

Design and Technology**'Produce for use'**

Intent – Children will leave Melbourne Primary school with the skills and creativity to design and make products for a purpose.

Cycle A - 2022-2023

	Autumn	Spring	Summer
EYFS Expressive Art and Design	<p><u>My Family and People Who Help Us Celebrations</u></p> <p><u>I can...</u></p> <p>Explore mark making tools and materials.</p> <p>Draw a simple representation of people or objects (can be their own interpretation e.g. a collection of lines and shapes is their self-portrait)</p> <p>Explore with the opportunities provided in the provision area for crafting.</p>	<p><u>Once Upon a Time (Specific Authors) Minibeasts</u></p> <p><u>I can...</u></p> <p>Explore joining materials together.</p> <p>Sometimes give meaning to the marks they make.</p> <p>Explore colour and colour mixing.</p> <p>Explore with the opportunities provided in the provision area for crafting.</p>	<p><u>Oh I do like to be beside the seaside Under the Sea - Environmental</u></p> <p><u>I can...</u></p> <p>Begin to construct with a purpose in mind.</p> <p>Select an appropriate way to join materials together, e.g. sellotape, masking tape, glue.</p> <p>Select appropriate materials.</p> <p>Draw with increasing complexity and detail e.g. facial features.</p> <p>Select colours for a purpose.</p> <p>Explore with the opportunities provided in the provision area for crafting.</p>

<p>Ongoing Developing Skills EAD – EYFS Curriculum 2021</p>	<p>The development of children’s artistic and cultural awareness supports their imagination and creativity. It is important that children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials. The quality and variety of what children see, hear and participate in is crucial for developing their understanding, self-expression, vocabulary and ability to communicate through the arts. The frequency, repetition and depth of their experiences are fundamental to their progress in interpreting and appreciating what they hear, respond to and observe.</p>	<p>The development of children’s artistic and cultural awareness supports their imagination and creativity. It is important that children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials. The quality and variety of what children see, hear and participate in is crucial for developing their understanding, self-expression, vocabulary and ability to communicate through the arts. The frequency, repetition and depth of their experiences are fundamental to their progress in interpreting and appreciating what they hear, respond to and observe.</p>	<p>The development of children’s artistic and cultural awareness supports their imagination and creativity. It is important that children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials. The quality and variety of what children see, hear and participate in is crucial for developing their understanding, self-expression, vocabulary and ability to communicate through the arts. The frequency, repetition and depth of their experiences are fundamental to their progress in interpreting and appreciating what they hear, respond to and observe.</p>
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	Towers and Turrets	Our Environment	Captain Cook and the Seven Seas
Year 1 Design Make Evaluate	<p><u>To create a drawbridge lift the flap book to enjoy together in the class reading area (linking to History and Geography).</u></p> <p>DT Focus - Construction and Mechanics</p> <p><u>I can...</u> Use materials to practise gluing and shaping materials to make and strengthen products.</p> <p>Create products using flaps.</p> <p>Design products that have a purpose. Make changes to designs as work progresses. Plan designs before making. Deconstruct boxes and tubes</p>	<p><u>To design and make a toy stuffed animal, suitable for a young child to play with (linking to science).</u></p> <p>DT Focus –Materials and Textiles Please add what you will be making <u>I can...</u></p> <p>Shape textiles using templates.</p> <p>Cut materials safely using tools provided.</p> <p>Measure and mark out to the nearest centimetre.</p>	<p><u>Eating Healthily</u></p> <p><u>To design, make and evaluate vegetable soup to enjoy as an afternoon treat (linking to science).</u></p> <p><u>DT Focus – Food</u></p> <p><u>I can...</u></p> <p>Cut and separate ingredients safely and hygienically.</p> <p>Measure or weigh using measuring cups.</p> <p>Assemble ingredients. Pour liquid ingredients accurately.</p> <p>Know the origins of milk, beef, pork and lamb.</p> <p>Know that all food groups should be consumed in moderation.</p>
Year 2 Design Make Evaluate	<p><u>To design, make and evaluate a toy siege tower suitable to house a playmobile character in battle (linking to History and Geography)</u></p> <p>DT Focus – Construction and Mechanics</p> <p><u>I can...</u></p>	<p><u>To design and make a toy stuffed animal, suitable for a young child to play with (linking to science).</u></p> <p>DT Focus – Materials and Textiles</p> <p><u>I can...</u></p> <p>Join textiles using running stitch.</p>	<p><u>Eating Healthily</u></p> <p><u>To design, make and evaluate vegetable soup to enjoy as an afternoon treat (linking to science).</u></p> <p><u>DT Focus – Food</u></p>

