Netherton Moss Primary School — Long-Term Curriculum Plan for Design & Technology — 2024/25

<table>
<tr><th colspan="2">Organisation of Knowledge</th><th>Design</th><th>Make</th><th>Evaluate</th><th>Structures</th><th>Food</th></tr>
<tr><td rowspan="2">EYFS</td><td>Relevant ELG</td><td rowspan="2">ELG: Listening, Attention and Understanding
✓ Hold conversation when engaged in back-and-forth exchanges with their teacher and peers.
ELG: Speaking
✓ Participate in small group, class and one-to-one discussions, offering their own ideas, using recently introduced vocabulary.
ELG: Self-Regulation
✓ Set and work towards simple goals, being able to wait for what they want and control their immediate impulses when appropriate.</td><td colspan="4">ELG: Creating with Materials
✓ Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</td></tr>
<tr><td>KS1 readiness objectives</td><td>To describe something they want to make / build / construct
To say who they are making / building / constructing for
To talk about what materials they are going to use when making / building / constructing</td><td>✓ To make / build / construct objects using a variety of materials
✓ To join materials together when making / building / constructing</td><td>✓ To talk about their constructions / products, and what they are pleased with
✓ To talk about their constructions and say how it could be even better
✓ To talk about everyday objects that they like and say why they are good</td><td>✓ To build / construct structures from a range of materials to a design brief that they have created or been given.
✓ To build / construct structures that are tall or strong.
✓ To know that tape and glue can join materials together and can make structures stronger.</td></tr>
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<tr><td rowspan="3">ELG: Managing self
✓ Be confident to try new activities and show independence, resilience and perseverance in the face of challenge.
ELG: Fine motor skills
✓ Use a range of small tools, including scissors, paintbrushes and cutlery.
ELG: Creating with Materials
✓ 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.</td><td>ELG: Listening, Attention and Understanding
✓ Hold conversation when engaged in back-and-forth exchanges with their teacher and peers.
ELG: Speaking
✓ Offer explanations for why things might happen, making use of recently introduced vocabulary from stories, non-fiction, rhymes and poems when appropriate;</td><td rowspan="3"></td><td rowspan="3">ELG: Managing self
✓ Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.
✓ Set and work towards simple goals, being able to wait for what they want and control their immediate impulses when appropriate.
ELG: Fine motor skills
✓ Use a range of small tools, including scissors, paint brushes and cutlery.</td></tr>
<tr><td>ELG: Speaking
✓ Express their ideas and feelings about their experiences using full sentences, including use of past, present and future tenses and making use of conjunctions, with modelling and support from their teacher.
ELG: Managing self
✓ Be confident to try new activities and show independence, resilience and perseverance in the face of challenge.
ELG: Creating with Materials
✓ Share their creations, explaining the process they have used.</td></tr>
<tr><td>✓ To talk about their constructions / products, and what they are pleased with
✓ To talk about their constructions and say how it could be even better
✓ To talk about everyday objects that they like and say why they are good</td></tr>
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Year 1		Mechanisms	Structures	Food 1
		Sliders and levers *Designing, making and evaluating a moving storyboard to retell fairy-tale to the class*	**Freestanding structures** *Designing, making and evaluating a strong chair for baby bear*	***Fruit Skewers*- use the basic principles of a healthy and varied diet to prepare dishes.** *Survey class favourite fruits* *Look at the plants they grow on and where they come from.* *See skewers as a healthy alternative.* *Understand the 5 a day principle for fruit and veg.*
