

	Autumn	Spring	Summer
EYFS Cycles A and B	Three Little Pigs How will I join the different parts of my house together? Inspired by the story, pupils design and make a house for one of the three little pigs. They explore and decide what materials they will use and how they will join them together. <i>Structures</i> <i>Curriculum links:</i> Physical development Expressive arts and design 'The Three Little Pigs' (Literacy)	Food Technology What ingredients and techniques do we use to make pancakes and stir fry? Pupils complete basic hygiene tasks and use simple cooking utensils/equipment and techniques to make pancakes to celebrate Shrove Tuesday and stir fry to celebrate the Lunar New Year. They listen to instructions carefully and follow them accurately. They are supported to measure and weigh ingredients. <i>Cooking and nutrition</i> <i>Curriculum links:</i> Physical development Mathematics Communication and language A special time and place (RE)	Hungry Caterpillar Puppets What materials and techniques will I use to make my puppet? Pupils explore and select from different materials to make their finger puppets. Pupils explore simple ways of joining materials (for example stapling and gluing) and finishing techniques. They use their puppets to retell the story. <i>Textiles</i> <i>Curriculum links:</i> Physical development 'The Very Hungry Caterpillar' (Literacy) Communication and language
Years 1 and 2 Cycle A	Harvest Festival How can we use seasonal fruit and vegetables to make a healthy snack? Pupils design, make and evaluate a healthy snack by preparing and using fruit and vegetables from the harvest festival. They are introduced to simple utensils/equipment and the key skills of safely peeling, cutting, squeezing and grating. <i>Cooking and nutrition</i> <i>Curriculum links:</i> Seasons and Weather (Geography)	Moving Books for Katie How can I use simple mechanisms to make my page move? Pupils design, make and evaluate a page for a moving book for Katie Morag to enjoy, using levers and sliders. <i>Mechanisms</i> <i>Curriculum links:</i> Katie Morag, Isle of Coll (Geography)	School Playground How can I make strong and stable playground equipment? Pupils design, make and evaluate a small-scale freestanding piece of equipment for the school playground. Pupils explore the features of existing playground equipment. They learn to measure, mark out, cut, shape, join and finish using a range of tools and materials. They explore ways of making their freestanding structures stronger, stiffer and more stable. <i>Structures</i> <i>Curriculum links:</i> Significant people, places and events in East Leake (History)
Years 1 and 2 Cycle B	Toy Vehicles What are simple mechanisms and how can we use them to make a moving vehicle? Pupils design, make and evaluate a pull-along toy vehicle to carry a given weight using simple mechanisms (wheels and axles). <i>Mechanisms</i> <i>Curriculum links:</i> Toys and Technology (History)	Survival Snacks How can we combine ingredients to make a healthy snack? Pupils design, make (without using a heat source) and evaluate a healthy, energy snack for an explorer to take on an expedition. <i>Cooking and nutrition</i> <i>Curriculum links:</i> Penguin or meerkat? (Geography)	Story Puppets What materials and techniques are needed to make a hand puppet? Pupils design, make and evaluate a hand puppet to re-tell a favourite story. Building on from FS, pupils use templates, explore different ways of joining (e.g., running stitch) and finishing techniques (e.g., using fabric pens, gluing sequins, stitching buttons and ribbons). <i>Textiles</i> <i>Curriculum links:</i> English
Years 3 and 4 Cycle A	Field to Fork Healthy Lunch How can I use the Eatwell Guide and seasonal produce to design and make a healthy lunch? Pupils design, make and evaluate a healthy lunch using seasonal produce. They explore the Eatwell Guide and the nutritional value of certain foods. Utensil knowledge and technical skills are developed, including slicing using the bridge and claw technique. <i>Cooking and nutrition</i> <i>Curriculum links:</i> Food & Farming - where does our food come from? (Geography)	Reading Lights How can I use a switch to control my reading light? Pupils design, make and evaluate a battery-powered reading light incorporating a simple circuit and switch. Pupils' learning can be extended by using a computer to program and control their light for a purpose. For example, the bulb switching off after a period of time. <i>Electrical systems/computer control</i> <i>Curriculum links:</i> Electricity (Science)	Mighty Mascots How can I use a pneumatic system to create a moving mechanism? Pupils design, make and evaluate a model of a mighty mascot that has moving parts controlled by a pneumatic system. <i>Mechanical systems</i> <i>Curriculum links:</i> Forces (Science)

