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Agreed Trust Vision Statement Design and Technology is committed to inspiring students by providing real life experiences through development of creative, technical and practical tasks. We build on a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users. Students should be inspired by the work of others and the world around them to enable them to research, design, create and evaluate purposeful products. Subsequently, creating resourceful students who are ready to respond to tomorrow's rapidly changing world. 'Enjoy failure and learn from it. You can never learn from success' James Dyson						
Early Years						
Topics	All about me.	Let's celebrate!	Once upon a time...	Where shall we go today?	Splish, Splash, Splosh!	All creatures great and small.
Key Knowledge	See separate EYFS document					
Key Skills						
Key Vocabulary						
Year 1						
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	

Topics	Mechanisms - Making a moving story book Project To make a moving story book. Key terms ● Assemble ● Design criteria ● Design ● Sliders ● Test ● Template Resource support https://www.kapowprimary.com/subjects/design-technology/key-stage-1/year-1/mechanisms-making-a-moving-story-book/ What will students learn? Mechanisms - 4 lessons Moving pictures Experiment with sliders and levers Plan and make a moving story book - draw page backgrounds, create moving parts and assemble it.	Structures - Constructing a windmill Project To design, build and plan a windmill Key terms ● Axle ● Bridge ● Design ● Design Criteria ● Model ● Packaging ● Structure ● Template ● Net Resource support https://www.kapowprimary.com/subjects/design-technology/key-stage-1/year-1/ks1-y1-design-and-technology-constructing-windmills/ What will students learn? Structures - 4 lessons Design, decorate and construct windmills Develop an understanding of different types of windmill, how they work and key features	Food - Fruit and vegetables Project To explore fruit and vegetables and make a smoothie Key Terms ● Carton ● Design ● Flavour ● Healthy ● Peel ● Slice ● Smoothie Resource support https://www.kapowprimary.com/subjects/design-technology/key-stage-1/year-1/fruit-and-vegetables/ What will students learn? Food: Fruit and Vegetables - 4 lessons Handle and explore fruit and vegetables, identify which category they fall into, undertake taste testing, use ingredients to make a smoothie with accompanying packaging
Key Knowledge	Structures (something that has been made and put together) and	Technical: understand 1.shapes of materials can be changed to improve	Food: Fruit and Vegetables

	Mechanisms	strength & stiffness of structures 2. Cylinders are a strong shape for structures 3. Axles make parts that turn in a circle 4. Different structures are used for different purposes	
Key Skills	Mechanisms Moving pictures Experiment with sliders and levers Plan and make a moving story book - draw page backgrounds, create moving parts and assemble it	Structures - Design, decorate and construct windmills Develop an understanding of different types of windmill, how they work and key features	Handle and explore fruit and vegetables, identify which category they fall into, undertake taste testing, use ingredients to make a smoothie with
Key Vocabulary	• Mechanism • Lever • Slider • Slot • Guide/bridge	• Free standing structure • Frame Structure • Shell structure • Stability • Buttress • Brick bonding • Mock up	• Fruit • Vegetable • Nutrients • Salad • Pith • Sensory evaluation
Year 2			
Topics	Structures - Baby Bear's Chair Project Design a new chair for Baby Bear. Key terms • Design criteria • Model • Man-made	Textiles - Pouches Project To design and sew a pouch. Key Terms • Applique • Design • Embroider • Evaluate	Food - A balanced diet Project To determine what makes a balanced diet and finish with making a wrap. Key Terms • Balanced diet • Design criteria

	• Natural • Structure • Stable • Test <u>Resource support</u> https://www.kapowprimary.com/subjects/design-technology/key-stage-1/year-2/structures-baby-bears-chair/ <u>What will students learn?</u> Children will learn to explore different shapes and materials.design a chair for Baby Bear taking into consideration his needs and likes.	• Fray • Glove puppet • Mock up • Seam • Sew • Template <u>Resource support</u> https://www.kapowprimary.com/subjects/design-technology/key-stage-1/year-2/textiles-pouches/ <u>What will students learn?</u> Pouches - introduction to sewing, making templates, cutting fabric accurately and sewing a basic running stitch.	• Ingredients • Fruit • Protein • Vegetables <u>Resource support</u> https://www.kapowprimary.com/subjects/design-technology/key-stage-1/year-2/food-a-balanced-diet/ <u>What will students learn?</u> A balanced diet - explore and learn a balanced diet, taste test ingredients from different food groups. Design a wrap to include a healthy mix of protein, vegetables and dairy.
Key Knowledge	Structures-	Pouches - introduction to sewing	A balanced diet
Key Skills	Baby Bear's Chair - explore different shapes and materials, design the chair, consider needs and likes by sketching & modelling to generate & communicate ideas Learn about different types of structures	making templates, cutting fabric accurately and sewing a basic running stitch	explore and learn a balanced diet, taste test ingredients from different food groups. Design a wrap to include a healthy mix of protein, vegetables and dairy
Key Vocabulary	• Axle • Axle holder • Chassis • Friction	• Applique • Design • Embroider • Evaluate	• Fruit • Vegetable • Nutrients • Salad