	Knowledge, Skills & Dispositions	**Designing** ✓ Generate ideas based on simple design criteria 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** ✓ Explore a range of existing books and everyday products that use simple sliders and levers. ✓ Evaluate their product by discussing how well it works in relation to the purpose and the user and whether it meets design criteria. **Technical knowledge and understanding** ✓ Explore and use sliders and levers. ✓ Understand that different mechanisms produce different types of movement. ✓ Know and use technical vocabulary relevant to the project.	**Designing** ✓ Generate ideas based on simple design criteria and their own experiences, explaining what they could make. ✓ Develop, model and communicate their ideas through talking, mock-ups and drawings. **Making** ✓ Plan by suggesting what to do next. ✓ Select and use tools, skills and techniques, explaining their choices. ✓ Select new and reclaimed materials and construction kits to build their structures. ✓ Use simple finishing techniques suitable for the structure they are creating. **Evaluating** ✓ Explore a range of existing freestanding structures in the school and local environment e.g. everyday products and buildings. ✓ Evaluate their product by discussing how well it works in relation to the purpose, the user and ✓ whether it meets the original design criteria. **Technical knowledge and understanding** ✓ Know how to make freestanding structures stronger, stiffer and more stable. ✓ Know and use technical vocabulary relevant to the project.	✓ **Measure**- measure the quantity of food needed using whole numbers and fractions, e.g. 8 grapes, ½ cucumber ✓ **Wash** -gently rinse fruit and vegetables under the tap, removing any visible dirt, e.g. grapes, green beans ✓ **Deseed**- use hands to scoop out seeds, e.g. a melon ✓ **Peel**- use hands to peel fruit, e.g. banana or satsuma ✓ **Hull**- pull the green stalk away from a strawberry using fingers ✓ **Cut**- use the bridge hold and claw grip to cut foods safely into large pieces using a vegetable knife, e.g. strawberries in half ✓ **Segment**- segment a small 'easy peel' piece of fruit by hand, e.g. satsuma ✓ **Thread**- thread soft fruits carefully on a kebab stick ✓ **Tidy**- clear away equipment from working area

		Food 1	Food 2	Mechanisms	Textiles
Year 2		*Healthy sandwiches/ Packed lunches:* **use the basic principles of a healthy and varied diet to prepare dishes** *Link to making packed lunches in school healthier/les processed.* *Complete a packed lunch content or favourite sandwich survey* *Look at the Eatwell plate to assess packed lunches and sandwiches*	*Making meals healthier:* **Apple Crumble** *Look at a range of different crumble fillings including seasonal fruits* *Look at ways to reduce fat and sugar in the crumble mix* *Look at healthy accompaniments such as yoghurt.*	*Wheels and axles* *Designing, making and evaluating a small-scale wheeled trolley that will carry tools to use in the school garden for or for a character in a story*	*Templates and joining* *Designing, making and evaluating a puppet to perform a play*
	Knowledge. Skills & Dispositions	✓ **Follow**- follow recipe instructions, supported by images ✓ **Write**- write their own recipe, using text and some pictures ✓ **Change**- make changes to recipes and dishes that promote current healthy eating messages, e.g. using lower fat mayonnaise ✓ **Measure**- measure the quantity of food needed using whole numbers and fractions, e.g. 8 grapes, ½ cucumber ✓ **Wash**- gently rinse fruit and vegetables under the tap, removing any visible dirt, e.g. grapes, green beans ✓ **Core**- cut away the core by first quartering the fruit, then removing the pips ✓ **Deseed**- use hands to scoop out seeds, e.g. a melon ✓ **Peel**- use hands to peel fruit, e.g. banana or satsuma ✓ **Hull**- pull the green stalk away from a strawberry using fingers ✓ **Cut**- use the bridge