts & Design Spr 1) - Build as part of a group e.g. working together to create an outdoor obstacle course. (Expressive Arts & Design Spr 2) - To manipulate materials to achieve a planned effect. (Expressive Arts & Design Spr 2) - Recognise when changes need to be made e.g. when planks of wood are not safe for climbing, a model needs to be changed. (Expressive Arts & Design Spr 1)	- To Follow a simple recipe independently and explain what happens during the process. (Communication & Language and Literacy Sum1) - To follow a range of complex instructions and follow simple recipes independently. (Communication & Language and Literacy Sum2) - To understand and discuss about how things change e.g. when baking. (Communication & Language Sum1) - To try an increasing range of foods. (PSED Sum 1) - To know how to keep ourselves healthy e.g. teeth brushing, healthy foods, exercise. (PSED Sum 1) - Confidently use a range of smaller tools to access a variety of activities e.g. writing, painting, malleable. (Physical development Sum 1) - To use a range of tools safely and independently. (Physical development Sum 2) - To explain how to use a range of equipment effectively and safely. (Physical development Sum 1) - To explain about different ways to keep healthy. (Physical development Sum 2) - To know how to handle a range of equipment and tools effectively. (Physical development Sum 2) - To use what they have learnt about media and materials in an original way and be able to explain their choices. (Expressive Arts & Design Sum 1) - Selects appropriate resources and adapts work where necessary. (Expressive Arts & Design Sum 1)

	- To learn the names of different tools and techniques that can be used to create Art. (Expressive Arts & Design Aut 2) - To experiment with creating different things and to be able to talk about their uses. (Expressive Arts & Design Aut 2)	- To identify and select resources and tools to achieve a particular outcome. (Expressive Arts & Design Spr 2)	- To assemble, build and adapt my work independently and as part of a team. (Expressive Arts & Design Sum 2) - To know the different uses and purposes of a range of media and materials. (Expressive Arts & Design Sum 1) - For children to be able to safely construct with a purpose and evaluate their designs. (Expressive Arts & Design Sum 1) - To explain how to keep safe when using a range of tools. (Expressive Arts & Design Sum 2) - To explain the process of how I created a painting or model. (Expressive Arts & Design Sum 2)
Vocab	Cut Stick Glue Build Fix Join Make Tall Balance Stack High	Tear Roll Smooth Bumpy Press Connect Design Under On top Plan Heavy Light	Design Measure Attach Position Assemble Edge Wide Add Create Join

Year 1 DT Curriculum			
Term	**Auumn 1**	**Spring 2**	**Summer 2**
Unit	**Structures**	**Textiles – Reception Unit**	**Food**
End of Unit Outcomes	Construct a freestanding windmill. • Identify some features that would appeal to the client (a mouse) and create a suitable design. • Explain how their design appeals to the mouse. • Make stable structures, which will eventually support the turbine, out of card, tape and glue. • Make functioning turbines and axles that are assembled into the main supporting structure. • Say what is good about their windmill and what they could do better.	Make a Bookmark. • Develop treading and weaving skills. • Use a weaving base and paper strips. • Use wool through hessian fabric, then a sewing needle and thread. • Learn about the history of the bookmark back in Victorian times. • Compare Victorian bookmarks to modern-day styles. • Plan and sew a bookmark design.	Make a fruit smoothie. • Describe fruits and vegetables and explain why they are a fruit or a vegetable. • Name a range of places that fruits and vegetables grow. • Describe basic characteristics of fruit and vegetables. • Prepare fruits and vegetables to make a smoothie
National Curriculum	**Key Stage 1 - Pupils should be taught:** • **Design:** purposeful, functional, appealing products for themselves and other users based on design criteria. • generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. • **Make:** select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. • select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. • **Evaluate:** explore and evaluate a range of existing products. • evaluate their ideas and products against design criteria. • **Technical knowledge:**build structures, exploring how they can be made stronger, stiffer and more stable. • explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. **Cooking and Nutrition** • Use the basic principles of a healthy and varied diet to prepare dishes. • Understand where food comes from.		
Overview	In this unit, the children will begin to learn about simple freestanding structures. They will explore different types of windmills and find out about the main features. They will design a windmill to fit the design criteria before constructing their model, thinking about the best joining techniques to use. Once completed, they will judge how effective their design has been.	In this unit, the children will develop and practise threading and weaving techniques using various materials and objects. They will look at the history of the bookmark from Victorian times versus modern-day styles. The children will then apply their knowledge and skills to design and sew their own bookmarks.	In this unit, the children will begin to learn about basic cooking methods and nutrition. They will begin by exploring where a range of fruit and vegetables come from before deciding which ones to use in a simple recipe. They will then learn how to prepare the fruit and vegetables safely and hygienically to create a fruit smoothie before evaluating the final product and suggesting improvements which could be made.