	<p>Use materials to practise drilling and glue gunning materials to make and strengthen products.</p> <p>Create products using levers and wheels.</p> <p>Design products that have a clear purpose and an intended user.</p> <p>Make products, refining the design as work progresses. Use software to design.</p> <p>Explore how products have been created.</p>	<p>Colour and decorate textiles using a number of techniques (such as adding sequins or printing).</p> <p>Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling).</p> <p>Demonstrate a range of joining techniques (such as gluing, folding or combining materials to strengthen).</p>	<p>I can...</p> <p>Cut or peel ingredients safely and hygienically.</p> <p>Measure or weigh using spring or electronic scales. Cook ingredients.</p> <p>Mix wet and dry ingredients. Know some fruit and vegetables grow above and below ground.</p> <p>Know that food can be sorted into food groups. Understand the need for a balanced diet.</p>
	Roman!	World Bridges Bridges	Greece
<p>Year 3</p> <p>Design Make Evaluate Adapt</p>	<p><u>Design and make a pop up or moving part Christmas card using levers and linkages for a family member.</u></p> <p>Mechanics understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</p>	<p><u>To design, build and evaluate a bridge that can be used to cross water or valley (Linking to geography).</u></p> <p>Construction Design: (incorporate the mechanism objectives below)</p> <ul style="list-style-type: none"> Use the ideas of experts and existing designs to help design product: research different designers of bridges over time and understand their designs. Develop practical working models of bridges to explore and understand how they work and start to introduce aesthetic qualities. 	<p><u>To research, design and then make a traditional Greek meal. (Linked to history and Geography)</u></p> <p>Food I can...</p> <p>Prepare ingredients hygienically using appropriate utensils. Measure ingredients to the nearest gram accurately. Understand the terms sweet and savoury. Understand the principles of a healthy and varied diet.</p> <p>Challenge – consider a packed lunch for a child with intolerance or an allergy.</p>

		<ul style="list-style-type: none">• Run practical tests of materials checking their strength for spanning gaps.• Test different devices and designs for raising and lowering bridges using a variety of methods – cog wheels, levers and pulleys, electrical mechanisms, floating bridges• Make a detailed plan for a bridge to fulfil a specific purpose and explain it.• Add an electrical component to the bridge eg lighting, a signal box, a buzzer triggered by pressure. <p>Mechanism objectives Understand and use mechanical systems.</p> <ul style="list-style-type: none">• Understand and use levers and pulleys• Make a product which uses electrical components.• Select materials and components suitable for the task• Make accurate measurements to nearest CM <p>Evaluate the design:</p>	
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Year 4 Design Make Evaluate Adapt	<u>Design and make a pop up or moving part Christmas card using levers and linkages for a family member.</u> Mechanics understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]	<u>To design, build and evaluate a bridge that can be used to cross water or valley(Linking to geography).</u> Construction – Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product such as gears.	<u>To research, design and then make a traditional Greek meal. (Linking to history and Geography)</u> Food I can... Follow a recipe. Assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking). Select a recipe to create a savoury dish. Understand and apply the principles of a healthy and varied diet Understand that some foods are seasonal. Challenge – consider creating a dairy free or gluten free pizza. Challenge – Use a restricted budget or ingredients.
	Saxons	Vikings	The Amazon
Year 5 Design Make Evaluate	<u>Design and make an Anglo Saxon house. (Linking to History)</u> I can... Electronics	<u>Design, build and evaluate a Viking longboat.</u> https://www.teachwire.net/teaching-resources/ks2-history-and-dt-lesson-plan-design-and-build-a-viking-longboat	<u>Create an Amazon themes bookmark for a family member. (Linking to geography)</u> Textiles –

