

St Columb Minor Academy DT Disciplinary knowledge progression EYFS/KS1/KS2

EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Concept 1: Design						
Understanding contexts, users, and purposes						
Generating, developing, modelling, and communicating ideas						
<p>Expressive arts and design – Being imaginative</p> <p>To use what they have learnt about media and materials in original ways, thinking about uses and purposes.</p> <p>Represent their own ideas, thoughts and feelings through design and technology.</p>	<p>Work confidently within a range of contexts, such as imaginary, story-based, home, school, gardens, playgrounds, local community, industry and the wider environment.</p> <p>State what products they are designing and making.</p> <p>Say whether their products are for themselves or other users.</p> <p>Describe what their products are for.</p> <p>Say how their products will work.</p> <p>Say how they will make their products suitable for their intended users.</p> <p>Follow a simple design criteria</p>	<p>Work confidently within a range of contexts, such as imaginary, story-based, home, school, gardens, playgrounds, local community, industry and the wider environment.</p> <p>State what products they are designing and making.</p> <p>Say whether their products are for themselves or other users.</p> <p>Describe what their products are for.</p> <p>Say how their products will work.</p> <p>Say how they will make their products suitable for their intended users.</p> <p>Use simple design criteria</p>	<p>Work confidently within an increasing range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment.</p> <p>Describe the purpose of their products.</p> <p>Indicate the design features of their products that will appeal to intended users.</p> <p>Explain how particular parts of their products work.</p> <p>Gather information about the needs and wants of particular individuals and groups.</p>	<p>Work confidently within an increasing range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment.</p> <p>Describe the purpose of their products.</p> <p>Indicate the design features of their products that will appeal to intended users.</p> <p>Explain how particular parts of their products work.</p> <p>Gather information about the needs and wants of particular individuals and groups.</p>	<p>Work confidently within an increasing range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment.</p> <p>Describe the purpose of their products.</p> <p>Indicate the design features of their products that will appeal to intended users.</p> <p>Explain how particular parts of their products work.</p> <p>Identify the needs, wants, preferences and values of particular individuals and groups.</p>	<p>Work confidently within an increasing range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment.</p> <p>Describe the purpose of their products.</p> <p>Indicate the design features of their products that will appeal to intended users.</p> <p>Explain how particular parts of their products work.</p> <p>Identify the needs, wants, preferences and values of particular individuals and groups.</p>

	<p>To generate ideas by drawing on their own experiences.</p>	<p>to help develop their ideas. To think of their own ideas and explain what they want to do.</p> <p>Describe their design using pictures, model mock-ups and words.</p> <p>Develop and communicate ideas verbally and through labelled drawings.</p>	<p>Use pre-given prototypes to discuss design ideas.</p> <p>Use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas.</p> <p>Generate realistic ideas, focusing on the needs of the user.</p> <p>Make design decisions that take account of the availability of resources.</p>	<p>Use pre-given prototypes to discuss design ideas.</p> <p>Use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas.</p> <p>Generate realistic ideas, focusing on the needs of the user.</p> <p>Make design decisions that take account of the availability of resources.</p>	<p>Take user's views into account when designing.</p> <p>Considering safety and reliability.</p> <p>Describe the purpose of their products explain how particular parts of their products work.</p> <p>Test their ideas using prototypes and pattern pieces in order to develop and improve their ideas.</p> <p>Communicate design ideas in a variety of ways including verbally, written, using annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas.</p> <p>Use computer-aided design to develop and</p>	<p>Take user's views into account when designing.</p> <p>Indicate the design features of their products that will appeal to intended users. Considering safety and reliability.</p> <p>Describe the purpose of their products explain how particular parts of their products work.</p> <p>Test their ideas using prototypes and pattern pieces in order to develop and improve their ideas.</p> <p>Communicate design ideas in a variety of ways including verbally, written, using annotated sketches, cross-sectional drawings and exploded diagrams to develop and</p>
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					<p>communicate their ideas.</p> <p>Make design decisions, taking account of constraints such as time, resources and cost.</p> <p>Justify their decisions about materials and methods of constructions.</p>	<p>communicate their ideas.</p> <p>Use computer-aided design to develop and communicate their ideas.</p> <p>Make design decisions, taking account of constraints such as time, resources and cost.</p> <p>Justify their decisions about materials and methods of constructions.</p>
<p>Concept 2: Make</p> <p>KS1: Mechanisms, structures, food and textiles</p> <p>KS2: Mechanical systems, electrical systems, structures, food and textiles</p> <p>Planning</p> <p>Practical skills and techniques</p>						
<p>Exploring media and materials</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>Select appropriate tools and materials to use and why.</p> <p>Use tools safely.</p> <p>Plan by suggesting what to do next and how to progress as their ideas develop.</p> <p>Select from a range of tools and equipment,</p>	<p>Select appropriate tools and materials to use and why.</p> <p>Use tools safely.</p> <p>Plan by suggesting what to do next and how to progress as their ideas develop.</p> <p>Select from a range of tools and equipment,</p>	<p>Select tools and equipment suitable for the task.</p> <p>Select materials and components suitable for the task.</p> <p>Order the main stages of making.</p> <p>Apply knowledge in order to follow procedures</p>	<p>Select tools and equipment suitable for the task.</p> <p>Explain their choice of tools and equipment in relation to the skills and techniques they will be using.</p> <p>Select materials and components suitable for the task.</p> <p>Explain their choice of</p>	<p>Select tools and equipment suitable for the task.</p> <p>Explain their choice of tools and equipment in relation to the skills and techniques they will be using.</p> <p>Explain their choice of materials and components according to functional properties and</p>	