hold and claw grip to cut foods safely into large pieces using a vegetable knife, e.g. strawberries in half ✓ **Grate**- use an upright grater to grate foods, ✓ **Blend**- puree a soup in an electric blender (soup already put into the blender) ✓ **Assemble**- spread a soft topping, e.g. margarine over a slice of bread ✓ **Assemble**- place ingredients on a dish by hand, e.g. open sandwich, pizza ✓ **Chill**- place food in the fridge to keep it safe, e.g. sandwiches, salads ✓ **Tidy**- clear away equipment from working area ✓ **Wash**- help to wash up items, e.g. plates, cups	✓ **Follow**- follow recipe instructions, supported by images ✓ **Measure**- weigh foods in 100g increments, using weighing scales ✓ **Core**- cut away the core by first quartering the fruit, then removing the pips ✓ **Peel**- use a vegetable peeler to peel vegetables, e.g. carrot for a salad or potatoes for mashing ✓ **Chop**- use the bridge hold and claw grip to cut foods safely into large pieces using a vegetable knife, ✓ **Sieve**- sift flour into a bowl using a sieve ✓ **Rub-in**- use hands to rub fat into flour to make a veggie crumble topping ✓ **Arrange**- layer different ingredients together, e.g. fruit then crumble topping ✓ **Bake**- place and remove dishes in the oven safely ✓ **Serve**- carefully spoon or scoop servings into a dish ✓ **Tidy**- clear away equipment from working area ✓ **Wash**- help to wash up items, e.g. plates, cups	**Designing** ✓ Generate initial ideas and simple design criteria through talking and using own experiences. ✓ Develop and communicate ideas through drawings and mock-ups. **Making** ✓ 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. **Evaluating** ✓ Explore and evaluate a range of products with wheels and axles. ✓ Evaluate their ideas throughout and their products ✓ against original criteria. **Technical knowledge and understanding** ✓ Explore and use wheels, axles and axle holders. ✓ Distinguish between fixed and freely moving axles. ✓ Know and use technical vocabulary relevant to the project.	**Designing** ✓ Design a functional and appealing product for a chosen user and purpose based on simple design criteria. ✓ Generate, develop, model and communicate their ideas as appropriate through talking, drawing, templates, mock-ups and information and communication technology. **Making** ✓ Select from and use a range of tools and equipment to perform practical tasks such as marking out, cutting, joining and finishing. ✓ Select from and use textiles according to their characteristics. **Evaluating** ✓ Explore and evaluate a range of existing textile products relevant to the project being undertaken. ✓ Evaluate their ideas throughout and their final products against original design criteria. **Technical knowledge and understanding** ✓ Understand how simple 3-D textile products are made, using a template to create two identical shapes. ✓ Understand how to join fabrics using different techniques e.g. running stitch, glue, over stitch, stapling. ✓ Explore different finishing techniques e.g. using painting, fabric crayons, stitching, sequins, buttons and ribbons. ✓ Know and use technical vocabulary relevant to the project.

Year 3		Food 1	Structures	Food 2	Textiles
		Making food sustainable: Homemade v Shop bought pizza *Understand the basic principles of food miles and its impact on the environment* *Calculate the food miles of one bought in the shop e.g. ham and pineapple with one made using ingredients from the school allotment.* *Link ingredients to the Eatwell plate*	**Shell structures** *Designing, making and evaluating packaging for a gift for a family member*	**Food from different cultures: Chinese food** *Look at the significance of food in the Chinese culture and at times of celebration* *Know the principles of stir-frying and the importance of ingredients of matching size*	**2D shape to 3D product** *Designing, making and evaluating a holder purse or wallet for a friend or relative*
