Curriculum Narrative: Design Technology (All Saints Stibbard) 2023-24

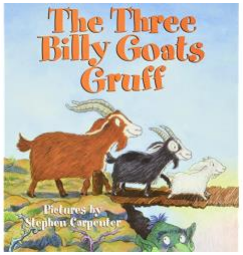
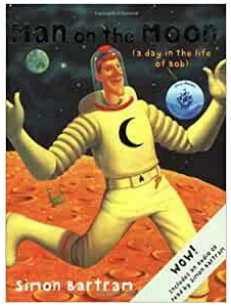
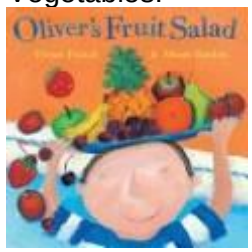
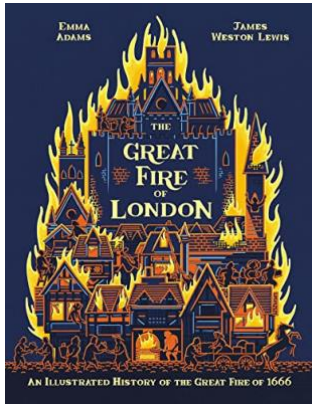
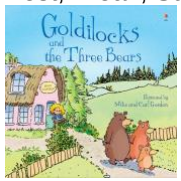
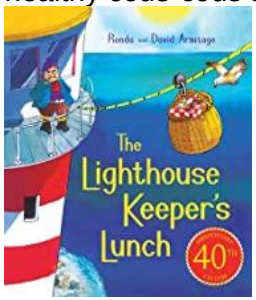
Early Years

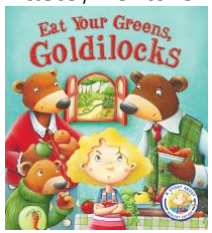
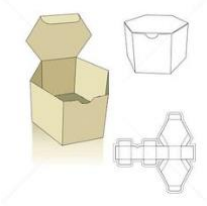
Nursery 0-3: Children will explore different materials, using all of their senses to investigate them. They will manipulate and play with different materials.
Children will use their imagination as they consider what they can do with different materials.
Children make simple models which express their ideas.

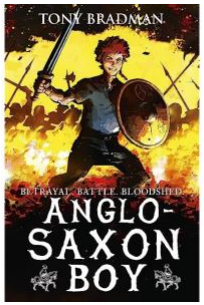
Nursery 3-4: Children will explore different materials freely, to develop their ideas about how to use them and what to make.
Children will develop their own ideas and then decide which materials to use to express them. Children will join different materials and explore different textures.

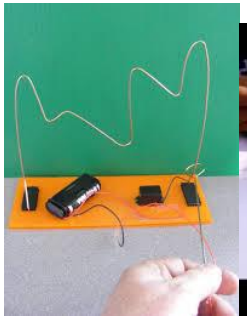
Design Technology in Reception	Children will return to and build on their previous learning, refining ideas and developing their ability to represent them. Children will create collaboratively, sharing ideas, resources and skills.		
Construction (leading to Structures) During constructive play, children use toys, loose parts or materials to build or create something new. Children build towers and cities with blocks, play in the sand or construct contraptions on the woodworking bench. Successful construction requires skills such as: planning, drawing, cutting, assembling, moulding, stacking and testing.	Mechanisms Design and make a moving toy incorporating two simple mechanisms (slider and pivot). Link to a class focus (for example: work on animals/ visit to the zoo, aliens, dinosaurs, puppets for a play). 	Textiles Children work with materials such as fabrics, wool, thread, string, felt, ribbon and cotton wool. Through experimentation and play with threads, fibres and fabrics, they begin to develop knowledge and understanding of the potential of the materials. Children will use fabric in imaginative play through den-making and tent-making or dressing up in different clothes. Josh, do you do threading with beads? If so, I can add it here.	Cooking and Nutrition Children will explore health by looking at 'our bodies' and be introduced to the health plate. Make a birthday cake. Group to work together to make a batch of cupcakes to celebrate the birthdays each half term.

