

Long Term DT Planning – Deighton Gates Primary School

Reception: EYFS	3 and 4 Year Olds (Development Matters EYFS 2021) - To explore different materials freely, in order to develop their ideas about how to use them and what to make. - To develop their own ideas and then decide which materials to use to express them. - To join different materials and explore different textures.		Children in Reception (Development Matters EYFS 2021) - To explore, use and refine a variety of artistic effects to express their ideas and feelings. - To return to and build on their previous learning, refining ideas and developing their ability to represent them. - To create collaboratively sharing ideas, resources and skills
Examples of DT in Reception Linked to the Threshold Concepts <i>*See the Annual Reception Long Term Plan for more a more specific curriculum mapping.</i>	Autumn One: Superheroes Designing our own Superhero masks (adding the string and holes) – Milestone - Master practical techniques Designing our own Superhero using split pins Autumn Two: Minibeasts Creating our own Minibeast houses out of wood/ tape. – Milestone - Design, evaluate and improve Summer One: People Who Help Us Construction vehicles – creating our own fire engines using boxes/ wheels etc. Milestone - Design, evaluate and improve Creative activities each week in the creative area – they have continual access to junk modelling resources, such as boxes, tubes, straws, split pins, buttons, pipe cleaners, googly eyes, masking tape, parcel tape, Sellotape, to make their own models in free flow each day. Continually ongoing to cover all of the objectives.		
Year 1	Spring 1: Green Fingers Food Evaluate, design and produce fruit kebabs.	Summer 1: The Great Outdoors Materials Evaluate, design and make a chair for teddy by joining materials.	Summer 2: Robots Mechanisms Evaluate, design and make a moving robot using a lever mechanism.
Threshold Concepts	Design, make, evaluate and improve: Design products that have a clear purpose and an intended user.	Design, make, evaluate and improve: - Design products that have a clear purpose and an intended user. - Make products, refining the design as work progresses.	Design, make, evaluate and improve: Design products that have a clear purpose and an intended user.

Long Term DT Planning – Deighton Gates Primary School

	• Make products, refining the design as work progresses. Take inspiration from designs throughout history: (Recipes) • Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to existing designs. • Explore how products have been created. Master Practical Skills: Food • Cut, peel or grate ingredients safely and hygienically. • Measure or weigh using measuring cups or electronic scales. • Assemble or cook ingredients.	• Use software to design. Take inspiration from designs throughout history: (Teddy Bear products) • Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to existing designs. • Explore how products have been created. Master Practical Skills: Materials • Cut materials safely using tools provided. • Measure and mark out to the nearest centimetre. • Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling). • Demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen)	• Make products, refining the design as work progresses. • Use software to design. Take inspiration from designs throughout history: (Books with lever system) • Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to existing designs. • Explore how products have been created. Master Practical Skills: Electronics and Computing Diagnose faults in battery operated devices (such as low battery, water damage or battery terminal damage). • Model designs using software. Master Practical Skills: Mechanics • Create products using levers, wheels and winding mechanisms. • Cut materials safely using tools provided. • Measure and mark out to the nearest centimetre.
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Long Term DT Planning – Deighton Gates Primary School

Year 2	Autumn 2: Living in a Material World Design and make a moving vehicle	Spring 2: Travellers to Dondra Food Design and make a portable snack	Summer 1: Spots, Stripes and Magical Beasts Textiles Design and Make a Puppet
Threshold Concepts	Design, make, evaluate and improve: • Design products that have a clear purpose and an intended user. • Make products, refining the design as work progresses. • Use software to design. Take inspiration from designs throughout history: (Henry Ford) • Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to existing designs. • Explore how products have been created. Master Practical Skills: Materials • Cut materials safely using tools provided. • Measure and mark out to the nearest centimetre. • Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling). • Demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen)	Design, make, evaluate and improve: • Design products that have a clear purpose and an intended user. • Make products, refining the design as work progresses. Take inspiration from designs throughout history: (Recipes for snacks) • Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to existing designs. • Explore how products have been created. Master Practical Skills: Food • Cut, peel or grate ingredients safely and hygienically. • Measure or weigh using measuring cups or electronic scales. • Assemble or cook ingredients.	Design, make, evaluate and improve: • Design products that have a clear purpose and an intended user. • Make products, refining the design as work progresses. • Use software to design. Take inspiration from designs throughout history: (A fashion designer of choice) • Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to existing designs. • Explore how products have been created. Master Practical Skills: Textiles • Shape textiles using templates. • Join textiles using running stitch. • Colour and decorate textiles using a number of techniques (such as dyeing, adding sequins or printing).