Sequence of learning	**Designing the Structure - Include individual preferences and requirements in the design.** - Know what a windmill is .- Describe the purpose of structures. - Understand the importance of clear design criteria. - Understand what a net is. **Assembling the Structure - Make a stable structure.** - Follow instructions to cut and assemble the supporting structure of a windmill. - Know that that the shape of materials can be changed to improve the strength and stiffness of structures. - Know that cylinders are a strong type of structure that are often used for windmills and lighthouses. - Understand what stable means and ensure that the structure has this property. **Assembling the windmill - Assemble the components of the structure.** - Cut and assemble a turbine correctly. - Understand that windmill turbines use wind to turn and make the machines inside work. - Know that axles are used in structures and mechanisms to make parts turn in a circle. - Attach a turbine to the axle and attach it to the structure of the windmill. - Test that the turbine turns in the structure and alter the parts if it doesn't. **Testing and evaluating – To evaluate the project abd adapt the design.** - Evaluate the windmill according to the design criteria. - Test whether the structure is strong and stable and reinforce it if necessary. - Test whether the turbine turns in the structure and alter the parts if it doesn't. - Test whether the turbine turns freely in the wind/when blown on.	**Exploring threading and weaving.** - Develop threading and weaving skills. - Explore different materials and objects. **Paper weaving.** - Explore weaving techniques. - Practise and apply weaving skills to a specific material. **Sewing with hessian.** - Practise and apply threading skills with specific materials. **Designing bookmarks.** - Use threading or sewing to design a product (bookmark). **Creating and evaluating bookmarks.** - Create a textiles product (bookmark) following own design. - Reflect on how aims have been achieved.	**Fruit or vegetable? – Identify if a food is a fruit or a vegetable.** - Name a number of fruits and vegetables. - Know how to determine if something is a fruit. - Know that some foods we call vegetables are actually fruits. **Where fruit and vegatables grow – Identify where plants grow and which parts we eat.** - Know how to determine if a food is a fruit or a vegetable. - Know that fruits and vegetables grow in one of three places: on trees or vines, above the ground or below the ground. - Know which parts of plants we can eat **Smoothie ingredients tasting- Taste and compare fruit and vegetables.** - Suggest what fruits and/or vegetables are in a drink. - Taste fruits and vegetables and describe their: appearance/feel, smell and taste. - Choose ingredients to make a smoothie. - Be able to say why those ingredients were chosen. **Making smoothies - Make a fruit and vegetable smoothie** - Know how to prepare fruit and vegetables. - Use a knife to cut safely. - Know how to use a blender. - Make a smoothie.

Vocab	Client Design Evaluation Net Stable Strong Test Weak Windmill	Thread Weave Pattern Sew Sewing needle Embroider Design Evaluate	Bleander Carton Fruit Healthy Ingredients Peel Peeler Recipe Slice Smoothie Stencil Template vegetable

Year 2 DT Curriculum			
Term	**Autumn 2**	**Spring 2**	**Summer 2**
Unit	**Mechanisms**	**Food**	**Textiles – Year 1 Unit**
End of Unit Outcomes	Create a moving monster using sliders and levers. • Identify the correct terms for levers, linkages and pivots. • Analyse popular toys with the correct terminology. • Create functional linkages that produce the desired input and output motions. • Design monsters suitable for children, which satisfy most of the design criteria. • Evaluate designs against the design criteria, using this information and the feedback of peers to choose the best design. • Select and assemble materials to create the planned monster features. • Assemble the monster to the linkages without affecting the functionality	Make a nutritious wrap. • Name the main food groups and identify foods that belong to each group. • Describe the taste, texture and smell of a given food. • Think of four different wrap ideas, considering flavour combinations. • Construct a wrap that meets the design brief and their plan.	Make a puppet. • Join fabrics together using pins, staples or glue. • Design a puppet and use a template. • Join their two puppets' faces together as one. • Decorate a puppet to match their design.
National Curriculum	**Key Stage 1 - Pupils should be taught:** • **Design:** purposeful, functional, appealing products for themselves and other users based on design criteria. • generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. • **Make:** select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. • select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics. • **Evaluate:** explore and evaluate a range of existing products. • evaluate their ideas and products against design criteria. • **Technical knowledge:**build structures, exploring how they can be made stronger, stiffer and more stable. • explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. **Cooking and Nutrition** • Use the basic principles of a healthy and varied diet to prepare dishes. • Understand where food comes from.		
Overview	In this unit, the children will continue to learn about simple mechanisms. They will look at everyday objects to explore levers, linkages and pivots. They will experiment with making linkages that could be used to create a moving monster. They will design and construct a moving monster following design criteria. Once they have completed their moving monster, they	In this unit, the children will continue to learn about different cooking methods and nutrition. They will explore what makes a healthy diet by exploring the Eatwell Plate. They will investigate a range of food combinations to find the best flavour for a healthy wrap. They will then prepare the ingredients safely and hygienically before evaluating their wrap to see	In this unit, the children will continue to develop their sewing skills. They will explore joining techniques and how to use each of these safely and sensibly.They will design a puppet and then use a simple template to cut out their felt. They will then join their pieces of fabric using their preferred technique of pinning, stapling or glueing. The children will then decorate their puppet using a variety of