DT	Aut 1	Aut 2	Spr 1	Spr 2	Sum 1	Summer 2
Year 1	**Construction/** leading to structures **Make a paper toy**	**Structures** **Build a strong bridge** Evaluate a range of different bridges. Learn to build and strengthen structures and how to		**Mechanisms** **Make a moving vehicle** Wheels and Axles Design a moon buggy to help Bob with his		**Cooking and Nutrition** **Make a fruit salad** Research favourite

	Learn to use scissors to cut along lines and cut out shapes. Evaluate a range of paper toys and learn to fold accurately to create a paper toy. Design and make a paper toy illusion 	join components together to create a finished product. Design and make a bridge for the Billy Goats. Text - The three Billy Goats Gruff 	jobs on the Moon. Investigate how wheels move Text: Man on the moon 	fruits Design and make a fruit salad. Evaluate product. Text - Oliver's Fruit salad & Oliver's Vegetables. 
Year 2	**Mechanisms: (5 sessions)** **Pulleys** **link to Great Fire of London** Explore the use of pulleys in everyday uses. Use a simple pulley to lift a fire in front of a Tudor house. 	**Textiles** **(4 sessions)** **Make a fabric keyring for bookbag** Explore different fabrics. Sew and join fabrics using running stitch and use stitching to attach a ring for a key. 	**Structures** **(3 sessions)** **Use strengthening techniques** Explore the stability of different shapes and learn how to strengthen materials. Design and make a chair for baby bear. VOCAB: Function, Man-made, Mould, Natural, Stable, Stiff, Strong, Structure, Test, Weak, Stability 	**Cooking and Nutrition (6 sessions)** **Design and make a cous-cous salad** Use a basic principle of a healthy and varied diet to prepare dishes. 1st Half Term, Taste and evaluate food - ie tomatoes, spring onions, cous-cous, quinoa and a range of dressings. Also test a mixed cous-cous salad. 2nd Half Term, design and make their own healthy cous-cous salad. 
Year 3	**Cooking and**	**Mechanisms:**	**Structures:**	**Mechanisms: (6 sessions)**

	Nutrition **(4 sessions)** **Design and make a healthy sandwich** Discuss healthy foods, use the food pyramid to explain. Design, make and evaluate a healthy sandwich for a class picnic. **VOCAB:** Design, Sandwich, Evaluate, Smell, Taste, Texture  	**Pneumatic systems: (4 sessions)** **Make a pneumatic toy** Investigate syringe and tube models and other pneumatic systems. Design and build a model toy/ monster which operates using a pneumatic system. **Vocab**: Pneumatic, inflatable, pressure, force, syringe.	**(4 sessions)** **Free standing Gift Boxes** Design and make purposeful, functional appealing products for themselves and others based on a design criteria. Children draw their own nets using 2D shapes learned in maths: pyramid, prism, square top pyramid, flower top, curved side, triangular side nets. 	**Design and make a Pop-Up Book with a range of pop-up mechanisms.** Practice making different pop up mechanisms and test on Reception Class - use this feedback to create … pop up books as a small group **VOCAB:** Rotate, Pivot, Lever, Linkage Design criteria, Critique, Evaluate, Purposeful, Functional , Strengthen, Reinforce, Mechanical  Any pop up book showing a range of mechanisms (lift the flap, spinning wheel, levers, pivots and pop ups) would work here. Good author Robert Sabuda.	
Year 4	**Textiles: (4 sessions)** **Design and make an Anglo Saxon style money holder** Build on sewing skills to create a drawstring bag, suitable for holding coins. **VOCAB:** Sewing, functionality, running stitch, fabric, needles, pins, thread, draw string, seam allowance, reverse.	**Cooking and Nutrition (6 sessions)** **Evaluate, design and make a healthy pizza** Revise healthy foods and the food pyramid. Evaluate a range of bought pizzas. Design, make and evaluate a healthy pizza.	**Electrical systems: (Control): (3 sessions)** **Use Makey Makey to control musical instruments** Children learn to use control equipment (Makey Makey) and use it to make a working piano. **VOCAB:** Conductive material, input device, touchpads, Coding, crocodile	**Electrical systems: (5 sessions)** **Design and make a torch with a working switch.** Use a range of materials to create a torch. Torch should include a working electrical circuit and a switch to turn the torch on and off. **VOCAB:** reflector, circuit, switch, bulb, wires.	

	 			clips, connector wires, USB cable, Earth, ground, grounded, key, non conductor,	
Year 5 **(not covered in 2023-24)**	**Mechanisms:** **Design and make a boat powered by elastic band mechanisms** Children will work together to investigate how the design of a boat can affect the mass it can hold and learn how a simple mechanism can be used to power a boat. They will work independently to make, test and refine their own elastic band powered boat. **VOCAB:** Float, sink, force, water resistance, upthrust, cargo, paddle boards, oars, kinetic energy, potential energy, tilt, stabilise, test, evaluate, adapt, refine, adjust, improve	**Electrical systems:** **Control:** **Use crumble kits and programming to make moving products (cars, pictures with sliding eyes etc)**	**Mechanisms&Structures:** **Design and make a toy using a CAM mechanism** Children will understand the use of a CAM mechanism and explore how CAMs work before designing a 'Victorian style' toy using a working CAM mechanism. Children will make and evaluate a 'Victorian style' toy using a working CAM mechanism. **VOCAB:** Mechanical, cam (round, egg, ellipse, eccentric, hexagonal, snail, pear), friction drive, follower, slider, handle, phase, 10mm wood, 5mm dowel, strengthen, support, clamp, bench hook, hacksaw, drill, drill bit, tubing, audience.	**Cooking and Nutrition** **Bombay potatoes** Children test and evaluate a range of bombay potato dishes and spices. Compare recipes. Design and make own version of bombay potatoes