Long Term DT Planning – Deighton Gates Primary School

	Master Practical Skills: Mechanics • Create products using levers and wheels		
Year 3	Spring 1 – What on Earth Food: Healthy Dips Children to design, make and evaluate healthy dips	Summer 1: Groovy Greeks Skills: Construction and Materials Children to design and make a Greek building	Summer 2: India Skills: Mechanics Children to Design and build a theatre with moving characters
Threshold Concepts	Design, make, evaluate and improve: • Design with purpose by identifying opportunities to design. • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, continually evaluating the product design. Take inspiration from designs throughout history: (Recipes for smoothies) • Identify some of the great designers in all of the areas of study to generate ideas for designs. • Improve upon existing designs, giving reasons for choices. Master Practical Skills: Food • Prepare ingredients hygienically using appropriate utensils.	Design, make, evaluate and improve: • Design with purpose by identifying opportunities to design. • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, continually evaluating the product design. • Use software to design and represent product designs. Take inspiration from designs throughout history: (Greek Architects) • Identify some of the great designers in all of the areas of study to generate ideas for designs. • Improve upon existing designs, giving reasons for choices. • Disassemble products to understand how they work. Master Practical Skills: Materials • Cut materials accurately and safely by selecting appropriate tools. • Measure and mark out to the nearest millimetre. • Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs).	Design, make, evaluate and improve: • Design with purpose by identifying opportunities to design. • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, continually evaluating the product design. • Use software to design and represent product designs. Take inspiration from designs throughout history: (Existing products with levers and winding mechanisms) • Identify some of the great designers in all of the areas of study to generate ideas for designs. • Improve upon existing designs, giving reasons for choices. • Disassemble products to understand how they work. Master Practical Skills: Mechanics

Long Term DT Planning – Deighton Gates Primary School

	• Measure ingredients to the nearest gram accurately. • Follow a recipe. • Assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking)	• Select appropriate joining techniques.		• Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears).
Year 4	Autumn 1: Invaders and Settlers Skills: Textiles	Spring 1: A matter of Change Skills: Food Evaluating, designing and producing own soup	Spring 2: Brightening up the UK Skills: Electronics and Computing	Summer 2: Law, Liberty and Legacy Skills: Construction and Mechanics Design and Make a Pop Up Book
Threshold Concepts	Design, make, evaluate and improve: • Design with purpose by identifying opportunities to design. • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, continually evaluating the product design. • Use software to design and represent product designs. Take inspiration from designs throughout history: (Bayeaux Tapestry) • Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for designs. • Improve upon existing designs, giving reasons for choices. • Disassemble products to understand how they work.	Design, make, evaluate and improve: • Design with purpose by identifying opportunities to design. • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, continually evaluating the product design. Take inspiration from designs throughout history: (Delia Smith) • Identify some of the great designers in all of the areas of study to	Design, make, evaluate and improve: • Design with purpose by identifying opportunities to design. • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, continually evaluating the product design. • Use software to design and represent product designs. Take inspiration from designs throughout history: (CAD products) • Identify some of the great designers in all of the areas of study (including pioneers in	Design, make, evaluate and improve: • Design with purpose by identifying opportunities to design. • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, continually evaluating the product design. • Use software to design and represent product designs. Take inspiration from designs throughout history: (Pop Up Books) • Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for designs. • Improve upon existing designs, giving reasons for choices. • Disassemble products to understand how they work.

Long Term DT Planning – Deighton Gates Primary School

	Master Practical Skills: Textiles • Understand the need for a seam allowance. • Join textiles with appropriate stitching. • Select the most appropriate techniques to decorate textiles.	generate ideas for designs. • Improve upon existing designs, giving reasons for choices. Master Practical Skills: Food • Prepare ingredients hygienically using appropriate utensils. • Measure ingredients to the nearest gram accurately. • Follow a recipe. • Assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking)	horticultural techniques) to generate ideas for designs. • Improve upon existing designs, giving reasons for choices. • Disassemble products to understand how they work. Master Practical Skills: Computing and Electronics • Create series and parallel circuits • Control and monitor models using software designed for this purpose.	Master Practical Skills: Mechanics • Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers) Master Practical Skills: Materials • Cut materials accurately and safely by selecting appropriate tools. • Measure and mark out to the nearest millimetre. • Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs).
Year 5	Autumn 1: Keep Calm and Carry On Skills: Food Designing and making a WW2 themed menu	Spring 1: Mission X Skills: Mechanics Outcomes: Design and Make a planetary system run by CAMS		Spring 2: Victorian Wetherby Skills: Textiles Outcomes: Design and make Punch and Judy puppets
Threshold Concepts	Design, make, evaluate and improve • Design with the user in mind, motivated by the service a product will offer (rather than simply for profit). • Make products through stages of prototypes, making continual refinements. • Ensure products have a high-quality finish	Design, make, evaluate and improve • Design with the user in mind, motivated by the service a product will offer (rather than simply for profit). • Make products through stages of prototypes, making continual refinements. • Ensure products have a high-quality finish • Use prototypes, cross-sectional diagrams and computer aided designs to represent designs.		Design, make, evaluate and improve • Design with the user in mind, motivated by the service a product will offer (rather than simply for profit). • Make products through stages of prototypes, making continual refinements. • Ensure products have a high-quality finish