	<p>explaining their choices.</p> <p>Select from a range of materials and components according to their characteristics.</p> <p>Select from a range of tools and materials with help, e.g. hole punches, hand drills, sandpaper.</p> <p>Follow procedures for safety and hygiene.</p> <p>Choose materials and techniques to suit purpose and be able to explain reasons for their choices.</p> <p>Make an object with simple moving parts.</p> <p>Choose appropriately from simple finishing techniques, including those from art and design in order to</p>	<p>explaining their choices.</p> <p>Select from a range of materials and components according to their characteristics.</p> <p>Select from a range of tools and materials with help, e.g. hole punches, hand drills, sandpaper.</p> <p>Follow procedures for safety and hygiene.</p> <p>Choose materials and techniques to suit purpose and be able to explain reasons for their choices.</p> <p>Make an object with simple moving parts.</p> <p>Choose appropriately from simple finishing techniques, including those from art and design in order to enhance their products.</p>	<p>for safety and hygiene.</p> <p>Apply measuring, marking and cutting skills with some accuracy.</p> <p>Assemble, join and combine materials and components with some accuracy.</p> <p>Select the correct tools to use with different materials.</p> <p>Apply a range of finishing techniques, including those from art and design, with some accuracy.</p>	<p>Order the main stages of making.</p> <p>Apply knowledge in order to follow procedures for safety and hygiene.</p> <p>Apply measuring, marking and cutting skills with some accuracy.</p> <p>Assemble, join and combine materials and components with some accuracy.</p> <p>Select the correct tools to use with different materials.</p> <p>Apply a range of finishing techniques, including those from art and design, with some accuracy.</p>	<p>materials and components according to functional properties and aesthetic qualities.</p> <p>Produce appropriate lists of tools, equipment and materials that they need.</p> <p>Formulate step-by-step plans as a guide to making.</p> <p>Work from a detailed plan.</p> <p>Apply knowledge in order to follow procedures for safety and hygiene.</p> <p>Accurately apply skills to measure, mark out, cut and shape materials and components.</p> <p>Accurately assemble, join and combine materials and components.</p> <p>Demonstrate resourcefulness when tackling practical problems.</p> <p>Applying knowledge of materials and</p>	<p>aesthetic qualities.</p> <p>Produce appropriate lists of tools, equipment and materials that they need.</p> <p>Formulate step-by-step plans as a guide to making.</p> <p>Work from a detailed plan.</p> <p>Apply knowledge in order to follow procedures for safety and hygiene.</p> <p>Accurately apply skills to measure, mark out, cut and shape materials and components.</p> <p>Accurately assemble, join and combine materials and components.</p> <p>Demonstrate resourcefulness when tackling practical problems.</p> <p>Applying knowledge of materials and</p>
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	enhance their products.				<p>tools to solve problems they encounter.</p> <p>Accurately apply a range of finishing techniques, including those from art and design e.g. collage, paint to enhance the appearance of their product.</p> <p>Use techniques that involve a number of steps.</p>	<p>tools to solve problems they encounter.</p> <p>Accurately apply a range of finishing techniques, including those from art and design e.g. collage, paint to enhance the appearance of their product.</p> <p>Use techniques that involve a number of steps.</p>