	will evaluate how successful their design has been.	if it could be improved and what they would do differently next time.	materials. Once they have completed their puppet, they will evaluate their puppet.
Sequence of learning	**Pivots, levers and linkages/Making linkages – Look at objects and understand how they move** - Understand that mechanisms are a collection of moving parts that work together in a machine. - Know that there is always an input and output in a mechanism. - Identify mechanisms in everyday objects. - Understand that a lever is something that turns on a pivot. - Understand that a linkage is a system of levers that are connected by pivots. - Help devise whole-class design criteria for a moving monster. **Desinging the monster – Explore different design options.** - Understand that linkages use levers and pivots to create motion. - Think of two points to add to the class Design Criteria. - Draw two moving monster designs that meet all points of the Design Criteria. - Ensure the design includes the linkage that will be used to make the monster move. **Making the monster – Make a moving monster** - Know how to make linkages by connecting levers and pivots. - Know that materials can be selected according to their characteristics. - Design and make the features of the monste.r - Evaluate how functional the monster is and whether it meets the Design Criteria.	**Hidden sugars in drinks – Know what makes a balanced diet.** - Know that there are five food groups, made up of: fruit and vegetables, starchy carbohydrates, proteins, dairy and oils and spreads. - Know roughly how much of each food group should be eaten each day. **Taste testing combinations – Taste test food combinations.** - Know which foods fall into which food groups. - Know how to experience food through touch and smell. - Consider and review food combinations. **Designing and making a wrap – Design a healthy wrap**- Know that the most ideal ingredient combinations for a wrap will contain foods from more than one food group. **Making and evaluating – Make a healthy wrap.** - Remember which food combinations work well together . - Design three possible wraps based on these combinations. - Choose one of these to make a 'Final Design'. - Know how to slice food safely using the bridge or claw grip. - Remember how to prepare food safely. - Make a healthy wrap. - Review the design.	**Joining fabrics - Join fabrics together using different methods.** - Remember that different techniques may be used to join fabrics for different purposes. - Know how to join fabric by pinning, stapling or glueing. **Designing a puppet – Use a template to create my design.** - Design a puppet. - Build a design on a template. **Making and joining a puppet – Join two fabrics together accurately.** - Join fabrics together. - Align two pieces of fabric. - Know how to use a template. **Decorating the puppet – Embellish the design using joining methods.** - Use joining methods to decorate the puppet. - Evaluate own and others' work.
Vocab	Evaluation Input Lever Linear motion Linkage Mechanical Mechanism	Alternative Diet Balanced diet Evaluation Expensive Healthy Ingredients	Decorate Design Fabric Glue Model Hand puppet Safety pin

	Motion Oscillating motion Output Pivot Reciprocating motion Rotary motion Survey	Nutrients Packaging Refrigerator Sugar Substitute	Staple Stencil Template

