

	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Food and Nutrition	<p>Fruit Kebabs Expressive Art and Design -Use utensils to chop fruit and salad, knives, peeler, scissors. Communication and Language -Follow 2-step instructions. -Ask why questions. -Discuss the process of making a fruit kebab.</p> <p>Physical Development Children can use utensils to chop and salad safely.</p> <p>Personal, Social and Emotional Development -Understand why they need a healthy, balanced diet and can identify more foods which are healthy. -Use knives to chop fruit and salad safely using the bridge technique.</p> <p>Understanding the World -identify some fruits grown in the UK (apples, pears, strawberries) and some from abroad (pineapple, kiwi, banana).</p>	<p>Design a sandwich for a picnic Designing - Explore and evaluate a range of existing sandwiches looking at types of bread and fillings. - Generate ideas for a sandwich based on personal preferences (must be made by joining two pieces of bread, must contain a filling inside, must be easy to pick up and eat) - Develop, model and communicate their ideas as appropriate through talking, drawing and writing.</p> <p>Making -Select and use equipment, skills and techniques, explaining their choices. - Select from and use ingredients based on their preferences.</p> <p>Evaluating -Evaluate their sandwich by assessing if it looked appealing, held together well when picked up and tasted nice.</p>	<p>Design fruit ice lollies for the Farmer's Market Designing - Explore and evaluate a range of existing fruit lollies looking at types of fruit used. - Test out different fruits to confirm personal preferences including strawberries picked from the kitchen garden. - Generate ideas for a fruit ice lolly based on personal preferences (must include two different fruits) Children can decide if fruit is mixed with yoghurt to change the colour of the yoghurt or if larger whole pieces of fruit are used and how much fruit is used. - Develop, model and communicate their ideas as appropriate through talking, drawing and writing.</p> <p>Making -Select and use equipment, skills and techniques, explaining their choices. - Select from and use ingredients based on their preferences.</p> <p>Evaluating -Evaluate their lolly by assessing if it looked appealing and tasted nice.</p>	<p>Fruit chocolates for the Farmers Market Designing - Explore and evaluate a range of existing chocolates (Link to Cadburys World trip) and whether there is a gap in the market (fruit chocolates) - Research and test out different fruit and chocolate combinations to find ones that work well together. - Survey people to find out which combinations are most popular. - Generate a chocolate flavour and packaging label to go with it. (flavour must contain one type of chocolate and complementary fruit, label must be aesthetically pleasing and explain what the product is could be produced with CAD) - Develop, model and communicate their ideas as appropriate through talking, drawing and writing.</p> <p>Making -Select and use equipment, skills and techniques, explaining their choices. - Select from and use ingredients based on their designs.</p> <p>Evaluating -Evaluate their chocolates by assessing taste and if it looked appealing.</p>	<p>Design and make a pizza Designing - Explore and evaluate a range of existing pizzas by looking at different toppings. - Try different pizza toppings to see which children like and make links to the Eatwell Plate and how they can create a healthy pizza. - Design a pizza with a range of toppings (such as peppers, sweetcorn, mushrooms, pineapple, olives, tomatoes, onions, cooked ham, cooked chicken, cooked beef) that looks appealing. - Develop, model and communicate their ideas as appropriate through talking, drawing and writing.</p> <p>Making -Select and use equipment, skills and techniques, explaining their choices. - Select from and use ingredients based on their designs.</p> <p>Evaluating -Evaluate their pizzas by assessing taste and if it looked appealing.</p>	<p>Cup Cake for a Christmas Gift Designing -Explore and taste a range of existing cupcakes including different flavours and ways of decorating and packaging. -Develop a design criterion to inform the design of products that are fit for purpose, aimed at a particular individuals or a group. (The flavour or the cupcake and decoration must be well suited to the individual and it must be well packaged) -Generate, develop, model and communicate realistic ideas through discussion and, as appropriate, annotated sketches.</p> <p>Making - weigh ingredients on a digital scale. - Mix ingredients together with a wooden spoon then add in selected flavours. - Use oven gloves to safely place the tray into oven and remove once cooked. - Decorate with icing and sweets once cooled down. - Create packaging for cup-cake.</p> <p>Evaluating - Evaluate their ideas and products against their own design criteria and identify the strengths and areas for improvement in their work.</p>	<p>Burrito bowls Designing -Explore, research and taste a range of existing Burrito bowl ingredients and combinations including different ways of presenting them. -Develop a design criterion to inform the design of products that are fit for purpose, aimed at a particular individuals or a group. (The ingredients must be well suited to the individual or group, must contain foods from different areas of the Eatwell plate in order to provide a balanced meal, must be well presented) -Generate, develop, model and communicate realistic ideas through discussion and, as appropriate, annotated sketches.</p> <p>Making - weigh ingredients on a digital scale. - Cook rice, beans and meat (if using) with adult supervision on the hob - Use bridge and claw cutting techniques to chop and prepare selected vegetables and herbs - Arrange ingredients carefully in the bowl</p> <p>Evaluating - Evaluate their ideas and products against their own design criteria and identify the strengths and areas for improvement in their work.</p>