	Knowledge, Skills & Dispositions	✓ **Follow**- follow recipe instructions, supported by images ✓ **Change**- make changes to a recipe by swapping its main ingredients, e.g. homegrown courgette instead of pepper or pineapple. ✓ **Measure**- measure foods using cups and measuring spoons, e.g. 1 cup, 1 x 5ml spoon (a teaspoon ✓ **Drain**- drain away liquid from foods in a can or bottle using a sieve, e.g. tuna or sweetcorn ✓ **Sieve**- sift flour into a bowl using a sieve ✓ **Knead**- knead bread dough by hand, developing it to become elastic and smooth (no surface cracks) ✓ **Prove**- allow dough to prove, knowing when it is ready for use, i.e. it doubles in size ✓ **Spread**- spread a uniform layer of topping, paying attention to corners ✓ Layer- place ingredients on a dish by hand, e.g. open sandwich, pizza ✓ **Bake**- place and remove dishes in the oven safely ✓ **Serve**- cut a final dish roughly into equal sized portions, e.g. ¼ pizza ✓ **Tidy**- clear area and wipe down work surfaces ✓ **Wash**- wash dirtier and different pieces of equipment	**Designing** ✓ Generate realistic ideas and design criteria collaboratively through discussion, focusing on the needs of the user and purpose of the product. ✓ Develop ideas through the analysis of existing products and use annotated sketches and prototypes to model and communicate ideas. **Making** ✓ Order the main stages of making. ✓ Select and use appropriate tools 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 finishing techniques suitable for the product they are creating. **Evaluating** ✓ Investigate and evaluate a range of existing shell structures including the materials, components and techniques that have been used. ✓ Test and evaluate their own products against design criteria and the intended user and purpose. **Technical knowledge and understanding** ✓ Develop and use knowledge of how to construct strong, stiff shell structures. ✓ Develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes. ✓ Know and use technical vocabulary relevant to the project.	✓ **Follow**- follow recipe instructions, supported by images ✓ **Measure**- measure foods using cups and measuring spoons, e.g. 1 cup, 1 x 5ml spoon (a teaspoon) ✓ **Clean**- wash fruit and vegetables to remove dirt, e.g. carrots, beetroot and potatoes ✓ **Deseed**- use hands to remove the seeds from a red pepper ✓ **Peel**- use a vegetable peeler to peel vegetables, e.g. carrot for a stir fry ✓ **Cut**- slice and dice foods safely, e.g. strips of pepper, cubes of cheese ✓ **Crush**- crush garlic using a garlic press ✓ **Stir**- stir hot dishes on the hob, ensuring that food does not burn or catch (keep food moving, ensure that heat is not too high), e.g. risotto ✓ **Stir**-Fry- stir-fry raw meat, followed by vegetables, on the hob, ensuring that the meat is thoroughly cooked ✓ **Tidy**- clear area and wipe down work surfaces ✓ **Wash**- wash dirtier and different pieces of equipment	**Designing** ✓ Generate realistic ideas through discussion and design criteria for an appealing, functional product fit for purpose and specific user/s. ✓ Produce annotated sketches, prototypes, final product sketches and pattern pieces. **Making** ✓ Plan the main stages of making. ✓ Select and use a range of appropriate tools with some accuracy e.g. cutting, joining and finishing. ✓ Select fabrics and fastenings according to their functional characteristics e.g. strength, and aesthetic qualities e.g. pattern. **Evaluating** ✓ Investigate a range of 3-D textile products relevant to the project. ✓ Test their product against the original design criteria and with the intended user. ✓ Take into account others' views. ✓ Understand how a key event/ individual has influenced the development of the chosen product and/or fabric. **Technical knowledge and understanding** ✓ Know how to strengthen, stiffen and reinforce existing fabrics. ✓ Understand how to securely join two pieces of fabric together. ✓ Understand the need for patterns and seam allowances. ✓ Know and use technical vocabulary relevant to the project.