Year 3 DT Curriculum			
Term	**Autumn 1**	**Spring 1**	**Summer 1**
Unit	**Food and Farming UK**	**Textiles Year 2 Unit**	**Mechanisms**
End of Unit Outcomes	Make a tart using seasonal ingredients. • Explain that fruits and vegetables grow in different countries based on their climates. • Understand that 'seasonal' fruits and vegetables are those that grow in a given season and taste best then. • Know that eating seasonal fruit and vegetables has a positive effect on the environment. • Design their own tart recipe using seasonal ingredients. • Understand the basic rules of food hygiene and safety. • Follow the instructions within a recipe.	Make a fabric pouch • Sew a running stitch with regular-sized stitches and understand that both ends must be knotted. • Prepare and cut fabric to make a pouch from a template. • Use a running stitch to join the two pieces of fabric together. • Decorate the pouch using the materials provided.	Make a slingshot car. • Work independently to produce an accurate, functioning car chassis. • Design a shape that is suitable for the project. • Attempt to reduce air resistance through the design of the shape. • Produce panels that will fit the chassis and can be assembled effectively using the tabs they have designed. • Construct car bodies effectively. • Conduct a trial accurately and draw conclusions and improvements from the results.
National Curriculum	**Key Stage 2 - Pupils should be taught:** • **Design:** use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups. • generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. • **Make:** select from and use a wider range of tools and equipment to perform practical tasks [for example, 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. • **Evaluate:** investigate and analyse a range of existing products. • evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. • understand how key events and individuals in design and technology have helped shape the world. • **Technical knowledge:** apply their understanding of how to strengthen, stiffen and reinforce more complex structures. • understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]. • understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]. • apply their understanding of computing to program, monitor and control their products. **Cooking and Nutrition** • Understand and apply the principles of a healthy and varied diet. • Prepare and cook a variety of predonintly savoury dishes using a range of cooking techniques. • Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.		
Overview	In this unit, the children will continue to learn about a healthy and varied diet as well as seasonality and how it affects food availability. They will understand that we need to eat a variety of different food and drink in order to stay healthy. They will be able to follow a recipe	In this unit, the children will begin to develop their textiles skills. They will practice how to tread a needle and sew a running stitch. They will learn about and create templates for a fabric pouch before cutting out the fabric pieces and sewing them together. Finally, they	In this unit, the children will use a range of materials, to make the chassis of their car and the slingshot launch mechanism, learning that their slingshot cars work by storing kinetic energy in the elastic band before it launches. They will then design car bodies to cover their

	and begin to understand that a recipe can be adapted and changed due to availability. They will be able to safely and hygienically prepare food using a range of techniques.	will decorate their pouch using felt shapes before evaluating its effectiveness against the design criteria.	chassis, make the nets for their car bodies based on their designs, adding the graphics and tabs that will attach to the chassis.
Sequence of learning	**Where in the world? – Know that climate affects food growth.** - Know that not all fruits and vegetables can be grown in the UK. - Know that each country has its own climate. - Understand that these climates enable different fruits and vegetables to grow. - Consider hygiene when preparing food. - Use cooking equipment safely. **British seasonal foods – Undersatnd the advantages of eating seasonal foods grown in the UK.** - Know that imported food will have travelled from far away and has an impact on the environment. - Know that vegetables and fruit grow in certain seasons and that in the UK we often import food from other countries when it is not in season. **Rainbow food – Create a recipe that is healthy and nutritious using seasonal vegatables.** - Know what foods are currently in season. - Know that each fruit and vegetable gives nutritional benefits. - Design a filo tart using seasonal vegetables. - Describe a filo tart and the benefits of its ingredients. **Making tarts – Safely follow a recipe when cooking.** - Know how to prepare a kitchen to cook in. - Know how to prepare myself in order to start cooking. - Know the basic rules of food contamination. - Use, store and clean a knife safely. - Follow a recipe to make a tart.	**Running stitch – Sew a running stitch.** - Thread a needle. - Sew a running stitch. - Use neat and evenly spaced stitches to join fabric. **Using a template – Sew a running stitch.** - Use a template. - Cut fabric neatly. - Pin fabric accurately. - Design a pouch. **Making a pouch – Join fabrics using a running stitch.** - Sew neat, even stitches. - Tie a knot at either end of the thread. - Design decorations for a product. **Decorating a pouch – Decorate a pouch using fabric glue or stitching.** - Join items using fabric glue or stitching. - Decorate fabric using different items. - Evaluate design.	**Chassis and launch mechism – Build a car chassis.** - Understand that car designs have developed over many years. - Know that a chassis is the frame of a car on which everything else is built. - Know that all moving things have kinetic energy. - Know that kinetic energy is the energy that something (an object or person) has by being in motion, e.g., the energy that a swing has to keep moving; any object in motion uses kinetic energy. **Designing the car body – Design a shape that reduces air resistance.** - Design a suitable car body to cover a chassis. - Draw a net to create a structure. - Choose shapes that increase or decrease the speed of the car as a result of air resistance. - Add graphics to personalise the design. **Making the car body – Make a model based on a chosen design.** - Make the body of the car. - Know that nets are flat shapes that can be turned into 3D structures. - Measure, mark and cut the panels (nets) against the dimensions of the chassis. - Including tabs on the nets. - Decorate the panels. **Assembly and testing – Assemble and test the completed product.** - Assemble the panels of the body to the chassis correctly. - Remember that smaller shapes create less air resistance and can move faster through the air. - Evaluate the speed of the design.

