

Ormesby Primary School

Design and Technology Curriculum Overview with skills and Knowledge

Year Group	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2	Additional Events
Nursery	It's good to be me Life Cycle Me	It's good to be part of a family	My Family and their jobs	We are all special	Little explorers I wonder what?	How does your garden grow? Starting School	
	<p><u>Rationale</u> – Design and Technology is taught through child interest led activities.</p>						
	<p><u>Skills</u> – Build in construction areas with purpose. Explore materials and investigate their use in a range of ways. Use various construction materials. Begin to construct by stacking blocks vertically and horizontally, making enclosures and creating spaces. Join construction pieces together to build and balance. Construct with a purpose in mind using a variety of resources. Select appropriate resources and adapt work where necessary. Select tools and techniques needed to shape assembly and join materials they are using. Realise tools can be used for a purpose.</p>						
	<p><u>Vocabulary</u> – build, join, stack, materials, tools, stick, balance, blocks, colour</p>						
	<p><u>Knowledge-</u> To know that tools can be used to create an effect. To know how to join construction pieces together effectively. To know how to use construction equipment in different ways. To know how to use given props to support role-play.</p>						
Reception	It's good to be me Autumn	It's good to be you	Who are you? Winter	Let's explore! Spring	Near and Far Summer		On-site learning Off-site learning Visitors
	<p><u>Rationale</u> – To build on the learning from Nursery to build in construction areas with a given purpose. Design and Technology is taught through child led activities.</p>						
	<p><u>Skills</u> – To build in the construction areas with a given purpose. To choose their own materials to build a structure. To explore different ways to join materials.</p>						
	<p><u>Vocabulary</u> – stick, join, tool, build, balance, stack, material, colour, design</p>						
	<p><u>Knowledge-</u> To know how to use construction equipment in different ways. To know techniques and tools to use to join materials.</p>						

	<p>To know how to manipulate materials to change shape. To know the safety rules when using different tools and equipment.</p>			
Year 1	To design and build the strongest house they can for the three little pigs.	To design and make a wheeled toy vehicle.	To make a healthy sandwich for a teddy bear's picnic.	On-site learning Off-site learning Visitors
	<u>Rationale</u> – To build on the exploration of creating structures in FS2 to build a structure according to a set criteria.	<u>Rationale</u> – To know the structure of a vehicle and design and make their own vehicle structure.	<u>Rationale</u> –To build on their learning in RSHCE to design and make a food product that is in keeping with a healthy diet.	
	<u>Skills</u> – To generate ideas by drawing on their own experiences and use knowledge of existing products to help them come up with new ideas. To explore their ideas practically using a range of materials and begin to evaluate these to make improvements	<u>Skills</u> – To select a range of tools and equipment. To talk about their design ideas and what they are making. To use a range of materials to measure, mark out, cut and shape. To make simple judgements about their products against a design criteria and suggest how their products could be improved.	<u>Skills</u> – To use their knowledge of a healthy diet to design and make a food product. To be able to say what products they are designing and making. To be able to say whether their products are for themselves or others. To prepare food in hygienic way. To be able to use some cookery skills (e.g. chopping, grating and spreading).	
	<u>Vocabulary</u> – build, strong, strengthen, weak, weaker, design, evaluate	<u>Vocabulary</u> design, structure, building, build, attach, strong, material, evaluate, axel, vehicle, wheel, body, moving, mechanism	<u>Vocabulary</u> – Prepare, food, cook, slice, chop, spread, serve, ingredients, equipment, method, taste, hygienic, healthy.	
	<u>Knowledge-</u> To know how to make a structure stronger. To know the uses of different tools. To know how to join pieces of materials together. To share what they like and dislike about products.	<u>Knowledge</u> To know the shape and properties of varying materials. To know how to measure and mark out. To know the uses of varying tools. To know how to join pieces of materials together. To know about trial and error	<u>Knowledge-</u> To know how to chop, grate and weigh food safely. To know the importance of a varied, balance diet. To explain what sweet and savoury food is.	
Year 2	<u>Food tasting</u>	<u>Easter Card</u>	<u>Puppets</u>	On-site learning Off-site learning Visitors
	<u>Rationale</u> – Taste test different varieties of bread from around the world. To design and make bread as a small group.	<u>Rationale</u> – To build on learning in RE about Easter and to design and make a product with moving parts.	<u>Rationale</u> - To make a basic hand puppet to characters studied in English.	

