

Intent

- To be designers and design items for a purpose.
- To make meaningful creations.
- To be confident in using a range of tools and techniques
- To use their imagination to design and create.
- To take risks when designing and making.
- To evaluate technology and develop a critical understanding of its daily life in the wider world.

Knowledge or skill already
acquired ready to progress.

	Curriculum	Knowledge	Skills	Vocabulary
FI	Development Matters 3 & 4 year olds <ul style="list-style-type: none"> • Explore different materials freely, in order to develop their ideas about how to use them and what to make. • Develop their own ideas and then decide which materials to use to express them. • Join different materials and explore different textures. 	To know how to make simple models which express their ideas.	To be able to explore different materials, using all their senses to investigate them. To be able to manipulate and play with different materials. To be able to use their imagination as they consider what they can do with different materials.	Paper, card, cut, stick, plan, design, make, idea, card, paper, scissors, glue, wood, hammer, nails, felt.
	3 and 4 year statements from Development Matters 2021 (Expressive Arts and Design)	Autumn 1 – Small worlds Structures Experience building with a variety of resources: Duplo, wooden blocks, happy land, Playmobil etc. Teach – how to build and assign meaning to what is built. <ul style="list-style-type: none"> • To know what a structure is • To know how to begin to put blocks together • To begin to know different materials • To understand how to build a structure 	Autumn 1 – Small worlds Structures <ul style="list-style-type: none"> • To be able to put materials together • To be able to think about what materials they are going to use. 	
		Autumn 2 – Junk Modelling Explore different materials freely, to develop their ideas about how to use them and what to make. Develop their own ideas and then decide which materials to use to express them. Join different materials and explore different textures. <ul style="list-style-type: none"> • To know there are a range to different materials that can be used to make a model and that they are all slightly different. • Making simple suggestions to fix their junk model. 	Autumn 2 – Junk Modelling <ul style="list-style-type: none"> • To be able to make verbal plans and material choices. • To be able to developing a junk model. • Improving fine motor/scissor skills with a variety of materials. • Joining materials in a variety of ways (temporary and permanent). • Joining different materials together. • Describing their junk model. 	

		<p>Spring 1 – Structures/Junk Modelling</p> <p>Provide children with a range of materials for children to construct with.</p> <p>Encourage them to think about and discuss what they want to make.</p> <p>Discuss problems and how they might be solved as they arise.</p> <p>Reflect with children on how they have achieved their aims.</p> <ul style="list-style-type: none"> • To know a range of materials • To know how to build a structure • To know how to make simple suggestions • To know that models/structure can look different. 	<p>Spring 1 – Structures/Junk Modelling</p> <p>Explore different materials freely, to develop their ideas about how to use them and what to make. Develop their own ideas and then decide which materials to use to express them. Join different materials and explore different textures.</p> <ul style="list-style-type: none"> • To join different materials together • To use their ideas to create a model • To be able to decide what materials to use • To explore a range of different materials • To be able to create using their own ideas 	
		<p>Spring 2 – Structures/Junk Modelling</p> <p>Promoting Independence</p> <ul style="list-style-type: none"> • To know they can build a structure on their own. 	<p>Spring 2</p> <p>Promoting Independence</p> <ul style="list-style-type: none"> • To explore different materials freely • Develop their ideas about how to use them and what to make • Think about their own ideas • To think about what materials they are going to use • How to join the materials together 	
		<p>Summer 1 – Structures Project</p> <ul style="list-style-type: none"> • To know they can return to a model to add more over a period of time. • To know they can work with others on building a bigger project. 	<p>Summer 1 – Structures Project</p> <ul style="list-style-type: none"> • To develop their own ideas about how to use different materials. • To be able to select their own materials to use when creating something. • To be able to express their ideas through material choice and design. • To be able to confidently explore different textures of materials. 	