Vocab	Climate Dry climate Exported Imported Mediterranean climate Nationality Nutrients Polar climate Recipe Seasonal food Seasons Temperate climate Tropical climate	Accurate Fabric Knot Pouch Running-stitch Sew Shape Stencil Template Thimble	Aesthetic Air resistance Chassis Design Design criteria Function Graphics Kinetic energy Mechanism Net Structure

Year 4 DT Curriculum			
Term	**Spring 2**	**Summer 1**	**Summer 2**
Unit	**Electical Systems Year 5 Unit**	**Food**	**Textiles Year 3 Unit**
End of Unit Outcomes	Make a Doodler. • Identify simple circuit components (battery, bulb and switch) with a basic explanation of their function. • Explain that a series circuit is assembled in a loop to allow the electricity to flow along one path. • Describe a motor as a circuit component that changes electrical energy into movement. • Provide examples of motorised products that use movement to rotate or spin different parts. • Remove and replace different parts of a Doodler, as part of a team. • Suggest ways to switch the configuration to amend the form or function of the Doodler. • Explain, in an investigation report, each of the changes they made and the effect this had on the Doodler's ability to draw scribbles (function) and appearance (form). • Develop design criteria with consideration for the target user, the purpose of their Doodler, a key function and the Doodler's form and final appearance (e.g. fun, bright, soft). • Explain simply why their Doodler has a certain configuration based on the findings of their investigation (e.g. I used four pens because the Doodler would fall over with two). • Create a functional Doodler that creates scribbles on paper with or without a switch. • Identify and list each of the required materials, tools and circuit components required to build a Doodler. • Explain simply the steps to assemble a Doodler as part of a set of instructions (or storyboard).	Make biscuits. • Follow a recipe, with some support. • Describe some of the features of a biscuit based on taste, smell, texture and appearance. • Adapt a recipe by adding extra ingredients to it.	Make a cushion. • Use a cross-stitch to join two pieces of fabric together. • Design and cut the template for a cushion. • Use cross-stitch and appliqué to decorate a cushion face. • Make a cushion that includes appliqué and cross-stitch.

	• Write instructions to build a functional circuit, explaining how to identify if it is functional or not. • Provide suggestions to improve a peer's set of instructions after testing how effective they are at guiding someone.		
National Curriculum	**Key Stage 2 - Pupils should be taught:** • **Design:** use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups. • generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. • **Make:** select from and use a wider range of tools and equipment to perform practical tasks [for example, 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. • **Evaluate:** investigate and analyse a range of existing products. • evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. • understand how key events and individuals in design and technology have helped shape the world. • **Technical knowledge:** apply their understanding of how to strengthen, stiffen and reinforce more complex structures. • understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]. • understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]. • apply their understanding of computing to program, monitor and control their products. **Cooking and Nutrition** • Understand and apply the principles of a healthy and varied diet. • Prepare and cook a variety of predonintly savoury dishes using a range of cooking techniques. • Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.		
Overview	In this unit, the children will identify and look at a range of products that make use of a motor. They will then investigate an existing product (the Doodler) working out how the product has been constructed, ready to develop their own. They will then write a design criteria based on the knowledge learned from the investigation and develop a new Doodler design and then construct it.	In this unit, the children will continue to develop their cooking skills. They will follow a simple biscuit recipe before they experiment with adapting the recipe by adding different ingredients to see which they prefer. The children will then be given a budget to work within to decide on the ingredients for their final biscuit recipe.	In this unit, the children will continue to develop their textile skills creating a cushion. They will follow a design criteria, select and cut fabrics using fabric scissors, thread needles and tye knots with greater independence. They will learn how to join fabric using cross stitch and will decorate their cushion applique.
Sequence of learning	**Electrical systems and motors – Understand how motors are used in electrical products.** - Identify simple circuit components (battery, bulb, motor and switch). - Explain what a series circuit is. - Give examples of motorised products and explain their primary function.	**Following a recipe – Follow a baking recipe.** - Evaluate a product and consider: taste, smell, texture, appearance, packaging and the target audience. - Follow a recipe to make a biscuit. **Testing ingredients – Make and test a prototype.** - Know how to cook food safely – following basic hygiene rules.	**Cross-stitch and applique – Learn how to sew cross-stitch and applique.** - Use cross-stitch. - Know how to appliqué. - Reflect on techniques used. **Cushion design – Design a product and it's template.** - Design a cushion. - Use a paper template.