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Concept 3: Analyse and Evaluate Own ideas and products Existing products						
<p>Own ideas and products Talk about their design and what they are making.</p> <p>With support, identify what they like and dislike of their design.</p>	<p>Own ideas and products Talk about their design ideas and what they are making.</p> <p>Make simple judgements about their products and ideas against design criteria.</p> <p>Suggest how their designs and products could be improved.</p> <p>Talk about their own work identifying likes and dislikes of their design.</p> <p>Identify what they could have done differently to improve their work in the future.</p>	<p>Own ideas and products Talk about their own work identifying likes and dislikes of the design.</p> <p>Make simple judgements about their products and ideas against design criteria.</p> <p>Suggest how their designs and products could be improved.</p> <p>Talk about how closely their finished product meets their design criteria.</p> <p>Identify ways to improve their design by reflecting on the design brief.</p>	<p>Own ideas and products Identify the strengths and areas for development in their ideas and products and explain why.</p> <p>Consider the views of others, including intended users, to improve their work</p> <p>With support, suggest alternative ways to make their products or how their products could be improved.</p> <p>Talk about how closely their finished product meets their design criteria.</p> <p>Use what the work of famous inventors and engineers to influence and inspire their own design process.</p>	<p>Own ideas and products Identify the strengths and areas for development in their ideas and products and explain why.</p> <p>Consider the views of others, including intended users, to improve their work</p> <p>With support, suggest alternative ways to make their products or how their products could be improved.</p> <p>Use what the work of famous inventors and engineers to influence and inspire their own design process.</p>	<p>Own ideas and products Identify the strengths and areas for development in their ideas and products and explain why.</p> <p>Consider the views of others, including intended users, to improve their work</p> <p>Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make.</p> <p>Evaluate their ideas and products against their original design specification suggesting things they would do differently next time.</p> <p>Use what the work of famous inventors and engineers to influence and inspire their own design process.</p>	<p>Own ideas and products Identify the strengths and areas for development in their ideas and products and explain why.</p> <p>Consider the views of others, including intended users, to improve their work</p> <p>Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make.</p> <p>Evaluate their ideas and products against their original design specification suggesting things they would do differently next time.</p> <p>Use what the work of famous inventors and engineers to influence and inspire their own design process.</p>
<p>Existing products When prompted, suggest improvements to existing designs.</p>	<p>Existing products Talk about their ideas, saying what they like and dislike.</p> <p>Pupils use their investigative skills to describe and analyse existing products relating their findings to</p>	<p>Existing products Talk about their ideas, saying what they like and dislike and explain why.</p> <p>Identify what they could have done differently to improve their work in the future.</p>				