		Spring – Bookmarks <u>Textiles</u> <ul style="list-style-type: none"> • To know that a design is a way of planning our idea before we start. • To know what a good design needs. • To know that threading is putting one materials through an object. 	Spring – Bookmarks <u>Textiles</u> <ul style="list-style-type: none"> • To be able to design a simple pattern with paper • To be able to design a bookmark. • To be able to choose from available materials. • To be able to draw and cut with appropriate tools and materials. • To be able to use a prepared needle and woll to practice threading. • To be able to weave (under, over technique) with a variety of materials. • To be able to reflect on a finished product and compare to their design. 	Thread, weave, through, under, over, pattern, Back, front, sew, sewing needle, wool, thread, hessian, Bookmark, embroider, sew, Victorian, design
		Summer – Boats <u>Structures</u> <ul style="list-style-type: none"> • To use knowledge from exploration to inform design. • To know how to make predictions e.g. waterproof materials • To know how the shape and structure of a boat affects the way it moves. • To know that waterproof materials are those which do not absorb water. • To know that some objects float and others sink. • To know the different parts of a boat. 	Summer – Boats <u>Structures</u> <ul style="list-style-type: none"> • To be able to make a boat that floats and is waterproof. • To be able to make observations about exisiting boats to see which floats best. • To be able to test their design and reflect on what could have been done differently. 	Waterproof, material, absorb, leak, wet, dry, prediction, variable, fair test, experiment, investigation, Float, sink, Boat, cruise ship, fishing boat, kayak, ocean liner, pirate ship, ship, watercraft, Sail, anchor, hull, mast, rudder, helm, poop deck, deck, crow's nest, ship, junk, reeds
	Curriculum	Knowledge	Skills	Vocabulary
Year 1	<ul style="list-style-type: none"> • use the basic principles of a healthy and varied diet to prepare dishes • understand where food comes from 	<ul style="list-style-type: none"> • To name and safely use a variety of materials and tools. • To know how to cut, fold and join different materials. • To know how to use colour and texture when designing. 	<ul style="list-style-type: none"> • To be able to safely explore and experiment with a range of materials and resources for design and technology (design, colour, texture, form, function) • To be able to build on their previously learnt skills of cutting, folding and joining materials. 	

<p><u>Design</u></p> <ul style="list-style-type: none"> • design purposeful, functional, appealing products for themselves and other users based on design criteria • generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology <p><u>Make</u></p> <ul style="list-style-type: none"> • select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] • select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics <p><u>Evaluate</u></p> <ul style="list-style-type: none"> • explore and evaluate a range of existing products • evaluate their ideas and products against design criteria 	<p>Autumn – Moving story book <u>Mechanisms/mechanical systems</u> <u>Technical</u></p> <ul style="list-style-type: none"> • To know that a mechanism is the parts of an object that move together. • To know that a slider mechanism moves an object from side to side. <p><u>Additional</u> To know that in Design and technology we call a plan a 'design'.</p>	<p>Autumn – Moving story book <u>Mechanisms/mechanical systems</u> <u>Design</u></p> <ul style="list-style-type: none"> • To be able to design a moving story book for a given audience. • To be able to create clearly labelled drawings that illustrate movement. <p><u>Make</u></p> <ul style="list-style-type: none"> • To be able to follow a design to create moving models that use levers and sliders. • To be able to adapt mechanisms: <ul style="list-style-type: none"> ○ when they do not work as they should. ○ to fit their design. ○ to improve how they work after testing their product. <p><u>Evaluate</u></p> <ul style="list-style-type: none"> • To be able to test a finished product, seeing whether it moves as planned and if not, explaining why and how it can be fixed. <p>To be able to review the success of a product by testing it with its intended audience.</p>	<p>Assemble, mechanism, sliders, Design, design criteria, target audience, model, template, test</p>
	<p>Spring – Windmill <u>Structures</u></p> <ul style="list-style-type: none"> • To know that 'joining technique' means connecting two pieces of material together. • To know that there are various temporary methods of joining fabric by using staples. glue or pins. • To understand that different techniques for joining materials can be used for different purposes. • To know that in Design and technology we call a plan a 'design'. <p><u>Technical</u></p>	<p>Spring – Windmill <u>Structures</u> <u>Design</u></p> <ul style="list-style-type: none"> • To be able to understand the importance of a clear design criteria. • To be able to including individual preferences and requirements in a design. <p><u>Make</u></p> <ul style="list-style-type: none"> • To be able to make stable structures from card, tape and glue . • To be able to turn 2D nets into 3D structures. 	<p>Axle, design, design criteria, model, net, structure, template, turbine, windmill, stable, strong, unstable, weak, evaluation, test, turbine</p>