	Meet the Doodlers – Investigate an existing product to determine the factors that affect the product's form and function. - Take apart a product and reassemble it. - Determine which parts of the product affect its function. - Determine which parts of the product affect its form. - Alter the way a product functions by tinkering with its configuration. **Doodler design and construction – Apply the findings from research to develop a unique product.** - Develop design criteria based on findings from an investigation. - Develop a design based on key points discovered in an investigation. - Incorporate an electrical system that uses a motor. **Doodler DIY kits – Develop a DIY kit for another individual to assemble their product.** - Identify and list the materials, equipment and circuit components required to build the product. - Explain the steps required to assemble the product. - Explain how to build and integrate an electrical system as part of the product.	- Cook to a recipe and adapt it to create a new biscuit prototype. - Evaluate and compare a range of biscuit prototype. **Final design – Design a biscuit.** - Work as a group to design a biscuit. - In a group: consider biscuits tasted and the successes of the prototypes made and make decisions as part of a team to finalise the recipe that will be made. **Biscuit bake off – Make a biscuit that meets a design brief.** - Consider safety and hygiene when baking.	- Cut fabric accurately. **Decorating the cushion – Decorate fabric using applique and cross-stitch.** - Follow a design criteria. - Add appliqué. **Assembling the cushion – Assemble and complete a cushion.** - Use stitches to join fabrics. - Leave space for a seam. - Understand why some products are turned inside out after sewing.
Vocab	Circuit component Configuration Current Develop DIY Investigate Motor Motorised Problem solve Product analysis Series circuit Stable Target user	Adapt Budget Cooling rack Creaming Equipment Evaluation Flavour Ingredients Method Net Packaging Prototype Quantity Recipe Rubbing	Accurate Applique Cross-stitch Cushion Decorate Detail Fabric Patch Running-stitch Seam Stencil Stuffing Target audience Target customer Template