	• Dowel	• Fray • Glove puppet • Mock up • Seam • Sew • Template	• Pith • Sensory evaluation
Year 3			
Topics	<u>Textiles: Link to Kapow - making a cushion.</u> <u>Project</u> Winter/Christmas decorations. (3D stuffed decoration – textiles) <u>Key terms</u> • Applique • Cross-stitch • Design • Equipment • Fabric • Patch • Running stitch • Seam • Thread • Texture • Knot <u>Resource support</u> https://www.kapowprimary.com/subjects/design-technology/lower-key-stage-2/year-3/textiles-making-a-cushion/	<u>Electrical Systems - Static Electricity</u> <u>Project</u> Make a simple game, using static electricity. <u>Key Terms</u> • Attract • Electricity • Electrostatic • Innovative • Motion • Research • Repel • Stable • Template <u>Resource support</u> https://www.kapowprimary.com/subjects/design-technology/lower-key-stage-2/year-3/electrical-systems-static-electricity/	<u>Food - Eating seasonally</u> <u>Project</u> To discuss where fruits and vegetables are grown and to make a seasonal tart. <u>Key Terms</u> • Climate • Diet • Ingredients • Natural • Processed • Reared • Recipe • Seasonal <u>Resource support</u> https://www.kapowprimary.com/subjects/design-technology/lower-key-stage-2/year-3/food-eating-seasonally/

	stage-2/year-3/textiles-cushions/ <u>What will students learn?</u> Learn to apply two new sewing techniques (cross stitch and applique). Design, make and evaluate the item.	static-electricity/ <u>What will students learn?</u> Learn the science behind static electricity, generate ideas and make a game.	<u>What will students learn?</u> When, why, how fruit and vegetables are grown in different seasons. Discover relationships between colour and health benefits.
Key Knowledge	Textiles - Winter/Christmas decorations	Materials: Mechanisms, Pneumatics	Food: Healthy and Varied Diet
Key Skills	Make 3D stuffed decoration – textiles	Make a mascot	Make super salads and learn about texture, appearance, taste and evaluate
Key Vocabulary	• Applique • Pattern • Template • Seam • Seam Allowance • Prototype • Aesthetics	• Compressed • Input • Output • Pivot • Lever • Pneumatic • Hydraulic • Pressure • Inflate • Deflate • Syringe • System	• Appearance • Texture • Sensory evaluation • Preference test • Processed foods
Year 4			
Topics	<u>Food - Adapting a recipe</u>	<u>Electrical Systems - Torches</u>	<u>Textiles: Fastenings</u>

	<u>Project</u> Adapt a recipe to make the tastiest biscuit. Link to Christmas <u>Key Terms</u> ● Design Criteria ● Research ● Texture ● Innovative ● Aesthetic ● Measure ● Cross-contamination ● Diet ● Processed ● Packaging <u>Resource support</u> https://www.kapowprimary.com/subjects/design-technology/lower-key-stage-2/year-4/food-adapting-a-recipe/lesson-4-biscuit-bake-off-2/ <u>What will students learn?</u> Children will learn to work in groups to adapt a biscuit recipe and take account of the cost of ingredients and other expenses against a set budget.	<u>Project</u> To use an electrical circuit to make a torch. <u>Key Terms</u> ● Aesthetics ● Assemble ● Battery ● Bulb ● Circuit ● Conductor ● Design criteria ● Diagram ● Electricity ● Equipment ● Evaluation ● Ingredients ● Insulator ● Model ● Packaging ● Properties ● Shape ● Sketch ● Switch ● Test <u>Resource support</u> https://www.kapowprimary.com/subjects/design-technology/lower-key-stage-2/year-4/electrical-systems-torches/	<u>Project</u> Explore different fastenings and make an item linked to their History topic - link to Kapow - button fastened bracelet <u>Key terms</u> ● Fabric ● Fastening ● Fix <u>Resource support</u> https://www.kapowprimary.com/subjects/design-technology/lower-key-stage-2/year-4/textiles-fastenings/ <u>What will students learn?</u> Children will learn how to analyse and evaluate a range of fastenings, devise design criteria to make templates and make a fabric item to fit in with their history topic.
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Key Knowledge	Design a battery-powered night light which incorporates a fully working circuit plus a choice of switch	How to make an interesting small bag with a self closing top	Experience basic food preparation techniques
Key Skills	Create a night light based upon their own design, incorporating both their practical skills and creative flair, whilst demonstrating and challenging their technological ability, linked to the science theme of electricity.	Learn and use textile skills such as making a paper pattern (template) to meet their own requirements, cutting around the pattern and using simple stitching techniques.	Combine ingredients to create simple food products for a particular purpose
Key Vocabulary	• Circuit • Conductor • Insulator • Prototype • Push to break switch • Push to make switch • Reed switch • System • Output device • Input devices	• Straight stitch • Pattern • Prototype • Aesthetics • Seam • Seam allowance	• Appearance • Texture • Sensory evaluation • Preference test • Processed foods