Structures	<p>Bear Cave Expressive Art and Design -Experiment and build with a range of construction materials. -With support, can use scissors, tape dispenser, stapler, glue stick, etc. -Use a variety of materials and fabric. -Choose resources and tools with a purpose in mind. -Talk about what they like about their models. -Use junk modelling to create a bear cave for the bear in Bear snoozes on.</p> <p>Communication and Language -Understand and can respond appropriately to a variety e.g. Why...? Do you think...? What...? - Ask questions to clarify instructions. -Use talk to help them work out problems and possible solutions.</p> <p>Physical Development -Pick up and use a variety of pens, pencils, crayons and paint brushes. -Begin to use pens, pencils and crayons using a tripod grip. -Use pencils to draw. -Begin to transfer skills from other activities to their creative activities.</p> <p>Personal, Social and Emotional Development -Begin to remember rules without being prompted.</p> <p>Understanding the World</p>	<p>A New Chair For Baby Bear Designing - Explore a range of existing chair designs commenting on their stability and comfort. - Test out different support for chairs (buttress and wide base) and assessing which are most stable using art straws and cardboard boxes. - Test different joining methods (glue, blue tac, tape) evaluating their effectiveness. - Generate ideas for a chair based on simple design criteria (must stand up on its own and must hold a teddy bear). - Develop, model and communicate their ideas through talking, mock-ups and drawings.</p> <p>Making -Select and use tools, skills and techniques, explaining their choices. - Select new and reclaimed materials to build their structures. -Use simple finishing techniques to decorate their chair.</p> <p>Evaluating -Evaluate their chair by discussing how stable it is, if it supports the teddy bear and its appearance</p>		<p>A bridge for a toy car to cross Designing - Explore and analyse a range of existing bridges evaluating strength and stability. -Test out different joining techniques by comparing the strength of square frameworks with triangular frameworks. -Reinforce square frameworks using diagonals to help develop an understanding of using triangulation to add strength to a structure using art straws or lolly sticks. -Test how paper tubes can be made from rolling sheets of newspaper diagonally. -Use these tubes and masking tape or paper straws with pipe cleaners to build 3-D frameworks such as cubes, cuboids and pyramids. -Explore how each of the frameworks could be reinforced and strengthened. -generate ideas for a bridge design that meets the design criteria (Is able to support a toy car to cross between two tables) - Develop, model and communicate their ideas through talking, mock-ups and drawings.</p> <p>Making -Select and use tools, skills and techniques, explaining their choices. - Select new and reclaimed materials to build their bridges.</p>		<p>Children can apply previous structures knowledge during their gears and pulleys mechanisms project.</p>	<p>Children apply previous structures knowledge during their monitoring and control project.</p>

	<ul style="list-style-type: none"> -Use a range of materials natural or man mad to construct with. -Explore which materials are best for their models, talking about the properties of the materials 			<ul style="list-style-type: none"> - Use strengthening techniques to ensure their bridges are strong enough for a toy car to pass over. Evaluating -Evaluate their bridge by discussing how stable it is, if it supports the toy car to cross and its appearance. <p>Shell structures using computer-aided design (CAD)</p> <p>Packaging for a new box of chocolates</p> <p>Designing</p> <ul style="list-style-type: none"> -Investigate and evaluate a range of existing chocolate box designs (next, structure, strength, appearance). Links to Cadburys World trip. -Generate realistic ideas and design criteria collaboratively through discussion, focusing on the needs of the user and the functional and aesthetic purposes of the product (must be able to hold chocolates securely, must be clear what the product is, must be aesthetically appealing). -Develop ideas through the analysis of existing shell structures and use computer-aided design to model and communicate ideas. <p>Making</p> <ul style="list-style-type: none"> -Plan the order of the main stages of making -Select and use appropriate tools and software to measure, mark out, cut, score, shape and assemble with some accuracy. -Explain their choice of materials according to functional properties and aesthetic qualities. -Use computer-generated finishing techniques suitable for the product they are creating. <p>Evaluating</p> <ul style="list-style-type: none"> -Test and evaluate their own products against design criteria by discussing if it holds chocolates securely, look appealing and makes clear what the product is. 			
