

Design Technology coverage and progression across topics and year groups

Golden thread – to be able to design and make products to solve real and relevant problems

Green: Skills Blue: Knowledge

	Topic Title	EYFS objective	What it looks like at Meadowside
Reception	Meadowside explorers	<p>Select and use activities and resources, with help when needed. This helps them to achieve a goal they have chosen or one which is suggested to them.</p> <p>Use large-muscle movements to wave flags and streamers, paint and make marks.</p> <p>Choose the right resources to carry out their own plan.</p> <p>Use one-handed tools and equipment, for example, making snips in paper with scissors.</p> <p>Explore different materials freely, in order to develop their ideas about how to use them and what to make.</p>	<p>Learn about the different resources available in school</p> <p>Experiment with how to use different resources.</p> <p>How to make accurate large scale movements</p> <p>Practice large movements with streamers. Brushes and chalks.</p> <p>Practice using scissors, pencils, brushes etc.</p> <p>Free access to craft area and different materials.</p>
	Marvellous monsters	<p>Explore different materials freely, in order to develop their ideas about how to use them and what to make.</p> <p>Develop their own ideas and then decide which materials to use to express them.</p> <p>Create closed shapes with continuous lines, and begin to use these shapes to represent objects.</p> <p>Develop their small motor skills so that they can use a range of tools competently, safely and confidently.</p> <p>Use their core muscle strength to achieve a good posture when sitting at a table or sitting on the floor.</p>	<p>Investigate how clay feels/ works</p> <p>Use clay to create a bog baby.</p> <p>Make a home for a monster</p> <p>Create own monsters</p> <p>Practice large movements with streamers. Brushes and chalks.</p>
	What's the story?	<p>Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park.</p> <p>Explore, use and refine a variety of artistic effects to express their ideas and feelings.</p> <p>Return to and build on their previous learning, refining ideas and developing their ability to represent them.</p> <p>Create collaboratively, sharing ideas, resources and skills.</p>	<p>Learn how to make different small world items</p> <p>Create small world to represent Little Red Ridding Hood story.</p> <p>Learn to join materials</p> <p>Make bed or chair for baby bear.</p> <p>Build collaboratively – houses for pigs, bridges for goats.</p> <p>Clay – bowl for baby bear</p>
	How can we help?	<p>Use a range of small tools, including scissors, paintbrushes and cutlery</p>	<p>Cutting activities- teeth, ladders.</p> <p>Hand writing patterns</p> <p>Experiment with colour mixing</p>

		<p>Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p> <p>Share their creations, explaining the process they have used.</p>	
Where shall we go? How shall we get there?	<p>Use a range of small tools, including scissors, paintbrushes and cutlery</p> <p>Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p> <p>Share their creations, explaining the process they have used.</p>	<p>With construction kits eg lego/ mobilo can you make a model that moves?</p> <p>Make different colours of blue.</p> <p>Junk model of a boat with a sail- fixing a mast.</p> <p>Free reign with junk and construction kits.</p>	

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Year 1	Meadowside explorers	Cooking and Nutrition Use the basic principals of a healthy and varied diet to prepare dishes Understand where food comes from	Discuss which crops grow best and when. Find some crops that can grow over wintertime. Plant them in the hopes of growing and harvesting them ready to eat in the spring. Discuss where food comes from. Include info on where food comes from before it gets to the supermarket.
	A Toys' Story	Make Select from and use a range of tools and equipment to perform practical tasks (e.g. cutting, shaping, joining and finishing) Technical Knowledge Build structures, exploring how they can be made stronger, stiffer and more stable Explore and use mechanisms (e.g. levers, sliders, wheels and axles) in their products Evaluate Explore and evaluate a range of existing products Cooking and Nutrition Use the basic principals of a healthy and varied diet to prepare dishes	Design and make a pop up picture illustrating a nursery rhyme, selecting the materials and tools required. Make a junk model toy by selecting the materials required and choosing tools to join, shape and attach. Explore paper folding, curling, bending etc. to see how it can be made stronger, more flexible etc. Learn about different mechanisms through videos and real world examples (wherever possible). Label these in pictures of toys. Look at and discuss sliders/pop up pictures in existence. As well as pizzas available. Design and make a teddy bear shaped pizza.
	A Tale of Tails		
	Setting Sail	Design Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology Make Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics (buoyancy) Technical Knowledge Build structures, exploring how they can be made stronger, stiffer and more stable (boat masts) Evaluate Evaluate their ideas and products against design criteria (junk model boats)	Design a junk model boat to meet a specific criteria (has a hull, mast, sail, captain's cabin, can float, can stay upright, must stay in tact). Choose from a range of junk modelling materials how to build their boat, join their structures and ensure the structure is secure. Test the junk model boat as it is built, make changes to structures that are not secure or fit for purpose as needed. Know which materials are best suited for the purpose they will serve and why. Complete evaluation form by referring back to the original design criteria.