	their own ideas for products.	Pupils use their investigative skills to describe and analyse existing products relating their findings to their own ideas for products.	Existing products Investigate and analyse asking questions such as: - who designed and made the products - where products were designed and made - when were these products designed and made - whether products can be recycled or reused - what is the intended purpose of the product	Existing products Investigate and analyse asking questions such as: - who designed and made the products - where products were designed and made - when were these products designed and made - whether products can be recycled or reused - what is the intended purpose of the product	Existing products Investigate and analyse products by asking questions such as: - how much products cost to make - how innovative products are - how sustainable the materials in products are - what impact products have beyond their intended purpose	Existing products Investigate and analyse products by asking questions such as: - how much products cost to make - how innovative products are - how sustainable the materials in products are - what impact products have beyond their intended purpose
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Concept 4: Textiles

Look at different stitches on sewing cards.	Understand the difference between running stitch and basting stitch and apply. Understand that a 3D textiles product can be assembled from two identical fabric shapes.	Understand the difference between running stitch and basting stitch and apply. Understand that a 3D textiles product can be assembled from two identical fabric shapes.	Make informed choices from the sewing stiches they have learned in order to join fabrics and/or add embellishment and decoration (applique). Apply decoration to their work using buttons, beads, sequins. Choose from a small range of fabrics according to properties, purpose, ease of working, aesthetics.	Make informed choices from the sewing stiches they have learned in order to join fabrics and/or add embellishment and decoration (applique). Apply decoration to their work using buttons, beads, sequins. Choose from a small range of fabrics according to properties, purpose, ease of working, aesthetics.	Use patterns and prototypes to try out ideas. Make informed choices from the sewing stiches they have learned in order to join fabrics and/or add embellishment and decoration (applique)	Use patterns and prototypes to try out ideas. They make informed choices from the sewing stiches they have learned in order to join fabrics and/or add embellishment and decoration (applique)
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Concept 4: Cooking and Nutrition						
<p>Apply knowledge of healthy eating to identify healthy food for themselves.</p>	<p>Apply knowledge of healthy eating to plan a balanced meal for themselves.</p> <p>Follow procedures for safety and hygiene for the skills learned.</p> <p>Follow a simple recipe applying skills learned.</p> <p>Know that food ingredients should be combined according to their sensory characteristics.</p>	<p>Apply knowledge of healthy eating to plan a balanced meal for themselves.</p> <p>Follow procedures for safety and hygiene for the skills learned.</p> <p>Follow a simple recipe applying skills learned.</p> <p>Know that food ingredients should be combined according to their sensory characteristics.</p>	<p>Apply knowledge of healthy eating to plan a balanced diet.</p> <p>Use their knowledge of seasonality and food miles to influence their choice of ingredients when designing.</p> <p>Follow procedures for safety and hygiene.</p> <p>Know when to use a bridge or a claw technique when cutting soft and hard food.</p> <p>Follow a recipe applying skills learned.</p>	<p>Apply knowledge of healthy eating to plan a balanced diet.</p> <p>Use their knowledge of seasonality and food miles to influence their choice of ingredients when designing.</p> <p>Follow procedures for safety and hygiene.</p> <p>Know when to use a bridge or a claw technique when cutting soft and hard food.</p> <p>Prepare ingredients hygienically and using the appropriate utensils by following a recipe.</p>	<p>Use their understanding of dietary needs and how they differ to design a meal for an individual (athlete, older person, child etc).</p> <p>Choose ingredients with a growing awareness of conservation, seasonality, sustainability and animal welfare.</p> <p>Independently select equipment appropriate to the task.</p> <p>Be able to explain their choices.</p> <p>Begin to use their time efficiently e.g: wash up or cut toppings whilst waiting for a pie to cook.</p> <p>Create and refine recipes, including ingredients, methods, cooking times</p>	<p>Use their understanding of dietary needs to design a meal for an individual (athlete, older person, child, soldier etc).</p> <p>Choose ingredients with a growing awareness of conservation, seasonality, sustainability and animal welfare.</p> <p>Independently select equipment appropriate to the task.</p> <p>Be able to explain their choices.</p> <p>Begin to use their time efficiently e.g: wash up or cut toppings whilst waiting for a pie to cook.</p> <p>Create and refine recipes, including ingredients, methods, cooking times and temperatures.</p>

					<p>and temperatures.</p> <p>Understand that a recipe can be adapted by adding or substituting one or more ingredients.</p> <p>Understand that recipes can be adapted to change the appearance, taste, texture and aroma.</p> <p>Understand importance of correct storage and handling of ingredients.</p>	<p>Understand that a recipe can be adapted by adding or substituting one or more ingredients.</p> <p>Understand that recipes can be adapted to change the appearance, taste, texture and aroma.</p> <p>Understand importance of correct storage and handling of ingredients.</p>
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