Year 4		Mechanisms	Food 1	Food 2	Electrical Systems
		Levers and linkages *Designing, making and evaluating a greetings card with moving parts for family or friends*	**Making real meals: Global Scouse Day** **28th Feb every year- Enterprise - on sale to staff** *Understand the cultural significance of Scouse, its Irish origins and the reason it is made in Liverpool* *Know how Blind Scouse was made without meat during times of poverty and rationing/shortage* *Link ingredients to the Eatwell plate* *Look at the total cost of the ingredients* *Understand how the portion size affects profitability* *Calculate the sale price and profit/loss*	**Making meals healthier: Tasty Tomato Pasta** **Homemade vs Shop bought sauce.** *Know and understand the idea of starchy staple foods and how they exist in every culture, bread, rice, pasta, potatoes etc* *Understand the way shop bought goods have hidden ingredients such as salt, sugar and fat.* *Link ingredients to the Eatwell plate*	**Simple circuits and switches** *Designing, making a devaluating a night light for a brother sister or friend*
	Knowledge, Skills & Dispositions	**Designing** ✓ Generate realistic ideas and their own design criteria through discussion, focusing on the needs of the user. ✓ Use annotated sketches and prototypes to develop, model and communicate ideas. **Making** ✓ 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. **Evaluating** ✓ Investigate and analyse books and, where available, other products with lever and linkage mechanisms. ✓ Evaluate their own products and ideas against criteria and user needs, as they design and make. **Technical knowledge and understanding** ✓ Understand and use lever and linkage mechanisms. ✓ Distinguish between fixed and loose pivots. ✓ Know and use technical vocabulary relevant to the project.	✓ **Follow**- follow text-based recipe instructions ✓ **Weigh**- weigh accurately using weighing scales, e.g. in 5-10g increments ✓ **Chop**- cut, slice or dice ingredients into equal sized pieces/portions e.g. potato ✓ **Cut**- use a knife to portion parts of meat, poultry and fish ✓ **Brown**- fry an onion on the hob, e.g. as a base for soup ✓ **Bake**- check that food being baked is cooked - usually golden brown on the surface ✓ **Serve**- ladle soup or stew into bowls ✓ **Clean**- remove and tidy all items of equipment and clean work surfaces ✓ **Clean**- wash and rinse equipment, paying attention to detail	✓ **Follow**-follow text-based recipe instructions ✓ **Change**- make changes to recipes and dishes that promote current healthy eating messages, e.g. using lower salt stock cubes ✓ **Measure**- measure the quantity of food needed using whole numbers and fractions ✓ **Wash**- wash fruit and vegetables to remove dirt, e.g. carrots, beetroot and potatoes ✓ **Deseed**- use hands to remove the seeds from a red pepper ✓ **Crush**- crush garlic using a garlic press ✓ **Peel**- use a vegetable peeler to peel vegetables, e.g. carrot for a salad ✓ **Chop**- slice and dice foods safely, e.g. strips of pepper ✓ **Stir**- stir hot dishes on the hob, ensuring that food does not burn or catch (keep food moving, ensure that heat is not too high) ✓ **Stir**- understand that some foods do not need continual stirring while being cooked, e.g. pasta, rice, potatoes ✓ **Fry**- fry foods in very little oil, ensuring that they are turned over for even cooking ✓ **Boil**- know that rapid boiling is only suitable for some foods, such as rice and pasta, and simmering is better for vegetables, as it is less damaging ✓ **Drain**- drain hot liquid safely away from foods using a colander, e.g. pasta, rice ✓ **Serve**- coat food with a topping, e.g. pasta with a tomato sauce ✓ **Clean**- wash and rinse equipment, paying attention to detail	**Designing** ✓ Gather information about needs and wants and develop design criteria to inform the design of products that are fit for purpose, aimed at particular individuals or groups. ✓ Generate, develop, model and communicate realistic ideas through discussion and, as appropriate, annotated sketches, cross-sectional and exploded diagrams. **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. **Evaluating** ✓ Investigate and analyse a range of existing battery-powered products. ✓ Evaluate their ideas and products against their own design criteria and identify the strengths and areas for improvement in their work. **Technical knowledge and understanding** ✓ Understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs and buzzers. ✓ Apply their understanding of computing to program and control their products. ✓ Know and use technical vocabulary relevant to the project.