	<p><u>Technical knowledge</u></p> <ul style="list-style-type: none"> • build structures, exploring how they can be made stronger, stiffer and more stable • explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. 	<ul style="list-style-type: none"> • To understand that the shape of materials can be changed to improve the strength and stiffness of structures. • To understand that cylinders are a strong type of structure (e.g. the main shape used for windmills and lighthouses). • To understand that axles are used in structures and mechanisms to make parts turn in a circle. • To begin to understand that different structures are used for different purposes. • To know that a structure is something that has been made and put together. <p><u>Additional</u></p> <p>To know that a client is the person I am designing for.</p> <ul style="list-style-type: none"> • To know that design criteria is a list of points to ensure the product meets the clients needs and wants. • To know that a windmill harnesses the power of wind for a purpose like grinding grain, pumping water or generating electricity. • To know that windmill turbines use wind to turn and make the machines inside work. • To know that a windmill is a structure with sails that are moved by the wind. • To know the three main parts of a windmill are the turbine, axle and structure. 	<ul style="list-style-type: none"> • To be able to follow instructions to cut and assemble the supporting structure of a windmill. • To be able to make functioning turbines and axles which are assembled into a main supporting structure. <p><u>Evaluate</u></p> <ul style="list-style-type: none"> • To be able to evaluate a structure according to the design criteria, testing whether the structure is strong and stable and altering it if it isn't. • To be able to suggest points for improvements. 	
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	Curriculum	Knowledge	Skills	Vocabulary
Year 2	<ul style="list-style-type: none"> • use the basic principles of a healthy and varied diet to prepare dishes • understand where food comes from <p><u>Design</u></p> <ul style="list-style-type: none"> • design purposeful, functional, appealing products for themselves and other users based on design criteria • generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology 	<ul style="list-style-type: none"> • To know that in Design and technology we call a plan a ‘design’. • To understand that axles are used in structures and mechanisms to make parts turn in a circle • To begin to understand that different structures are used for different purposes. • To know that a structure is something that has been made and put together. • To know that ‘joining technique’ means connecting two pieces of material together. 	<ul style="list-style-type: none"> • To be able to understand the importance of a clear design criteria. • To be able to including individual preferences and requirements in a design <p><u>Make</u></p> <ul style="list-style-type: none"> • To be able to follow a design to create moving models that use levers and sliders. • To be able to adapt mechanisms: <ul style="list-style-type: none"> ○ when they do not work as they should. ○ to fit their design. ○ to improve how they work after testing their product. <p><u>Evaluate</u></p> <ul style="list-style-type: none"> • To be able to test a finished product, seeing whether it moves as planned and if not, explaining why and how it can be fixed. 	<p>Axle, axle holder, design, design brief, design criteria, Ferris wheel, frame, pod, wheel, Model, rotate, stable, strong, waterproof, weak, mechanism, Opinion, survey, Decorate, evaluation, test</p>

<p><u>Make</u></p> <ul style="list-style-type: none"> • select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] • select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics <p><u>Evaluate</u></p> <ul style="list-style-type: none"> • explore and evaluate a range of existing products • evaluate their ideas and products against design criteria <p><u>Technical knowledge</u></p> <ul style="list-style-type: none"> • build structures, exploring how they can be made stronger, stiffer and more stable • explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. 	<p>Autumn – Fairground wheel</p> <p><u>Mecahnisms/mechanical systems</u></p> <p><u>Technical</u></p> <ul style="list-style-type: none"> • To know that a mechanism is the parts of an object that move together. • To know that wheels need to be round to rotate and move. • To understand that for a wheel to move it must be attached to a rotating axle. • To know that an axle moves within an axle holder which is fixed to the vehicle or toy. • To know that the frame of a vehicle (chassis) needs to be balanced. <p><u>Additional</u></p> <ul style="list-style-type: none"> • To know that in Design and technology we call a plan a 'design'. • To know some real-life items that use wheels such as wheelbarrows, hamster wheels and vehicles. 	<p>Autumn – Fairground wheel</p> <p><u>Mecahnisms/mechanical systems</u></p> <p><u>Design</u></p> <ul style="list-style-type: none"> • To be able to select a suitable linkage system to produce the desired motion. • To be able to design a wheel. <p><u>Make</u></p> <ul style="list-style-type: none"> • To be able to select materials according to their characteristics. • To be able to follow a design brief. • To be able to make linkages using card for levers and split pins for pivots. • To be able to experiment with linkages adjusting the widths, lengths and thicknesses of card used. • To be able to cut and assemble components neatly. <p><u>Evaluate</u></p> <ul style="list-style-type: none"> • To be able to evaluate different designs. • To be able to test and adapt a design. • To be able to evaluate own designs against design criteria. • To be able to use peer feedback to modify a final design. 	
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		<p>Summer – Pouches</p> <p><u>Textiles</u></p> <ul style="list-style-type: none"> • To know that sewing is a method of joining fabric. • To know that different stitches can be used when sewing. • To understand the importance of tying a knot after sewing the final stitch. <p>To know that a thimble can be used to protect my fingers when sewing.</p>	<p>Summer – Pouches</p> <p><u>Textiles</u></p> <p><u>Design</u></p> <ul style="list-style-type: none"> • To be able to design a pouch. <p><u>Make</u></p> <ul style="list-style-type: none"> • To be able to select and cutting fabrics for sewing. • To be able to decorate a pouch using fabric glue or running stitch. • To be able to thread a needle. • To be able to sew running stitch, with evenly spaced, neat, even stitches to join fabric. • To be able to neatly pin and cut fabric using a template. <p><u>Evaluate</u></p> <ul style="list-style-type: none"> • To be able to troubleshoot scenarios posed by the teacher. • To be able to evaluate the quality of the stitching on others' work. • To be able to discuss as a class the success of their stitching against the success criteria. <p>To be able to identify aspects of their peers' work that they particularly like and explaining why.</p>	<p>Fabric, knot, needle, needle threader, running stitch, sew, thread, stitch, template, Decorate, fabric glue</p>
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