	<p><u>Skills –</u> Taste and evaluate different varieties of bread from around the world (naan, pitta, chapati, focaccia etc) To prepare food in hygienic way. To learn ways that food is produced and the skills involved (e.g. mixing, kneading etc).</p>	<p><u>Skills –</u> Explore existing products to evaluate them To design an appealing product based on design criteria. To perform practical tasks e.g. cutting and joining. Evaluate their finished product and suggest improvements. To use sliders and levers to allow their design to move. To understand the simple working characteristics of materials and components and about the movement of simple mechanisms such as levers and sliders.</p>	<p><u>Skills –</u> Explore existing products to evaluate them To design a functional product based on design criteria. To perform practical tasks e.g. joining and threading. Evaluate their finished product and suggest improvements. To add decoration to create a character</p>	
	<p><u>Vocabulary –</u> taste, test, evaluate, cook, knead</p>	<p><u>Vocabulary –</u> Slider, lever, attach, cutting, decoration, evaluate</p>	<p><u>Vocabulary –</u> sew, thread, join, decoration, design, evaluate,</p>	
	<p><u>Knowledge-</u> To know the importance of a balanced, varied diet. To know where food comes from. To know the importance of hygiene when preparing food (e.g. washing hands when preparing food). To know how to apply skills such as kneading and mixing.</p>	<p><u>Knowledge-</u> To know how sliders and levers work. To know how to replicate these mechanisms using thin card.</p>	<p><u>Knowledge-</u> To know how to create a stitch using pre-punched holes to join together using thread. To know how to join decoration to create a functional puppet.</p>	
Year 3	<p>Making a Christmas Stocking (Textiles)</p>	<p>Egyptian Pharaoh ‘Death’ Mask</p>	<p>Pizza Making</p>	<p>On-site learning Off-site learning Visitors</p>
	<p><u>Rationale -</u> To develop on skills from Y2 to develop textile skills when joining fabric</p>	<p><u>Rationale –</u> To allow the children to use the knowledge the children have learnt in History to create mask.</p>	<p><u>Rationale –</u> To build upon skills from KS1 to develop their cookery skills.</p>	
	<p><u>Skills –</u> To research designs to inform their own designs. To discuss designs and communicate their ideas through discussions. To generate a range of designs and annotate sketches. To use their design criteria to evaluate their completed product.</p>	<p><u>Skills –</u> To talk about their design criteria as they design and make. To select tools and equipment suitable for the task To know how to join pieces of materials together.</p>	<p><u>Skills –</u> To understand how to prepare food hygienically. To use their knowledge of a healthy diet to design and make a food product. To be able to say what products they are designing and making and whether their products are for themselves or others. To be able to use some cookery skills (e.g. chopping, grating and spreading).</p>	
	<p><u>Vocabulary –</u> fabric, textile, materials, thread, running stitch, stitch, needle, felt, colour, design, sew, evaluate</p>	<p><u>Vocabulary –</u> structure, build, design, evaluate, attach, material, design criteria, sketch,</p>	<p><u>Vocabulary -</u> Spread, grate, chop, slice, peel cut, knead, roll, cook, prepare, serve, ingredients, equipment,</p>	

			method, taste, hygienic, sprinkle.	
	<u>Knowledge-</u> To know how to join different materials together. To know how to create a stitch. To evaluate completed product.	<u>Knowledge-</u> To know how to join pieces of materials together. To know the uses of varying tools. To evaluate their completed product.	<u>Knowledge-</u> To know how to chop and grate food safely. To know the importance of a varied, balance diet. To explain what sweet and savoury food is. To know the importance of being safe when cooking.	
Year 4	Roman Catapults	Scones	Viking Ship	
	<u>Rationale</u> – This will build upon the skills developed in KS1 when using levers. The children will use their knowledge of their History topic the Romans to create a catapult.	<u>Rationale</u> – The children will develop their cookery skills by deciding whether they would want to create a sweet or savoury scone.	<u>Rationale</u> - To develop creating a structure with a purpose. The children will explore whether their structure is functional.	
	<u>Skills</u> – To discuss their design criteria as they design and create their structure. To select tools and equipment suitable for the task. To understand how mechanical systems such as levers and linkages to create movement. To use simple electrical circuits and components could be used to create functional products.	<u>Skills</u> – To understand how to prepare food hygienically. To develop baking techniques to combine ingredients To adapt a recipe to create their own food product.	<u>Skills</u> – To discuss their design criteria as they design and create their structure. To select tools and equipment suitable for the task. To generate innovative ideas, researching materials and annotating sketches. To create prototypes to explore whether materials would be water resistant. To accurately measure, mark out and cut materials. To decide upon suitable way to join materials together. To evaluate the quality of design and whether the product is successful.	On-site learning Off-site learning Visitors
	<u>Vocabulary</u> – Design, mechanism, lever, linkage, loose pivot, fixed pivot	<u>Vocabulary</u> – Prepare, weigh, ingredients, sweet, savoury, equipment, taste, bake, slice, cute, measure, grate	<u>Vocabulary</u> - Strong, water resistant, waterproof, Float, sink, adapt, annotate, ship, oar, measure, accurate, mark up	
	<u>Knowledge-</u> To know how a catapult works. To know a range of different mechanisms and how they work. To know how simple electrical circuits and components can be utilised in a structure.	<u>Knowledge-</u> To know the importance of a balanced, varied diet. To know how to follow a recipe. To know how to adapt a given recipe. To know different baking techniques. To know that ingredients need to be measured accurately.	<u>Knowledge-</u> To know the properties of materials and explore whether these would be suitable to use to build a ship. To know how to join different materials together. To evaluate a completed product.	