<p>Mechanisms</p>			<p>Wheels and axels – A moving vehicle</p> <p>Designing</p> <ul style="list-style-type: none"> - Explore and evaluate a range of products with wheels and axles. -Generate initial ideas and simple design criteria (vehicle must have moving wheels) through talking and using own experiences. - Develop and communicate ideas through drawings and mock-ups. <p>Making</p> <ul style="list-style-type: none"> - Select from and use a range of tools and equipment to perform practical tasks such as cutting and joining to allow movement and finishing. - Select from and use a range of materials and components such as paper, card, plastic and wood according to their characteristics. <p>Evaluating</p>	<p>Pneumatics – a moving mythical monster toy for a child</p> <p>Designing</p> <ul style="list-style-type: none"> -Explore and analyse products with pneumatic mechanisms. -Test out making a simple pneumatic mechanism. -Generate ideas for a moving monster toy that meets the design criteria (toy is a mythical monster with a mouth that opens and closes). -Use annotated sketches and prototypes to develop, model and communicate ideas. <p>Making</p> <ul style="list-style-type: none"> -Order the main stages of making. -Select from and use appropriate tools with some accuracy to cut and join materials and components such as tubing, syringes and balloons. 	<p>Levers and Linkages – a moving poster to explain a process</p> <p>Designing</p> <ul style="list-style-type: none"> - Investigate and analyse books and, where available, other products with lever and linkage mechanisms. - Generate realistic ideas and their own design criteria through discussion, focusing on the needs of the user (must include a lever and linkage mechanism.) - Use annotated sketches and prototypes to develop, model and communicate ideas. <p>Making</p> <ul style="list-style-type: none"> - Order the main stages of making. - Select from and use appropriate tools with some accuracy to cut, shape and join paper and card. - Select from and use finishing techniques suitable for the product they are creating. <p>Evaluating</p>	<p>Cams - A moving theme park ride souvenir for a child</p> <p>Designing</p> <ul style="list-style-type: none"> -generate innovative ideas by carrying out research using surveys, interviews, questionnaires and web-based resources. -develop a simple design specification to guide their thinking (toy must contain a cam mechanism which moves.) -develop and communicate ideas through discussion, annotated drawings, exploded drawings and drawings from different views including cross sections. <p>Making</p> <ul style="list-style-type: none"> -produce detailed lists of tools, equipment and materials. Formulate step-by-step plans and, if appropriate, allocate tasks within a team. 	