		Food 1	Food 2	Structures	Textiles
Year 5		**Making real meals** **Chicken Stew** *Prepare a traditional meal* *Know and understand the idea of starchy staple foods and how they exist in every culture, bread, rice, pasta, potatoes etc*	**Food for celebration and other cultures** **Basic Bread** *Make the link to bread products as a staple and yeast as a useful microorganism.* *Understand the religious significance and the link to the religious stories and cultural practices.* *Compare to other bread-based products including those without yeast.*	**Frame structures** *Designing and making a small-scale bird hide for children to use in the school wildlife area*	**Combining different fabric shapes** *Designing, making and evaluating a belt to hold garden tools*
	Knowledge, Skills & Dispositions	✓ **Follow**-follow text-based recipe instructions ✓ Change- make changes to recipes and dishes that promote current healthy eating messages, e.g. using lower salt stock cubes ✓ **Deseed**- use hands to remove the seeds from a red pepper ✓ **Crush**- crush garlic using a garlic press ✓ **Peel**- use a vegetable peeler to peel vegetables, e.g. carrot for a salad ✓ **Chop**- slice and dice foods safely, e.g. strips of pepper ✓ **Sauté**- sauté foods in a pan on the hob, e.g. mushrooms Stir- stir hot dishes on the hob, ensuring that food does not burn or catch (keep food moving, ensure that heat is not too high) ✓ **Stir-Fry**- stir-fry raw meat, followed by vegetables, on the hob, ensuring that the meat is thoroughly cooked ✓ **Stir**- understand that some foods do not need continual stirring while being cooked, e.g. pasta, rice, potatoes ✓ **Clean**- wash and rinse equipment, paying attention to detail	✓ **Follow**- follow text-based recipe instructions ✓ **Weigh**- weigh accurately using weighing scales, e.g. in 5-10g increments ✓ **Measure**- measure foods using cups and measuring spoons, e.g. 1 cup, 1 x 5ml spoon (a teaspoon ✓ **Mix**- combine wet and dry ingredients together uniformly, ✓ **Knead**- knead bread dough by hand, developing it to become elastic and smooth (no surface cracks) ✓ **Prove**- allow dough to prove, knowing when it is ready for use, i.e. it doubles in size ✓ **Bake**- place and remove dishes in the oven safely ✓ **Serve**- cut a final dish roughly into equal sized portions, e.g. ¼ pizza ✓ **Tidy**- clear area and wipe down work surfaces ✓ **Wash**- wash dirtier and different pieces of equipment	**Designing** ✓ Carry out research into user needs and existing products, using surveys, interviews, ✓ questionnaires and web-based resources. ✓ Develop a simple design specification to guide the development of their ideas and products, taking account of constraints including time, resources and cost. ✓ Generate, develop and model innovative ideas, through discussion, prototypes and annotated sketches. **Making** ✓ Formulate a clear plan, including a step-by-step list of what needs to be done and lists of resources to be used. ✓ Competently select from and use appropriate tools to accurately measure, mark out, cut, shape and join construction materials to make frameworks. ✓ Use finishing and decorative techniques suitable for the product they are designing and making. **Evaluating** ✓ Investigate and evaluate a range of existing frame structures. ✓ Critically evaluate their products against their design specification, intended user and purpose, identifying strengths and areas for development, and carrying out appropriate tests. ✓ Research key events and individuals relevant to frame structures. **Technical knowledge and understanding** ✓ Understand how to strengthen, stiffen and reinforce 3-D frameworks. ✓ Know and use technical vocabulary relevant to the ✓ project.	**Designing** ✓ 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. **Making** ✓ Produce detailed lists of equipment and fabrics relevant to their tasks. ✓ 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 are accurately ✓ assembled and well finished. Work within the constraints of time, resources and cost. **Evaluating** ✓ Investigate and analyse textile products linked to their final product. ✓ 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. **Technical knowledge and understanding** ✓ A 3-D textile product can be made from a combination of accurately made pattern pieces, fabric shapes and different fabrics. ✓ Fabrics can be strengthened, stiffened and reinforced where appropriate.

