	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
			Expressive art and design			
Nursery	Wonderful me and colours	Magic, witches and wizards	Fantasy and adventure	Fantastic food	teddy bear's picnic	camping
			Expressive art and design			
Reception	All about me	Terrific tales	Amazing animals	Come outside	Ticket to ride	Fun at the seaside
Year 1	**Food: Fruit and vegetable smoothies** Make a fruit and vegetable smoothie. Use the basic principles of a healthy ad varied diet to prepare dishes. Identify if a food is a fruit or vegetable. Understand where food comes from. Taste and compare fruit and vegetables. **Design –** Generate, develop, model and communicate their ideas through talk, drawing and templates. **Make –** Select from and use a range of tools and equipment to perform practical tasks Chopping fruit and vegetables to make a smoothie. **Evaluate –** Explore and evaluate a range of existing products. Evaluating and adapting designs. **Technical knowledge -** Describing and grouping fruits by texture and taste. Understanding the difference between fruit and vegetables. Understand where food comes from.		**Structures: Windmills** Make a stable structure and assemble materials and components accurately. **Design –** Include individual preferences and requirements in my design. **Make** – Make a stable structure. Cut and assemble the supporting structure of the windmill. Select from and use a range of tools and equipment. Select from and use different materials and components to work together to create motion. Build structures, exploring how they can be made stronger, stiffer and more stable. **Evaluate** – Explore and evaluate a range of existing products. Evaluate the finished product and adapt the design. **Technical knowledge** – Know what a windmill is. Describe the purpose of the structures (e.g. supporting structure, turbine or sails, axle). Understand what a net is. Develop awareness of different structures for different purposes. Understand how to turn 2D nets into 3D structures. Understand what mechanisms are. Know that the shape of materials to improve the strength and stiffness of the structure. Know that cylinders are a strong type of structure that are often used for windmills and lighthouses.		**Mechanisms: Wheels and axles** Understand how wheels move. Identify what stops wheels from turning. Explore and use mechanisms in a product. **Design** – Design a moving vehicle. Design mechanisms. Draw and label a diagram of an axis, wheel and axle holder. **Make** – Build a moving vehicle. Make a wheel and axle mechanism. Adapt mechanisms. Measure and cut accurately. Follow a design brief. Work to scale. Identify materials commonly used for wheels. **Evaluate** – Evaluate their ideas and products against design criteria. Research and testing mechanisms. **Technical knowledge** –Identify what mechanism makes a toy or vehicle roll forwards. Understand how an axle works.	

Year 2	**Food: A balanced diet** Know what makes a balanced diet. Understand where food comes from. Use the basic principles of a healthy and varied diet to prepare dishes. **Design** – Design a healthy wrap. Recall which food combinations work well. **Make** – Make a healthy wrap. Prepare food safely and hygienically. Chop safely using the bridge grip. **Evaluate** – Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria. Taste test food combinations. **Technical knowledge** – Understand how fruit and vegetables grow. Know the food groups. Understand what makes a balanced diet. Know what hidden sugars are. Know where to find the nutritional information. Know that there are 5 food groups.	**Textiles: Pouches** Sew a running stitch. Cut fabric using a template to make a pouch. **Design** – Design purposeful, functional and appealing products for themselves and others. Design decorations for my product. **Make** – Thread a needle. Sew a running stitch. Use neat and evenly spaced stitches to join fabric. Prepare fabrics for sewing. Cut fabric using a template. Decorate a pouch using fabric glue or stitching. **Evaluate** – Discuss the making process and the finished product. Evaluate my own designs. **Technical knowledge** – Identify parts of a needle (point and eye). Understand the alternative ways of joining fabrics and embellishments.	**Mechanisms: Moving monsters** Understand how objects move. Explore and use mechanisms. Build structures, exploring how they can be made stronger, stiffer and more stable. **Design** – Create and use design criteria, generating ideas. Plan for design and manufacture. Explore different design options. Include the linkage that will be used to make the monster move. **Make** – Make a moving monster. Cut and assemble accurately. Select appropriate equipment and materials. Create linkage systems and experiment with them by changing the widths, lengths and thicknesses of the card. Make the features of the monster. **Evaluate** – Explore and evaluate a range of existing products. Evaluate how functional the monster is and whether it meets the design criteria. **Technical knowledge** – Understand that mechanisms are a collection of moving parts that work together in a machine. Learn mechanical components. Identify input and output. Understand that a lever is something that turns on a pivot.