Long Term DT Planning – Deighton Gates Primary School

	• Use prototypes, cross-sectional diagrams and computer aided designs to represent designs. Take inspiration from designs throughout history: (Recipes from WW2 era) • Understand how key events and individuals in design and technology have helped shape the world • Create innovative designs that improve upon existing products. • Evaluate the design of products so as to suggest improvements to the user experience. Master Practical Skills: Food • Select appropriate units of measure of measure ingredients precisely • Demonstrate a range of baking and cooking techniques. • Create and refine recipes, including ingredients, methods, cooking times and temperatures	Take inspiration from designs throughout history: (CAMS products) • Understand how key events and individuals in design and technology have helped shape the world • Create innovative designs that improve upon existing products. • Evaluate the design of products so as to suggest improvements to the user experience. Master Practical Skills: Materials • Cut materials with precision • 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). Master Practical Skills: Mechanics • Convert rotary motion to linear using cams. • Use innovative combinations of mechanics in product designs.	• Use prototypes, cross-sectional diagrams and computer aided designs to represent designs. Take inspiration from designs throughout history: (Traditional punch and Judy puppet makers) • Understand how key events and individuals in design and technology have helped shape the world • Create innovative designs that improve upon existing products. • Evaluate the design of products so as to suggest improvements to the user experience. Master Practical Skills: Textiles • Create objects (such as a cushion) that employ a seam allowance. • Join textiles with a combination of stitching techniques (such as back stitch for seams and running stitch to attach decoration). • Use the qualities of materials to create suitable visual and tactile effects in the decoration of textiles (such as a soft decoration for comfort on a cushion).
Year 6	Spring 2: South America Skills: Food Design and Make	Summer 1 and 2: A New Direction To design and make a moving fairground ride	Term Summer 2 Electronics and Computing To produce a lego model and write code to control the model
Threshold Concepts	Design, make, evaluate and improve	Design, make, evaluate and improve	Design, make, evaluate and improve

Long Term DT Planning – Deighton Gates Primary School

	• Design with the user in mind, motivated by the service a product will offer (rather than simply for profit). • Make products through stages of prototypes, making continual refinements. • Ensure products have a high-quality finish Take inspiration from designs throughout history: (South American chefs/traditional foods and recipes) • Understand how key events and individuals in design and technology have helped shape the world • Create innovative designs that improve upon existing products. • Evaluate the design of products so as to suggest improvements to the user experience. Master Practical Skills: Food • Select appropriate units of measure of measure ingredients precisely • Demonstrate a range of baking and cooking techniques. • Create and refine recipes, including ingredients, methods, cooking times and temperatures	• Design with the user in mind, motivated by the service a product will offer (rather than simply for profit). • Make products through stages of prototypes, making continual refinements. • Ensure products have a high-quality finish • Use prototypes, cross-sectional diagrams and computer aided designs to represent designs. Take inspiration from designs throughout history: (George Washington Ferris?) • Understand how key events and individuals in design and technology have helped shape the world • Create innovative designs that improve upon existing products. • Evaluate the design of products so as to suggest improvements to the user experience. Master Practical Skills: Materials • Cut materials with precision and refine the finish with appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape). • 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). Master Practical Skills: Mechanics • Use innovative combinations of electronics and mechanics in product designs.	• Design with the user in mind, motivated by the service a product will offer (rather than simply for profit). • Make products through stages of prototypes, making continual refinements. • Ensure products have a high-quality finish • Use prototypes, cross-sectional diagrams and computer aided designs to represent designs. Take inspiration from designs throughout history: (CAD products) • Understand how key events and individuals in design and technology have helped shape the world • Create innovative designs that improve upon existing products. • Evaluate the design of products so as to suggest improvements to the user experience. Master Practical Skills: Computing and Electronics • Create circuits using electronics kits that employ a number of components (such as LEDs, resistors, transistors and chips). • Write code to control and monitor models or products.
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