Years 3 and 4 Cycle B	<p>Bread Making What different ingredients are needed to make bread and what techniques do we use?</p> <p>Pupils design, make and evaluate a bread product to share with their families. They develop their baking and kneading skills. They recognise, name and explain the features (appearance, ingredients, taste) of different types of bread from around the world. They learn what gluten-free means and explore some bread traditions.</p> <p><i>Cooking and nutrition</i> Curriculum links: <i>Nutrition and growth (Science)</i> <i>RE</i></p>	<p>Shell Structures How does the construction and materials used meet the purpose of the product?</p> <p>Pupils design, make and evaluate their own packaging to stop home-made biscuits being broken using strong, stiff shell structures for protection. The different purposes of packaging and ways to make shell structures stronger and stiffer are investigated. Pupils use CAD to create their nets and combinations of laminating, ribbing and corrugating. Pupils test the effectiveness of their designs by posting the biscuits in the packaging back to school!</p> <p><i>Structures</i> Curriculum links: <i>Mouse skills (Computing)</i></p>	<p>Upcycled Drawstring Bag How can I make a 2D shape into a 3D product?</p> <p>Pupils design, make and evaluate a drawstring bag, upcycling an unwanted pillowcase or piece of clothing. Pupils create the pattern pieces for their bag. They develop back stitching and finishing techniques. For example, stitching embellishments.</p> <p><i>Textiles</i> Curriculum links: <i>Design and make art for different purposes (Art)</i> <i>Measuring (Maths)</i></p>
Years 5 and 6 Cycle A	<p>Make do and mend textiles upcycling project How can we combine different fabric shapes to make a new 3D product?</p> <p>Pupils design and select from a wide range of materials, tools and equipment to make a small bag of their choice (e.g. purse, mobile phone carrier, tablet case) by combining different fabric shapes and using a range of finishing techniques. Building on from Y3/4, pupils explore ways of joining, decorating and improving the appearance and consistency of stitches.</p> <p><i>Textiles</i> Curriculum links: <i>WWII (History)</i></p>	<p>Celebrating Caribbean Cuisine What are the key ingredients needed to make...?</p> <p>Pupils design, prepare, cook and evaluate their own Caribbean-inspired savoury dish using a wide range of utensils, cooking techniques and a heat source. They identify and explore the source of key ingredients and carry out sensory evaluations (exploring tastes, textures and aromas) of herbs and spices specific to Caribbean dishes.</p> <p><i>Cooking and nutrition</i> Curriculum links: <i>Post WWII (History)</i> <i>Cuba (Geography)</i></p>	<p>Fairground Ride What types of components are used and where are they positioned?</p> <p>Pupils design, make and evaluate their own fairground ride, incorporating belts, pulleys and a battery powered electrical circuit including a motor and handmade switch. Pupils could enhance their designs by creating and modifying a computer control program to enable the product to work automatically in response to changes in the environment.</p> <p><i>Mechanical and electrical systems/computer control</i> Curriculum links: <i>Electricity (Science)</i> <i>Nottingham (History)</i></p>
Years 5 and 6 Cycle B	<p>Fair Trade Breakfast Bars What constitutes a healthy breakfast and how can I design, make and launch a new healthy breakfast bar?</p> <p>Pupils design, prepare, bake and evaluate a new and healthy breakfast bar for children using a wide range of equipment, techniques and ingredients, including Fair Trade ingredients. Pupils also learn about the significance of 2D branding in design and use CAD to create nets for their breakfast bar packaging and logos.</p> <p><i>Cooking and nutrition/structures</i> Curriculum links: <i>Animals including humans and identifying the importance of diet and nutrients (Science).</i> <i>Computing</i></p>	<p>School Shelters What 3D framework will I use to create a strong, stable and innovative structure?</p> <p>Pupils design, make and evaluate their own small-scale 3D frame shelter structure for the school, considering ways of joining materials. Pupils compare the strengths of square and triangular frameworks and learn about Jinks Joints and cross beams. They explore the properties of renowned frame structures, analysing the work of key designs and designers.</p> <p><i>Structures</i> Curriculum links: <i>Properties of materials (Science)</i> <i>Accurately measuring using standard units i.e., cm/mm (Mathematics)</i></p>	<p>Cams Moving Toys How can I use cam mechanisms to create movement and change the direction and speed of my toy?</p> <p>Pupils design, make and evaluate a moving toy using a cam mechanical system. Pupils explore different types of movement: rotary, oscillating and reciprocating. They carry out market research and develop their own design specification to inform their innovative ideas.</p> <p><i>Mechanical systems</i> Curriculum links: <i>Geometry and measurement (Mathematics)</i></p>