

Progression Map 2020/2021 Subject: DT Subject Lead: Mrs L Mulroy							
	Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
FSU - Shows an interest in toys with buttons, flaps and simple mechanisms and beginning to learn to operate them. During free play provide opportunities for joining materials. Cooking or baking on a weekly basis and exploring materials, threading and weaving.							
Aims <ul style="list-style-type: none"> develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users critique, evaluate and test their ideas and products and the work of others understand and apply the principles of nutrition and learn how to cook. 							
	Year Group	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Knowledge (Breadth)	1	Exploring and using mechanisms. Wheel and axels. Making a toy car	Designing and making puppets - puppets on a string or pop up puppets	Cookery - healthy foods and understanding where food comes from.			
Master Practical Skills		<ul style="list-style-type: none"> Create products using levers, wheels and winding mechanisms Use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products. 	<ul style="list-style-type: none"> 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). 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). 	<ul style="list-style-type: none"> 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		<ul style="list-style-type: none"> Design products that have a clear purpose and an intended user. Make products, refining the design as work progresses. Use software to design. 	<ul style="list-style-type: none"> Design products that have a clear purpose and an intended user. Make products, refining the design as work progresses. Use software to design. 	<ul style="list-style-type: none"> 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 Design Through History		<ul style="list-style-type: none"> Explore objects and designs to identify likes and dislikes of the designs. Suggest improvements to existing designs. Explore how products have been created 	<ul style="list-style-type: none"> Explore objects and designs to identify likes and dislikes of the designs. Suggest improvements to existing designs. Explore how products have been created. 	<ul style="list-style-type: none"> Explore objects and designs to identify likes and dislikes of the designs. Suggest improvements to existing designs. Explore how products have been created. 			
Vocabulary		Mechanisms - axles, chassis body cab, fixed free moving, mechanism, names of tools and equipment used, stable or stability, stiffen, strengthen, vehicle axle holder, wheels	Textiles - Centimetre/metre, fabric crayons, fabric pens, needle, pattern, pin, ribbon, silk, stitch, tape measure, thread, Velcro, wool, zip	Food - amount, baking sheet, basin, chopping board, cleaning cloths, grater, ingredients, knead, masher, measure, measuring jug, measuring spoons, method, mixing bowl, pastry cutters, peeler, pizza tray, recipe, saucepans, scales, sieve, weigh, wooden spoon.			

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Knowledge (Breadth)	2	Exploring and using mechanisms. Sliders & Levers: How will your roly poly move? https://www.stem.org.uk/system/files/elibrary-resources/legacy_files_migrated/2377-rolypoly_col-1812.pdf	Structures - making Bird Feeders https://www.woodlandtrust.org.uk/blog/2019/01/how-to-make-a-bird-feeder/	Cookery - healthy foods and understanding where food comes from.
Master Practical Skills		<ul style="list-style-type: none"> 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). Decorate materials using a number of techniques (such as adding sequins or printing). Create products using wheels/winding mechanisms. Model designs using software (design on 2simple). 	<ul style="list-style-type: none"> Construction - Choose suitable techniques to construct products or to repair items. Strengthen materials using suitable techniques. 	<ul style="list-style-type: none"> 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		<ul style="list-style-type: none"> Design products that have a clear purpose and an intended user. Make products, refining the design as work progresses. Use software to design (2simple). 	<ul style="list-style-type: none"> Design products that have a clear purpose and an intended user. Make products, refining the design as work progresses. Use software to design. 	<ul style="list-style-type: none"> Design products that have a clear purpose and an intended user. Make products, refining the design as work progresses.
Take Inspiration From Design Through History		<ul style="list-style-type: none"> Explore objects and designs to identify likes and dislikes of the designs. Suggest improvements to existing designs. Explore how products have been created. 	<ul style="list-style-type: none"> Explore objects and designs to identify likes and dislikes of the designs. Suggest improvements to existing designs. Explore how products have been created. 	<ul style="list-style-type: none"> Explore objects and designs to identify likes and dislikes of the designs. Suggest improvements to existing designs. Explore how products have been created.
Vocabulary		Mechanisms - axles, chassis body cab, fixed free moving, mechanism, names of tools and equipment used, stable or stability, stiffen, strengthen, vehicle axle holder, wheels, rolling motion	Structures - Build, make, design, plan, product, base, circle, corner, cube, cuboid, curved cylinder, edge, fix, fold, framework, join, metal, plastic, point, rectangle, slide, square, straight, structure, surface, thicker, thinner, top, tower.	Food - amount, baking sheet, basin, chopping board, cleaning cloths, grater, ingredients, knead, masher, measure, measuring jug, measuring spoons, method, mixing bowl, pastry cutters, peeler, pizza tray, recipe, saucepans, scales, sieve, weigh, wooden spoon.