		Sieving Target audience Unit of measurement Utilities	

Year 5 DT Curriculum			
Term	**Autumn 2**	**Spring 2**	**Summer 2**
Unit	**Textiles Year 4 Unit**	**Structures**	**Food**
End of Unit Outcomes	Make a book sleeve including a fastening. • Identify the features, benefits and disadvantages of a range of fastening types. • Write design criteria and design a sleeve that satisfies the criteria. • Make a template for their book sleeve. • Assemble their case using any stitch they are comfortable with.	Create a model bridge. • Identify stronger and weaker shapes. • Recognise that supporting shapes can help increase the strength of a bridge, allowing it to hold more weight. • Identify beam, arch and truss bridges and describe their differences. • Use triangles to create simple truss bridges that support a load (weight). • Cut beams to the correct size, using a cutting mat. • Smooth down any rough cut edges with sandpaper. • Follow each stage of the truss bridge creation as instructed by their teacher. • Complete a bridge, with varying ranges of accuracy and finish, supported by the teacher. • Identify some areas for improvement, reinforcing their bridges as necessary.	Create a healthy Bolognese sauce. • Understand how beef gets from the farm to our plates. • Present a subject as a poster with clear information in an easy to read format. • Contribute ideas as to what a 'healthy meal' means. • Notice the nutritional differences between different products and recipes. • Recognise nutritional differences between two similar recipes and give some justification as to why this is. • Work as a team to amend a bolognese recipe with healthy adaptations. • Follow a recipe to produce a healthy bolognese sauce. • Design packaging that promotes the ingredients of the bolognese.
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Overview	In this unit, the children will explore different fastenings around them and consider their advantages and disadvantages. They will then devise their own design criteria, create a mock-up, which will be used as a template, to cut out their fabric before making their own book sleeve. They will then attach their fastenings and decorate their book sleeves in accordance with their design criteria.	In this unit, the children will continue to develop their understanding of structures. They will investigate different types of bridges, exploring how different shapes can affect a bridges strength. They will make a prototype to test their design before using their wood work skills to create a frame structure with diagonal struts to strengthen.	In this unit, the children will continue to develop their knowledge of cooking and nutrition. They will learn about how beef is farmed and the main welfare issues that surround the rearing of cattle. They will then research and modify a traditional Bolognese recipe to make it healthier.
Sequence of learning	**Evaluating fastenings – Explain the advantages and disadvantages of different types of fastening types.** - Know what the main types of fastenings are. - Identify the benefits of each fastening type. - Identify the disadvantages of each fastening type. **Designind a book sleeve – Design a product to meet a design criteria.** - Design a product based on a design criteria. - Write a design criteria. - Include a fastening in the design. **Paper mock-up and preparing fabric – Make and test a paper template.** - Make a paper template. - Know how to test the paper template. **Assembling the book sleeve – Assemble a book jacket.** - Join fabric by sewing. - Stick to a design criteria. - Create a product that is fit for purpose.	**Arch and beam bridges – Explore how to reinforce a beam (structure) to imprve its strength.** - Identify beam and arch bridges. - Create a range of beam and arch bridge designs. - Identify stronger and weaker structures. - Find different ways to reinforce structures. **Spaghetti truss bridge – Build a spaghetti truss bridge.** - Identify arch, beam and truss bridges. - Use triangles to create truss bridges and test them. - Understand how triangles can be used to reinforce bridges. **Building bridges – Build a wooden truss bridge.** - Measure and mark out accurately on wood. - Select appropriate tools and equipment for particular tasks. - Follow health and safety rules. - Explain why selecting appropriating materials is an important part of the design process. **Finalising bridges – Complete, reinforce and evaluate the truss bridge.** - Make a wooden truss bridge. - Identify points of weakness and reinforce them as necessary following testing. - Evaluate the truss bridge against a specification.	**From farm to fork – Understand where food comes from.** - Know that beef is the name of meat from cattle (cows). - Know how beef is reared and processed. - Have an understanding of the ethical issues around the way in which cattle should be farmed. **What does healthy look like? – Understand the term 'healthy'.** - Know what foods make up a balanced diet. - Know how a recipe can be adapted to make it healthier. - Use keywords to research for alternative ingredients for a well-known dish. - Based on the research, suggest healthy substitutions and additions to a recipe. **Adapting and improving a recipe – Adapt a traditional recipe.** - Know that the nutritional value of a recipe can change if you remove, substitute or add additional ingredients. - Calculate and compare two adapted Bolognese recipes using a nutritional calculator. - Based on this information decide which recipe is healthier. - Write an amended method for a recipe to incorporate the relevant changes to ingredients. **Mamma mia! What a tasty, healthy Bolognese! Complete a food product.** - Use equipment safely, including knives, hot pans and hobs.

			- Know how to avoid cross-contamination. - Carefully follow a method to make a recipe. - Know how to chop an onion. - Design appealing packaging that reflects the recipe.
Vocab	Aesthetic Assemble Book sleeve Design criteria Evaluation Fabric Fastening Mock-up Net Running-stitch Stencil Target audience Target customer Template	Abutment Accurate Arched bridge Beam bridge Coping saw Evaluation File Mark out Material properties Measure Predict Reinforce Research Sandpaper Set square Suspension bridge Tenon saw Test Truss bridge Wood	Beef Cross-contamination Diet Ethical issues Farm Healthy Ingredients Method Nutrients Packaging Reared Recipe Research Substitute Supermarket Vegan Vegetarian Welfare

Year 6 DT Curriculum			
Term	**Autumn 1**	**Spring 1**	**Summer 1**
Unit	**Textiles Year 5 Unit**	**Electrical systems**	**Food**
End of Unit Outcomes	Make a Stuffed Toy. • Design a stuffed toy, considering the main component shapes of their toy. • Create an appropriate template for their stuffed toy. • Join two pieces of fabric using a blanket stitch. • Neatly cut out their fabric. • Use appliqué or decorative stitching to decorate the front of their stuffed toy. • Use blanket stitch to assemble their stuffed toy, repairing when needed. • Identify what worked well and areas for improvement.	Create an electrical circuit for a steady hand game. • Explain simply what is meant by 'form' (the shape of a product) and 'function' (how a product works). • State what they like or dislike about an existing children's toy and why. • Learn about skills developed through play and apply this knowledge in a survey of one or more children's toys. • Identify the components of a steady hand game. • Design a steady hand game of their own according to their design criteria, using four different perspective drawings. • Create a secure base for their game, with neat edges, that relates to their design. • Make and test a functioning circuit and assemble it within a case.	Create a three course meal. • Find a suitable recipe for their course. • Record the relevant ingredients and equipment needed. • Follow a recipe, including using the correct quantities of each ingredient. • Write a recipe, explaining the process taken. • Explain where certain key foods come from before they appear on the supermarket shelf.
National Curriculum	**Key Stage 2 - Pupils should be taught:** • **Design:** use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups. • generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. • **Make:** select from and use a wider range of tools and equipment to perform practical tasks [for example, 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. • **Evaluate:** investigate and analyse a range of existing products. • evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. • understand how key events and individuals in design and technology have helped shape the world. • **Technical knowledge:** apply their understanding of how to strengthen, stiffen and reinforce more complex structures. • understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]. • understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]. • apply their understanding of computing to program, monitor and control their products. **Cooking and Nutrition** • Understand and apply the principles of a healthy and varied diet. • Prepare and cook a variety of predonintly savoury dishes using a range of cooking techniques. • Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.		