			<p>- Evaluate their ideas throughout and their products against original criteria.</p> <p>Levers and sliders – A moving picture for a story book Designing -Explore a range of existing books and everyday products that use simple sliders and levers. -Explore and make mock up sliders and levers to decide which to use in their design -Generate ideas based on simple design criteria (must be a moving picture linked to their pirate story, must move easily, must be sturdy) and their own experiences, explaining what they could make. -Develop, model and communicate their ideas through drawings and mock-ups with card and paper. Making -Plan by suggesting what to do next. -Select and use tools, explaining their choices, to cut, shape and join paper and card. -Use simple finishing techniques suitable for the product they are creating. Evaluating -Evaluate their product by discussing how well it works in relation to the purpose and the user and whether it meets design criteria (does picture link to story? does the picture move? is it sturdy?)</p>	<p>-Select from and use finishing techniques to create their monster toy design. Evaluating -Evaluate their monster toy by discussing if it looks like their mythical monster and does the pneumatic mechanism work to allow the mouth to open and close.</p>	<p>-Evaluate their own products and ideas against criteria and asses if lever and linkage worked and if poster achieved its purpose.</p>	<p>-select from and use a range of tools and equipment to make products that that are accurately assembled and well finished. Work within the constraints of time, resources and cost. Evaluating -compare the final product to the original design specification. - test products with the intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose. - consider the views of others to improve their work.</p> <p>Pulleys or Gears – A load pulling vehicle for a STEM competition Designing -generate ideas by carrying out research using surveys, interviews, questionnaires and web-based resources. - develop a simple design specification to guide their thinking (must design a vehicle that can pull a load up hill with choices made on the size and type of wheels used and any additional covers to the chassis) -develop and communicate ideas through discussion, annotated drawings, exploded drawings and drawings from different views. Making - produce detailed lists of tools, equipment and materials. Formulate step-by-step plans and, if appropriate, allocate tasks within a team. - select from and use a range of tools and equipment to make products that that are accurately assembled and well finished. Work within the constraints of time, resources and cost. Evaluating - compare the final product to the original design specification. - test products with intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose. -consider the views of others to improve their work.</p>	
<p>Textiles</p>		<p>A Flag for a Carnival Designing - Explore and evaluate a range of existing flags commenting on designs. - Test a range of joining techniques (running stitch, glue and stapling) and evaluate their effectiveness. - Generate ideas for a flag based on a simple design criterion (must be made by joining two pieces of material, must have a bright coloured design) -Develop, model and communicate their ideas as appropriate through talking, drawing, templates, mock-</p>					<p>A mobile phone case Designing -Investigate and analyse a range of textile products linked to their final product. These could include mobile phone cases, pencil cases and purses or wallets. -Generate innovative ideas by carrying out research including surveys, interviews and questionnaires. -Develop, model and communicate ideas through talking, drawing, templates, mock-ups and prototypes and, where appropriate, computer-aided design. -Design purposeful, functional, appealing products for the intended user that are fit for purpose based on a simple design specification. (Must be able to hold a</p>

		<p>ups and information and communication technology.</p> <p>Making --Select and use tools, skills and techniques, explaining their choices. - Select from and use textiles according to their characteristics.</p> <p>Evaluating - Evaluate their flag by assessing if it is securely joined together and if it has a brightly coloured design.</p>					<p>mobile phone, must fasten securely, and must include a design)</p> <p>Making -Produce detailed lists of equipment and fabrics relevant to their tasks. -Formulate step-by-step plans. -Select from and use a range of tools and equipment to make products that are accurately assembled and well finished. Work within the constraints of time, resources and cost.</p> <p>Evaluating -Compare the final product to the original design specification (Does case hold phone, fasten securely and include a design?) -Test products with intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose. -consider the views of others to improve their work</p>
<p>Electrical Systems</p>					<p>Simple circuits and switch in a product for someone</p> <p>Designing -Design a product of their choice for themselves or someone else with a clear purpose containing a working electrical system (for example a Christmas card, lamp for my bedroom or a light box with a Christmas message for our stall at the Christmas fair, a game with a buzzer system for the Christmas fair). -Explore and analyse a range of existing battery-powered products. - Develop a design criterion to inform the design of products that are fit for purpose, aimed at a particular individuals or a group. (It must contain an electrical system with a switch to turn on and off.) -Generate, develop, model and communicate realistic ideas through discussion and, as appropriate, annotated sketches, cross-sectional and exploded diagrams.</p> <p>Making - Order the main stages of making. - Select from and use tools and equipment to cut, shape, join and finish with some accuracy. - Select from and use materials and components, including construction materials and electrical components according to their functional properties and aesthetic qualities.</p> <p>Evaluating - Evaluate their ideas and products against their own design criteria and identify the strengths and areas for improvement in their work.</p>		<p>Electrical systems - Monitoring and control - An invention to solve a problem at school or home</p> <p>Designing -Look at existing products which incorporate monitoring and control systems. -Decide on own problem to try and design a solution to. -Develop a design specification for a functional product that responds automatically to changes in the environment. -Generate, develop and communicate ideas through discussion, annotated sketches and pictorial representations of electrical circuits or circuit diagrams.</p> <p>Making -Formulate a step-by-step plan to guide making, listing tools, equipment, materials and components. -Competently select and accurately assemble materials, and securely connect electrical components to produce a reliable, functional product. -Create and modify a computer control program to enable their electrical product to respond to changes in the environment.</p> <p>Evaluating -Continually evaluate and modify the working features of the product to match the initial design specification. -Test the system to demonstrate its effectiveness for the intended user and purpose.</p>