Year 6		Food 1	Food 2	Mechanisms	Electrical Systems
		Making real meals: Souper Squashes *Look at how recipes can make cost effective use of leftover/surplus ingredients* *Understand food can be produced and frozen for future use.* *Design and evaluate a range of wheat-based snacks for accompanying soup.*	**Making food healthier: Homemade vs takeaway** *Look at the nutritional values in a shop bought ready meal and compare them to the raw ingredients in a homemade equivalent.* *Compare and contrast the cost per portion.* *Compare the taste of the finished dish to that of the shop bought equivalent.*	**Pulleys or gears** *Designing, making and evaluating a new toy vehicle for children in a particular age range*	**More complex switches** *Designing, making and evaluating an alarm to protect a valuable artefact*
	Knowledge, Skills & Dispositions	✓ **Follow**- follow text-based recipe instructions ✓ weigh accurately using weighing scales, e.g. in 5-10g increments ✓ **Chop**- cut, slice or dice ingredients into equal sized pieces/portions e.g. potato ✓ **Cut**- use a cook's knife to cut away the 'peel' from a 'hard' item, e.g. pineapple or squash ✓ **Deseed**- use a spoon to deseed, e.g. remove pumpkin seeds ✓ **Brown**- fry an onion on the hob, e.g. as a base for soup ✓ **Boil**- regulate and reduce the heat to a simmer (gentle bubbles) from a boil (rapid bubbles) to cook the food ✓ **Blend**- judge how long to 'blend' for a desired consistency, e.g. some chunks, coarse, smooth ✓ **Serve**- ladle soup or stew into bowls ✓ **Knead**- knead bread dough by hand, developing it to become elastic and smooth (no surface cracks) ✓ **Prove**- allow dough to prove, knowing when it is ready for use, i.e. it doubles in size ✓ **Bake**- place and remove dishes in the oven safely ✓ **Serve**- cut a final dish roughly into equal sized portions, e.g. ¼ pizza ✓ **Tidy**- clear area and wipe down work surfaces ✓ **Wash**- wash dirtier and different pieces of equipment	✓ **Follow-**follow text-based recipe instructions ✓ **Change**- make changes to recipes and dishes that promote current healthy eating messages, e.g. using lower salt stock cubes ✓ **Deseed**- safely scrape out the seeds of a chilli pepper using the back of a spoon ✓ **Crush**- crush garlic using a garlic press ✓ **Peel**- use a vegetable peeler to peel vegetables, e.g. carrot for a salad ✓ **Chop**- slice and dice foods safely, e.g. strips of pepper ✓ **Chop**- chop garlic or herbs finely ✓ **Grind**- grind foods together in a pestle and mortar, e.g. herbs and spices ✓ **Sauté**- sauté foods in a pan on the hob, e.g. mushrooms ✓ **Stir**- stir hot dishes on the hob, ensuring that food does not burn or catch (keep food moving, ensure that heat is not too high) ✓ **Stir-fry-** stir-fry raw meat, followed by vegetables, on the hob, ensuring that the meat is thoroughly cooked ✓ **Stir**- understand that some foods do not need continual stirring while being cooked, e.g. pasta, rice, potatoes ✓ **Drain**- drain hot liquid safely away from foods using a colander, e.g. pasta, rice ✓ **Clean**- wash and rinse equipment, paying attention to detail	**Designing** ✓ Generate innovative ideas by carrying out research using surveys, interviews, questionnaires and web-based resources. ✓ Develop a simple design specification to guide their thinking. ✓ 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. ✓ Investigate famous manufacturing and engineering companies relevant to the project. **Technical knowledge and understanding** ✓ Understand that mechanical and electrical systems have an input, process and an output. ✓ Understand how gears and pulleys can be used to speed up, slow down or change the direction of movement. ✓ Know and use technical vocabulary relevant to the project.	**Designing** ✓ Use research to develop a design specification for a functional product that responds automatically to changes in the environment. Take account of constraints including time, resources and cost. ✓ Generate and develop innovative ideas and share and clarify these through discussion. ✓ Communicate ideas through annotated sketches, pictorial representations of electrical circuits or circuit diagrams. **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 an electrical product to work automatically in response to changes in the environment. **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. ✓ Investigate famous inventors who developed ground-breaking electrical systems and components. **Technical knowledge and understanding** ✓ Understand and use electrical systems in their products. ✓ Apply their understanding of computing to program, monitor and control their products. ✓ Know and use technical vocabulary relevant to the project.