Overview	In this unit, the children decide upon a simple shape on which to base their stuffed toy on, decide on the materials that they will use and use a variety of stiches that they have learnt in previous units. They will be introduced to and practise the blanket stitch and use this to create their toy. The child will add any extra items, appendages and decorative stitches, that they have learnt previously, before assembling their stuffed toys.	In this unit, the children will continue to develop their understanding of electrical systems. They will design and make a steady hand game. They will use nets to create their base and their knowledge of electrical circuits to build a circuit with a buzzer which sounds when the handle makes contact with the wire frame.	In this unit, the children will continue to develop their understanding of cooking and nutrition by researching and preparing a three-course meal. They will research the journey of their main ingredient from 'farm to fork' before using a range of methods and equipment to safely and hygienically prepare their meal.
Sequence of learning	**Designing a stuffed toy – Design a stuffed toy.** - Know how to ensure that a template is proportional. - Make a paper template. **Blanket stitch – Sew a blanket stitch.** - Cut neatly and accurately. - Thread a needle. - Use a blanket stitch to join two pieces of fabric. **Details and appendages – Create and add decorations to fabric.** - Create strong and secure stitches (blanket, running, cross stitch) - Use applique to attach pieces of fabric decoration. - Use stitches to decorate fabric. **Stuffed toy assembly – Use a blanket stitch to assemble the components of a stuff toy.** - Use a blanket stitch to join two pieces of fabric. - Stuff the toy carefully, repairing any holes or gaps. - Evaluate the stuffed toy.	**Developing through play – Research and analyse a range of children's toys.** - Gather images and information about existing children's toys. - Analyse a selection of existing children's toys. - Apply my knowledge of form and function. **Game plan – Design a steady hand game.** - Identify and name the components in a steady hand game. - Decide on clear design criteria for a game. - Design a game and draw it from three different perspectives. -Ensure that the design reflects the design criteria. **Base building – Construct a stable base.** - Accurately cut and assemble a net. - Decorate the base and ensure a high quality finish. - Ensure that the sides of the base are aligned when glued. - Use tabs to secure the pieces of the net in place. **Electronics and assembly – Assemble electronics and complete the electronic game.** - Make and test a circuit. - Incorporate a circuit into a base. - Name electrical components.	**Three ingredients; three courses – research and design a three-course meal.**- Know how to research a recipe by ingredient. - Understand that not all courses complement one another. - List the ingredients needed for a chosen recipe. - Read the method and make a list of all of the equipment needed for the chosen recipe. **To start…The main course…Dessert – To prepare a meal using a recipe; To understand where food comes from; To write up a recipe.** - Prepare ingredients and follow a recipe safely and sensibly. - Describe the process of 'Farm to Fork' for a given ingredient using a storyboard. - Contribute a well-written recipe page to a class cookbook using imperative verbs, adjectives and illustrations.
Vocab	Accurate Annotate Appendage Blanket-stitch Design criteria	Assemble Battery Battery pack Benefit Bulb	Accompaniment Collaboration Cookbook Cross-contamination Equipment

	Detail Evaluation Fabric Sew Shape Stuffed toy Stuffing Template	Bulb holder Buzzer Circuit Circuit symbol Component Conductor Copper Design Design criteria Evaluation Fine motor skills Fit for purpose Form Function Gross motor skills Insulator LED User	Farm Flavour Illustration Imperative-verb Ingredients Method Nationality Preparation Processed Reared Recipe Research Storyboard Target audience Top tips Unit of measurement