Aims			
<ul style="list-style-type: none"> develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users critique, evaluate and test their ideas and products and the work of others understand and apply the principles of nutrition and learn how to cook. 			
Knowledge (Breadth)	3	Textiles. 2D shapes to 3D products. Designing and making purses.	What display will your class share? (link with making a display for a different subject) https://www.stem.org.uk/resources/elibrary/resource/25874/what-display-will-your-class-share
Master Practical Skills		<ul style="list-style-type: none"> 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). Select appropriate joining techniques. Understand the need for a seam allowance. Join textiles with appropriate stitching. Select the most appropriate techniques to decorate textiles. 	<ul style="list-style-type: none"> Cut materials accurately and safely by selecting appropriate tools. Measure and mark out to the nearest millimetre. Select appropriate joining techniques. Choose suitable techniques to construct products. Strengthen materials using suitable techniques.
Design, Make, Evaluate and Improve		<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Design with purpose by identifying opportunities to design. Make products by working efficiently (such as 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 Design Through History		<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Improve upon existing designs, giving reasons for choices.
Vocabulary		Textiles - back stitch, binca, bodkin, cotton thread, cross stitch, hook and eye, loom, pinking shears, press stud, running stitch, seam allowance, sewing machine, tacking, thumbing	Materials - assembling, durable, panels, construction, function, stiffen, structures.
			Food - grams/kilograms, hygiene, ladle, millilitre/litre, spatula, temperature, whisk

Aims				
<ul style="list-style-type: none"> • develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world • build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users • critique, evaluate and test their ideas and products and the work of others • understand and apply the principles of nutrition and learn how to cook. 				
Knowledge (Breadth)	4	Construction: Treasure boxes https://www.stem.org.uk/resources/elibrary/resource/25877/how-will-you-store-your-favourite-things	Cooking and nutrition: Designing and making bread	Electricals and electronics: Light-up signs https://www.planbee.com/light-up-signs
Master Practical Skills		<ul style="list-style-type: none"> • 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. • Select appropriate joining techniques. • Strengthen materials using suitable techniques. 	<ul style="list-style-type: none"> • 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. • Choose suitable techniques to cook. 	<ul style="list-style-type: none"> • Create series and parallel circuits. • Choose suitable techniques to construct products.
Design, Make, Evaluate and Improve		<ul style="list-style-type: none"> • 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 (Google SketchUp). 	<ul style="list-style-type: none"> • Design with purpose by identifying opportunities to design. • Refine work and techniques as work progresses, continually evaluating. 	<ul style="list-style-type: none"> • Design with purpose by identifying opportunities to design. • Make products by working efficiently. • Refine work and techniques as work progresses, continually evaluating.
Take Inspiration From Design Through History		<ul style="list-style-type: none"> • Identify some of the great designers to generate ideas for designs. • Improve upon existing designs, giving reasons for choices. 	<ul style="list-style-type: none"> • Improve upon existing designs, giving reason for choices. 	<ul style="list-style-type: none"> • Improve upon existing designs, giving reasons for choices. • Disassemble products to understand how they work.
Vocabulary		Construction – 2D, 3D, nets, illustrating, constructing.	Food – mixing, investigate, reflect, evaluate, flavours, textures, nutrition.	Circuits – switches, circuits, programming, monitoring, control, bulbs.