Year 3	**Textiles: Cushions** Sew cross stitch and applique. Design and make a cushion. **Design** – Design a product and its template. Design a cushion. Consider where the cushion will go. **Make** – Cut fabric accurately. Decorate fabric using applique and cross stitch. Select from and use a range of tools and equipment to perform practical tasks. Assemble a cushion **Technical knowledge** – Understand that fabrics can be layered for effect. Know different stitch types.	**Food: Eating seasonally** Prepare and cook a variety of dishes using a range of cooking techniques. Know that climate affects food growth. Consider hygiene when preparing food. **Design** – Create a recipe that is healthy and nutritious using seasonal vegetables. Design a filo tart and describe the benefits of its ingredients. **Make** – Safely follow a recipe when cooking. Prepare a kitchen to cook in. Prepare themselves to start cooking. Use, store and clean a knife safely. **Evaluate** – Taste and evaluate their tart. **Technical knowledge** – Know what foods are in season and when. Understand the benefits of foods by their colour. Know how climate alters the sweetness of food. Know that importing food impacts the environment. Know the basic rules of food contamination.	**Structures: Castles** Design and make a castle using 3D shapes. Establish and use a design criteria to help focus and evaluate their work. **Design** – Identify different features of castles. Design a castle and label the features. Add two design points to the design specification to appeal to the person/purpose of the castle. Draw the design of the castle using 2D shapes. **Make** – Make a castle using 3D shapes. Construct 3D nets by cutting and folding accurately. Use more demanding practical skills (paper engineering/ paper folding techniques). **Evaluate** – Evaluate as they work. Evaluate their own and other's final product. **Technical knowledge** – Apply understanding of how to strengthen, stiffen and reinforce more complex structures.

Year 4	**Electrical systems: Torches** Learn about electrical items and how they work. Identify electrical products and identify the features of a torch. **Design** – Understand what is important in torch design. Describe different torches and who they are designed for. Design a torch, planning who it is for in the design criteria **Make** – Make a torch. Make an electrical circuit. Create the housing for a torch. Select from and use a wide range of tools, equipment and components. **Evaluate** – Evaluate electrical products. Evaluate a torch. to improve their work. Test their final products. **Technical knowledge** – Understand how a torch works. Know what electrical conductors and insulators are. Know that electricity is energy. Know that batteries are used to store electricity. Know the terminology of: insulator, conductor, LED, battery, coin cell battery.	**Food: Adapting a recipe** Follow and adapt a recipe. Design a biscuit to a given budget. **Design** – Carry out research and design a recipe and packaging for a pack of biscuits costing £1.99. Design as a team and create branding. **Make** – Discuss good food hygiene. Make and test a prototype. Cook to a recipe and adapt it to create a new biscuit prototype. Prepare food hygienically. Cook food safely. Make suitable packaging for the product. **Evaluate** – Evaluate a product and consider the taste, smell, texture, appearance, packaging and target audience. Evaluate and compare a range of biscuit prototypes. **Technical knowledge** – Understand the costs behind professional food preparation. Understand the factors that contribute to product design. Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.	**Structures: Pavilions** Create a range of different shaped frame structures. **Design** – Design a structure that is stable and aesthetically pleasing. Explore and design within a given context/theme. **Make** – Make a variety of different frame structures. Make a stable structure. Build a free-standing structure. Select appropriate materials to build a strong structure. Reinforce corners to strengthen my structure. **Evaluate** – Discuss and evaluate existing pavilions. Evaluate their pavilions by comparing to their design sheets. Discuss what they found easiest/most difficult, what worked well and what didn't go to plan. **Technical knowledge** – Know what a pavilion is. Build on prior knowledge of net structures and broadening knowledge of frame structures. Know what architects consider light, shadow and patterns when designing. Know that different materials can create different effects.