Adapt	understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]	<p>(Linking to History)</p> <p>I can...</p> <p>Mechanics – Use innovative combinations for mechanics in product designs</p> <p>Construction –Use a range of practical skills to create products, such as cutting, drilling and screwing, nailing and gluing.</p>	Use the quality of materials to create suitable visual and tactile effects in the decoration of textiles.
Year 6 Design Make Evaluate Adapt	<p><u>Design and make an Anglo Saxon house.</u> <u>(Linking to History)</u></p> <p>I can...</p> <p>Electronics understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</p>	<p><u>Design, build and evaluate a Viking longboat.</u> https://www.teachwire.net/teaching-resources/ks2-history-and-dt-lesson-plan-design-and-build-a-viking-longboat (Linked to History)</p> <p>I can...</p> <p>Mechanics – Use innovative combinations of electronics (or computing) and mechanics in product designs.</p> <p>Construction – Use a range of practical skills to create products, such as cutting, drilling and screwing, nailing, gluing, filling and sanding.</p>	<p><u>Create an Amazon case for your own personal use. This could be a pencil case, a glasses case or even a phone case!</u> (Linked to geography)</p> <p>Textiles - Join textiles with a combination of stitching techniques (such as back stitch for seams and running stitch to attach decoration). Create objects (such as a cushion) that employ a seam allowance.</p>

***apply their understanding of computing to program, monitor and control their products.

Cycle B– 2021-2022

	Cogheart	Volcanoes	Stars and Stripes
EYFS Expressive Art and Design	<p><u>Me and My Family</u> <u>Light and Dark</u></p> <p>Explore mark making tools and materials.</p> <p>Draw a simple representation of people or objects (can be their own interpretation e.g. a collection of lines and shapes is their self-portrait)</p> <p>Explore with the opportunities provided in the provision area for crafting.</p> <p>Explore with the opportunities provided in the provision area for crafting.</p>	<p><u>Traditional Tales</u> <u>New Life</u></p> <p>Explore joining materials together.</p> <p>Sometimes give meaning to the marks they make.</p> <p>Explore colour and colour mixing.</p> <p>Explore with the opportunities provided in the provision area for crafting.</p>	<p><u>Down on the Farm</u> <u>Food, Glorious Food</u></p> <p>Begin to construct with a purpose in mind.</p> <p>Select an appropriate way to join materials together, e.g. sellotape, masking tape, glue. Select appropriate materials.</p> <p>Draw with increasing complexity and detail e.g. facial features.</p> <p>Select colours for a purpose.</p> <p>Explore with the opportunities provided in the provision area for crafting.</p>

<p>Ongoing Developing Skills EAD – EYFS Curriculum 2021</p>	<p>The development of children’s artistic and cultural awareness supports their imagination and creativity. It is important that children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials. The quality and variety of what children see, hear and participate in is crucial for developing their understanding, self-expression, vocabulary and ability to communicate through the arts. The frequency, repetition and depth of their experiences are fundamental to their progress in interpreting and appreciating what they hear, respond to and observe.</p>	<p>The development of children’s artistic and cultural awareness supports their imagination and creativity. It is important that children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials. The quality and variety of what children see, hear and participate in is crucial for developing their understanding, self-expression, vocabulary and ability to communicate through the arts. The frequency, repetition and depth of their experiences are fundamental to their progress in interpreting and appreciating what they hear, respond to and observe.</p>	<p>The development of children’s artistic and cultural awareness supports their imagination and creativity. It is important that children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials. The quality and variety of what children see, hear and participate in is crucial for developing their understanding, self-expression, vocabulary and ability to communicate through the arts. The frequency, repetition and depth of their experiences are fundamental to their progress in interpreting and appreciating what they hear, respond to and observe.</p>