Aims			
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Knowledge (Breadth)	5	Textiles- FabFix Repair Kit. https://www.stem.org.uk/resources/elibrary/resource/36661/smart-materials	Mechanics: Context: How fast should your buggy be? https://www.stem.org.uk/resources/elibrary/resource/25794/how-fast-should-your-buggy-be
Master Practical Skills		<ul style="list-style-type: none"> Create objects 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). 	<ul style="list-style-type: none"> 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 a shape). Show an understanding of the qualities of materials to choose appropriate tools to cut and shape (such as the nature of fabric would require sharper scissors than to cut paper). Develop a range of practical skills to create products (such as cutting, drilling and screwing, nailing, gluing and filing). Convert rotary motion to linear motion.
Design, Make, Evaluate and Improve		<ul style="list-style-type: none"> 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, using art skills where appropriate. Use prototypes, cross-sectional diagrams and computer aided designs to represent designs. 	<ul style="list-style-type: none"> 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, using art skills where appropriate.
Take Inspiration From Design Through History		<ul style="list-style-type: none"> Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. Create innovative designs that improve upon existing products. Evaluate the design of products so as to suggest improvements to the user experience. 	<ul style="list-style-type: none"> Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. Create innovative designs that improve upon existing products. Evaluate the design of products so as to suggest improvements to the user experience.
Vocabulary		Textiles - back stitch, binca, bodkin, cotton thread, cross stitch, hook and eye, loom, pinking shears, press stud, running stitch, seam allowance, sewing machine, tacking, thumbing	Mechanisms - bridge/guide, curve, cutting, input, joining/join, lever, linear, masking tape, output, paper fastener, split pin, pivot, pull/push, up/down, straight, shaping, simple flap, simple slider, slot, straight line.
			Nutrition - ratios, investigate, produced, extraction, storage, micro-organisms, methods, temperatures.

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Knowledge (Breadth)	6	Construction Context: Musical Christmas Decorations (controlled by Micro Bit rather than motor - links with ICT topic)	Textiles. Funky Furnishings - Making Cushions.	Cooking and Nutrition Food for Life Advice Pack - including healthy recipes (tried and tested), advice and information pages (seasonal vegetables, fair trade etc - presented using ICT)
Master Practical Skills		<ul style="list-style-type: none"> 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 a shape) Show an understanding of the qualities of materials to choose appropriate tools to cut and shape (such as the nature of fabric would require sharper scissors than to cut paper) Develop a range of practical skills to create products (such as cutting, drilling and screwing, nailing, gluing and filing) Write code to control and monitor models or products 	<ul style="list-style-type: none"> 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, appliqué). 	<ul style="list-style-type: none"> 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 Demonstrate a range of baking and cooking techniques Create and refine recipes, including ingredients, methods, cooking times and temperatures
Design, Make, Evaluate and Improve		<ul style="list-style-type: none"> 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, using art skills where appropriate. 	<ul style="list-style-type: none"> 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, using art skills where appropriate. 	<ul style="list-style-type: none"> Design with the audience in mind. Motivated by the message and service the product will offer Make products through stages of prototypes, making continual refinements.
Take Inspiration From Design Through History		<ul style="list-style-type: none"> Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. Create innovative designs that improve upon existing products. Evaluate the design of products so as to suggest improvements to the user experience. 	<ul style="list-style-type: none"> Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. Create innovative designs that improve upon existing products. Evaluate the design of products so as to suggest improvements to the user experience. 	<ul style="list-style-type: none"> Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices.
Vocabulary		Construction - curve, cutting, input, joining/join, masking tape, output, paper fastener, split pin, pivot, pull/push, up/down, straight, shaping, simple flap, simple slider, slot, straight line.	Textiles - back stitch, binca, bodkin, cotton thread, cross stitch, over stitch, blanket stitch, hook and eye, snap fasteners, loom, pinking shears, press stud, running stitch, seam allowance, sewing machine, tacking, thumbing, hidden, visible, appliqué, functional, aesthetic, product, resealable fastening, durable, envelope fold,	Food - grams/kilograms, hygiene, ladle, millilitre/litre, spatula, temperature, whisk, healthy diet, nutrition, varied diet, savoury/sweet dishes, reared, caught, processed, seasonal, fair trade, micro-organisms, carbohydrates, (saturated) fats, proteins, minerals, vitamins, fibre, nutrients, bacteria, cross contamination



Battle Hill Primary School

Learning together and having fun