Year 5	Cupcake and Packaging Design	Bridges in Teesside	Tudors Houses	
	<p><u>Rationale</u> - To build on their learning previous lesson to think about a food product and how this could be packaged to attract an intended audience.</p>	<p><u>Rationale</u> - To build upon their knowledge of building a structure. Identify the Transporter Bridge and identify great structures around the world.</p>	<p><u>Rationale</u> – To build upon their knowledge from their History topic to</p>	
	<p><u>Skills</u> – To use a range of technique such as peeling, chopping, slicing, grating, mixing, spreading To understand how much products cost to make. Understand that recipes can be adapted to change the appearance, taste and texture. Understand how food is processed into ingredients that can be eating or used in cooking.</p> <p><u>Package:</u> To discuss their design criteria as they design and create their structure. To select tools and equipment suitable for the task. To generate innovative ideas, researching materials and annotating sketches. To create prototypes to explore whether materials would be suitable for the product. To accurately measure, mark out and cut materials. To decide upon suitable way to join materials together. To evaluate the quality of design and whether the product is successful.</p>	<p><u>Skills</u> – To research and explore what is important for bridges to be successful. To produce appropriate lists of tools, equipment and materials and components suitable for the task. To evaluate the quality of the design, manufacture and suitability of the product for its purpose.</p>	<p><u>Skills</u> – To generate innovative ideas, using research, annotate sketches, cross-sectional drawings to communicate ideas. To accurately measure, mark out, cut and shape materials and assemble these components. To critically evaluate the quality of their design, manufacture and suitability for purpose.</p>	<p>On-site learning Off-site learning Visitors</p>
	<p><u>Vocabulary</u> – Cut, slice, whip, mix, weigh, ingredients, taste, recipe, folding a mixture, decoration.</p>	<p><u>Vocabulary</u> - bridge, tallest, longest, free-standing, span, support, rigid, stable, suspension, arches, materials, design, triangulation, evaluation</p>	<p><u>Vocabulary</u> - Materials, strength, adapt, durability, design, evaluation.</p>	
	<p><u>Knowledge-</u> To know how to mix, spread, fold and bake. To know how to adapt a given recipe. To know the properties of materials and explore whether to carry cupcakes. To know how to join different materials together. To evaluate a completed product.</p>	<p><u>Knowledge-</u> To know how to gather information. To know the uses of tools and equipment. To evaluate a completed product.</p>	<p><u>Knowledge-</u> To know the properties of materials. To know how to join different materials together. To know how to accurately measure, mark, cut and shape materials. To evaluate a completed product.</p>	
Year 6	Game Making with an electrical element		Wartime	<p>On-site learning Off-site learning</p>

	<p><u>Rationale</u> – This will allow children to design their own traditional game which can include an electrical component.</p>		<p><u>Rationale</u> - To allow the children to use the knowledge the children have learnt in History to create a meal with what was available during rationing.</p>	<p>Visitors</p>
	<p><u>Skills</u> – To identify the needs, wants, preferences and values of particular individuals and groups and develop a simple design specification to guide their thinking. To evaluate their ideas and products against their design specification. To identify the strengths and areas for development in their ideas and products.</p>		<p><u>Skills</u> – To understand that a recipe can be adapted by adding or adapting one or more ingredients. To understand how food is processed into ingredients that can be used in cooking. To understand that food is caught, reared and grown in the United Kingdom, Europe and the wider world. To understand that the food we eat provides important nutrients that are needed for a balanced diet. To use a range of techniques such as peeling, chopping, slicing, grating mixing and spreading.</p>	
	<p><u>Vocabulary</u> – Voltage, brightness, volume, switches, danger, circuit, bulb, switch, buzzer, design, evaluate, trial and error.</p>		<p><u>Vocabulary</u> - Healthy eating, grow your own, diet, varied diet, fruit and vegetables, meat, protein, fat, dairy, carbohydrates, prepare, measure, hygiene, season</p>	
	<p><u>Knowledge-</u> To know how an electrical component can be used to enhance a product. To know the importance of appearance of a product. To know the roles of inventors, designers, engineers, chefs and manufacturers. To evaluate their product throughout the process and adapt their ideas.</p>		<p><u>Knowledge-</u> To know how to peel, slice, grate, chop, mix, spread, knead and bake. To name some savoury meals. To know how to adapt a recipe. To know what processed food is. To know where food is grown.</p>	