	Transport	Our Planet	Beachcombers
Year 1 Design Make Evaluate	<p><u>To design, make and evaluate a vehicle. (Linked to History/Geography)</u> DT Focus –Construction, Mechanics</p> <p>Use materials to practise gluing and shaping materials to make and strengthen products.</p> <p>Create products using flaps. Design products that have a purpose.</p> <p>Make changes to designs as work progresses. Plan designs before making. Deconstruct boxes and tubes</p>	<p><u>To create an animal puppet for myself, to put on a show for the Year 2 children (Linking to Science)</u></p> <p>DT Focus –Materials and Textiles</p> <p>Shape textiles using templates.</p> <p>Cut materials safely using tools provided.</p> <p>Measure and mark out to the nearest centimetre.</p>	<p><u>To create a picnic for the class to enjoy.</u></p> <p>DT Focus - Food</p> <p>Cut and separate ingredients safely and hygienically.</p> <p>Measure or weigh using measuring cups.</p> <p>Assemble ingredients. Pour liquid ingredients accurately.</p> <p>Know the origins of milk, beef, pork and lamb.</p> <p>Know that all food groups should be consumed in moderation.</p>
Year 2 Design Make Evaluate	<p><u>To design, make and evaluate a vehicle. (Linked to History/Geography)</u></p> <p>DT Focus –Construction, Mechanics.</p> <p>Create labelled designs using software.</p> <p>Use materials to practise drilling and glue gunning materials to make and strengthen products.</p> <p>Create products using levers and wheels.</p>	<p><u>To create an animal puppet for myself, to put on a show for the Year 1 children (Linking to Sciene)</u></p> <p>DT Focus –Materials and Textiles</p> <p>Join textiles using running stitch.</p> <p>Colour and decorate textiles using a number of techniques (such as adding sequins or printing).</p> <p>Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling).</p>	<p><u>To create a picnic for the class to enjoy</u></p> <p>DT Focus - Food</p> <p>Cut or peel ingredients safely and hygienically.</p> <p>Measure or weigh using spring or electronic scales. Cook ingredients.</p> <p>Mix wet and dry ingredients. Know some fruit and vegetables grow above and below ground.</p> <p>Know that food can be sorted into food groups. Understand the need for a balanced diet.</p>

	<p>Design products that have a clear purpose and an intended user.</p> <p>Make products, refining the design as work progresses. Use software to design.</p> <p>Explore how products have been created.</p>	<p>Demonstrate a range of joining techniques (such as gluing, folding or combining materials to strengthen).</p>	
	Journey down The River Nile	Yorkshire	Stig of the Dump
<p>Year 3</p> <p>Design Make Evaluate Adapt</p>	<p><u>To create an Egyptian wall hanging to display in the class, to support the current topic (linking to history).</u></p> <p>DT Focus – Materials and Textiles</p> <p>Materials Cut materials accurately and safely by selecting appropriate tools. Measure and mark out to the nearest millimetre.</p> <p>Textiles Understand the need for seam allowance. Join textiles with appropriate stitching.</p> <p>Design Process - Improve upon existing designs, giving reasons for choices. Disassemble products to understand how they work.</p>	<p><u>Design and make a portable light source for a camping trip (Linking to science)</u></p> <p>Mechanics - Choose suitable techniques to construct products.</p> <p>Electronics Create series circuits.</p> <p>Materials Cut materials accurately and safely by selecting appropriate tools.</p> <p>Design Process - Improve upon existing designs, giving reasons for choices.</p>	<p><u>Design and make an item of clothing for an iron age doll. (Linking to History)</u></p> <p>Construction – Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product such as winding mechanisms.</p> <p>Materials Cut materials accurately and safely by selecting appropriate tools. Measure and mark out to the nearest millimetre.</p> <p>Design Process - Improve upon existing designs, giving reasons for choices.</p>
<p>Year 4</p> <p>Design Make Evaluate Adapt</p>	<p><u>To create an Egyptian wall hanging to display in the class, to support the current topic (linking to history).</u></p> <p>DT Focus – Materials and Textiles</p> <p>Materials Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs).</p>	<p><u>Design an make a portable light source for a camping trip that is pocket sized.</u></p> <p>Materials Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs).</p> <p>Select appropriate joining techniques.</p>	<p><u>Design and make an item of clothing for an iron age doll. (Linking to History)</u></p> <p>Construction – Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product such as gears.</p> <p>Materials Apply appropriate cutting and shaping techniques</p>