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Year 2	Meadowside explorers	<p>Design Design purposeful, functional and appealing products for themselves and others based on Design Criteria</p> <p>Evaluate Explore and evaluate a range of existing products</p>	<p>Design enclosure for a creature, based on scientific study of natural habitats</p> <p>Following science lessons on habitats, chn to look at how enclosures try to emulate these natural habitats- using pics online of zoos & smaller homes for pets</p> <p>Chn to design fish tank or aviary to appeal to chosen creature</p>
	Step back in time		
	Lets pretend	<p>Evaluate Evaluate and explore existing products</p> <p>Design Design purposeful, functional and appealing products for themselves and other users based in design criteria</p> <p>Make Generate, develop, model and communicate their ideas through talking, drawing, mick ups and IT</p> <p>Evaluate Evaluate their ideas and products against design criteria</p>	<p>Explore dressing up costumes from YR- create success criteria for own costumes to be worn during dance</p> <p>Design costume for assembly performance using SC created and knowledge of steps in dance</p> <p>Draw design for costume, labelling items that need to move & possible material choices</p> <p>Explore how to shape paper by bending/ twisting/ folding/ shaping</p> <p>Evaluate costume after dance</p> <p>Use following SC and star rate each criteria- How well could I move my limbs? Could I sit comfortably? How much fell off my outfit? Did it look like my design? Could I see? Using these scores, chn then rate costume out of 5 stars</p>
Buckets and spades	<p>Make Use drawing, painting and sculpture to develop and share their ideas, experiences and imagination</p>	<p>Create sculpture using sand</p> <p>On topic shine- Weston super Mare trip- chn to create sand sculpture to portray imagined ideas</p>	

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Year 3	Meadowside explorers	Technical Knowledge Investigate and analyse a range of existing products	Sketch Rea Bridge and discuss features
	History Hunters	Cooking and Nutrition understand and apply the principles of a healthy and varied diet □ prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques Evaluate Evaluate and analyse an existing product Make select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities	How healthy was stone age diet? Food and cooking – create a stone age soup / broth Create oldest bread Investigate roundhouses and how they were built Make a model of a round house
	Planes, Trains and automobiles	Technical Knowledge Understand how key events and individuals in design and technology have helped shape the world. Investigate and analyse a range of existing products Make Select from and use a wider range of tools and equipment to perform practical tasks Technical Knowledge Understand and use mechanical systems in their products	To learn about the work of Isambard Kingdom Brunel Look at a range of bridges, - Including Clifton Suspension Bridge Build like Brunel day – series of bridge building challenges – including beam bridge, lego and straws Design and make a wheeled vehicle which can be moved without being touched by hand (magnet / wind etc)
	Tomb Raiders	Technical Knowledge Understand and use mechanical systems in their products	Design a tomb protection system and create a prototype.

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Year 4	Meadowside Explorers	Technical Knowledge Investigate how locks work in a canal	Visit to local canal, sketch lock, build on observations to learn how a lock works, video clips to reinforce.
	Hellenic Heroes	Design and create a mask using materials to strengthen its design. Investigate how an aqueduct moves water from a high place to a lower place.	Generate, develop, model and communicate ideas through discussion. Apply knowledge to strengthen, stiffen and reinforce a mask. Research and develop design criteria. What is an aqueduct? Why might it be needed? Generate, develop, model and communicate ideas through discussion. Collaborate within a small group to create working model of aqueduct.
	We are Scientists		
	Ring Masters	Design, Make and Evaluate Design and create a fairground attraction using a moving mechanism, cam.	Research and develop design criteria. Generate, develop, model and communicate ideas through discussion. Apply knowledge to strengthen, stiffen and reinforce more complex structures. Select and use tools to cut, shape, join and finish accurately. Evaluate their product against design criteria and consider the views of others to improve their work.
	A Tale of Two Cities	Nutrition and Cooking Understand and apply the principles of a varied diet. Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.	Create a Roman broth. Research food that Romans brought to Britain.

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Year 5	Meadowside explorers		
	Watch this space	<p>Technical Knowledge Investigate and analyse a range of existing products</p> <p>Technical Knowledge Understand and use mechanical systems</p> <p>Recognise that some mechanisms including levers, pulleys and gears allow a small force to have a greater effect</p> <p>Design, Make and Evaluate Use research and develop design criteria to inform design of innovative, functional, products</p> <p>Technical Knowledge Apply understanding of computing to program, monitor and control product</p>	<p>Look at moon buggy design and powering vehicles</p> <p>Pulleys for moon buggy</p> <p>Design and build a motorised moon buggy</p> <p>Program Lego Mars rovers at Space Centre</p>
	The Battle for Middle England		
	Curious cases	<p>Cooking and Nutrition Understand and apply the principles of a healthy and varied diet</p> <p>Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</p> <p>Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed</p>	<p>Revisit healthy and varied diets using 'Root for veg'</p> <p>The Curious Case of the Chilli Con Carne (guessing ingredients and making it)</p> <p>Make a Chilli Con Carne</p>

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Year 6	Meadowside explorers	<p>Technical Knowledge Investigate and analyse a range of existing products</p> <p>Design Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups</p> <p>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer aided design.</p>	Look at existing bug hotels- analyse and use to create success criteria. Design and build a bug hotel.
	Murderous Maya		
	The origin of species		
	A child's war	<p>Cooking and Nutrition Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p> <p>Technical Knowledge Understand how key events and individuals in design and technology have helped shape the world</p> <p>Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</p> <p>Understand and use electrical systems in their products (for example, series circuits incorporating switches, bulbs, buzzers and motors)</p>	<p>Evaluate the food planned and prepared using war time rations Preparing a healthy dish using war time rations</p> <p>Design and make electronic game using circuits (tbc)</p> <p>Make Anderson shelters: sturdy structures</p>
	Dreams and aspirations		