Year 5	**Textiles: Stuffed toys**	**Mechanisms: Slingshot cars**	**Food: What could be healthier?**
	Design – Design a stuffed toy. Annotate their design / drawing with notes about the materials and techniques they will use. **Make** – Make a paper template. Thread a needle. Use a blanket stitch to join two pieces of fabric. Accurately cut and join. Create strong and secure stitches (blanket, running, cross stitch). Use applique to attach pieces of fabric decoration. Use stitches to decorate fabric. Use a blanket stitch to join two pieces of fabric. Stuff a toy carefully, repairing any holes or gaps. **Evaluate** – Evaluate a stuffed toy. Discuss which parts of the project they found particularly difficult or easy. Discuss how similar the final product looks to the original designs. Discuss how well their toys came out overall. Discuss how they would improve their toy. **Technical knowledge** - Know how to create a hidden seam. Know how to sew a running stitch, cross stitch and applique.	Build a slingshot car. Investigate and analyse a range of existing products. Understand and use mechanical systems in products. **Design** – Design a shape that reduces air resistance. Design a suitable car body to cover the chassis. Use nets and tabs to design and make the car body. **Make** – Make a model based on a chosen design. Measure, mark, cut and assemble accurately. Include tabs on the net so it can be secured to the panels of the chassis. Decorate the panels. **Evaluate** – Test products in time trials. Evaluate the speed of a design based on the understanding that some cars are faster than others as a result of different factors. **Technical knowledge** – Know some component names (chassis, axle, etc). Understand that the car body shape can impact speed (air resistance). Understand that car designs have developed over many years. Know that all moving things have kinetic energy. Know what kinetic energy is.	**Design** – Design their own bolognese sauce. Suggest healthy substitutions and additions to a recipe. calculate and compare two adapted bolognese recipes using a nutritional calculator. Decide which recipe is healthier. Write an amended method for a recipe to incorporate the relevant changes to ingredients. **Make** – Adapt a traditional recipe. Make a complete product. Use equipment safely, including knives, hot pans and hobs. Follow a method to make a recipe. cutting and preparing vegetables hygienically. Cooking meat safely. **Evaluate** – Taste and compare two similar products. Taste and adapt a dish during cooking process. Consider what they would have done differently if working alone. Reflect on how healthy their sauce ended up. **Technical knowledge** – Know where meat comes from and understand ethical issues around beef. Know nutritional values of packages food. Understand the term 'healthy'. Know what foods make up a balanced diet. Know that the nutritional value of a recipe alters if you remove, substitute or add additional ingredients.

Year 6		**Electrical systems: Steady hand games** Make electromagnetic motors and understand how they work. **Design** – Design a steady hand game. Identify and name the components in a steady hand game. Decide on a clear design criteria for a game. Design a game and draw it from three different perspectives. **Make** – Assemble a motor. Tweak the motor to improve its function. Construct a stable base. Accurately cut and assemble a net. Decorate the base and ensure a high quality finish. Make and test a circuit. Incorporate a circuit into a base **Evaluate** – Adapting products to improve functionality. Test their games by playing their own and one another's games. Discuss what went well with their game and what they could possibly do to improve it. **Technical knowledge** – Know batteries contain acid, which can be dangerous if they leak. Know that when electricity enters a magnetic field it can make a motor. Name electrical components. Know how to make electromagnetic motors.	**Food: Come dine with us** Research and design a three course meal. **Design** – List the ingredients I need for my chosen recipe. Read the method and make a list of all of the equipment I need for my chosen recipe. **Make** – Prepare one of the courses. Create a storyboard that explains how the main ingredient in their course is grown/reared, farmed/caught and processed. Write up a family or favourite recipe that will be added to a class cookbook. Work with food hygienically and safely. **Evaluate** – Taste and evaluate their own food. Taste the dishes that have been made. Take a score out of five from each child. **Technical knowledge** – Know how to research a recipe by ingredient. Understand that not all courses complement one another. Understand where their food comes from. Understand the risks of meat or fish when not cooked properly. Understand safe storage of meat/fish.	**Textiles: Pencil Cases** **Design** – Design a pencil case. Annotate designs. Design a pencil case to a set of design criteria. **Make** – Mark and cut fabric according to a design accurate cutting and joining, using running stitch. Accurately mark out the outline of the panels for a pencil case. Cut neatly and accurately. Assemble a pencil case. Decorate a pencil case. **Evaluate** – Evaluate work according to the design criteria. Evaluate anything which deviates from their original design, including their reasons behind this, as well as how well it works as a pencil case. **Technical knowledge** – Know how to create hidden seams. Explain the differences between the design and the template. Know how to sew a strong running stitch. Know how to keep stitches small, neat and how to follow the edge. Know how to tie strong knots to secure the thread in place.