	<p>Select appropriate joining techniques.</p> <p>Textiles Select the most appropriate techniques to decorate textiles.</p> <p>Design Process – Identify some of the great designers in all areas of study to generate ideas for designs.</p>	<p>Mechanics Choose suitable techniques to repair items.</p> <p>Electronics Create series circuits incorporating switches.</p> <p>Design Process – Identify some of the great designers in all areas of study to generate ideas for designs.</p>	<p>that include cuts within the perimeter of the material (such as slots or cut outs).</p> <p>Select appropriate joining techniques.</p> <p>Design Process – Identify some of the great designers in all areas of study to generate ideas for designs.</p>
	Cogheart	Volcanoes	Stars and Stripes
<p>Year 5</p> <p>Design Make Evaluate Adapt</p>	<p><u>Design and make a paddle steamboat. (Linking to History)</u></p> <p>I can...</p> <p>Mechanics – Use innovative combinations for mechanics in product designs</p> <p>Construction – Use a range of practical skills to create products, such as cutting, drilling and screwing, nailing and gluing.</p> <p>Design Process- Evaluate the design of products so as to suggest improvements to the user experience. Ensure products have a high-quality finish, using art skills where appropriate.</p>	<p>Design and make a model of an erupting volcano: investigate how pneumatic systems work and incorporate this to their design. https://www.tes.com/resource-detail/download/11000785</p> <p>Materials – Cut materials with precision and refine the finish with appropriate tools (such as sanding wood after cutting or more precise scissor cut after roughly cutting out a shape)</p> <p>Design Process- Evaluate the design of products so as to suggest improvements to the user experience. Ensure products have a high-quality finish, using art skills where appropriate.</p>	<p><u>Design and make a flight meal to fit on a tray for a holiday maker to enjoy. Focus on international cuisine.</u></p> <p>Food I can...</p> <p>Understand the importance of correct storage and handling of ingredients (using knowledge of micro-organisms). Measure accurately and calculate ratios of ingredients to scale up or down from a recipe. Know the seasonality of foods such as strawberries and understand the role providers/supermarkets play in providing fruits 'out of season'.</p>
<p>Year 6</p> <p>Design</p>	<p><u>Design and make a paddle steamboat. (Linking to History)</u></p>	<p>Design and make a model of an erupting volcano: investigate how pneumatic systems work and incorporate this to their design.</p>	<p><u>Come Dine with me</u> <u>Develop a three-course meal focused on three key ingredients, as part of a group challenge to</u></p>

<p>Make Evaluate Adapt</p>	<p>I can...</p> <p>Mechanics – Use innovative combinations of electronics (or computing) and mechanics in product designs.</p> <p>Construction – Use a range of practical skills to create products, such as cutting, drilling and screwing, nailing, gluing, filling and sanding.</p> <p>Design Process–Create innovative designs that improve upon existing products. Use prototypes, cross-sectional diagrams and computer aided designs to represent designs.</p>	<p>https://www.tes.com/resource-detail/download/11000785</p> <p>I can...</p> <p>Materials - Show an understanding of the qualities of materials to choose appropriate tools to cut and shape (such as the nature of fabric may require sharper scissors than would be used to cut paper).</p> <p>Design Process–Create innovative designs that improve upon existing products. Use prototypes, cross-sectional diagrams and computer aided designs to represent designs.</p>	<p>develop the best class recipes. Explore each key ingredient’s farm to fork process</p> <p>Food</p> <p>I can...</p> <p>Demonstrate a range of baking and cooking techniques.</p> <p>Make a range of savoury dishes.</p> <p>Create and refine recipes, including ingredients, methods, cooking times and temperatures.</p> <p>Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.</p> <p>Challenge – include a budget to work from.</p>
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