Year 6 (To be covered by both Y5/6 classes in 2023-24)	**Textiles** **Design and make a decorated phone sock or cushion cover.** Learn how to make textile products using stitches to join fabrics and a range of decorating techniques including buttons, applique and a selection of different stitches. **VOCAB:** Needle, Thread, Knot, Back stitch, Running stitch, Cross stitch, Whip stitch, Button, Applique, template, seam allowance,  	**Cooking and Nutrition** **Design and make Iraqi style breads and dips.** Investigate current Iraqi bread and compare to other breads from around the world. Look at the ingredients and where they are grown. Compare dips (hummus etc). Design own bread with a choice of shape and some variable ingredients. Design own dip Make, taste and evaluate bread and dip. **VOCAB:** Halaal, Wheat, Yeast, Khubz Tannour, Samoon, Carbohydrate  	**Electrical systems** **Design and make a toy or game which incorporates an electrical system.** To use their science knowledge of electrical circuits and components to create a game/ toy containing an electrical system. In groups research and select electrical games/ toys/ themes currently available and conduct market research across class. Make and evaluate (using testing by children from other classes to inform their evaluation) **VOCAB:** Series circuit, wire, Switch, battery, buzzer, bulb, motor.Market research  

Skills Progression

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design	Selects appropriate resources and adapts work where necessary.	Explore and investigate existing products. • Draw on their own experience to help generate ideas • Suggest ideas and explain what they	Generate ideas by drawing on their own and other people's experiences • Develop their design ideas through discussion,	Generate ideas for an item, considering its purpose and the user/s • Identify a purpose and establish criteria for a successful product. • Plan the	Generate ideas, considering the purposes for which they are designing • Make labelled drawings from different views showing specific	Generate ideas through brainstorming and identify a purpose for their product • Draw up a specification for their design	Communicate their ideas through detailed labelled drawings • Develop a design specification • Explore, develop and communicate

		are going to do • Talk about their design as they develop and identify good and bad points • Note changes made during the making process as annotation to plans/drawings.	observation , drawing and modelling • Identify a purpose for what they intend to design and make • Identify simple design criteria • Make simple drawings and label parts	order of their work before starting • Explore, develop and communicate design proposals by modelling ideas • Make drawings with labels when designing	features • Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making, if the first attempts fail • Use results of investigations, information sources, including ICT when developing design ideas	• Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making if the first attempts fail • Use results of investigations, information sources, including ICT when developing design ideas	aspects of their design proposals by modelling their ideas in a variety of ways • Plan the order of their work, choosing appropriate materials, tools and techniques
Make	-Selects tools and techniques needed to shape, assemble and join materials they are using. - Constructs with a purpose in mind, using a variety of resources. -Uses simple tools and techniques competently and appropriately.	Make their design using appropriate techniques • With help measure, mark out, cut and shape a range of materials. • Use tools eg scissors and a hole punch safely • Assemble, join and combine materials and components together. • Select and use appropriate fruit and vegetables, processes and tools • Use basic food handling, hygienic practices and personal hygiene • Use simple finishing techniques to improve the appearance of their product.	Begin to select tools and materials; use vocab' to name and describe them • Measure, cut and score with some accuracy • Use hand tools safely and appropriately • Assemble, join and combine materials in order to make a product • Cut, shape and join fabric to make a simple garment. Use basic sewing techniques • Follow safe procedures for food safety and hygiene • Choose and use appropriate finishing techniques	• Select tools and techniques for making their product • Measure, mark out, cut, score and assemble components with more accuracy • Work safely and accurately with a range of simple tools • Think about their ideas as they make progress and be willing to change things if this helps them improve their work. Measure, tape or pin, cut and join fabric with some accuracy • Demonstrate hygienic food preparation and storage • Use finishing	Select appropriate tools and techniques for making their product • Measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques • Join and combine materials and components accurately in temporary and permanent ways • Sew using a range of different stitches • Measure, tape or pin, cut and join fabric with some accuracy. • Use simple graphical communication techniques	Select appropriate materials, tools and techniques • Measure and mark out accurately • Use skills in using different tools and equipment safely and accurately • Weigh and measure accurately (time, dry ingredients, liquids) • Apply the rules for basic food hygiene and other safe practices e.g. hazards relating to the use of ovens • Cut and join with accuracy to ensure a good-quality finish to the product	Select appropriate tools, materials, components and techniques • Assemble components make working models • Use tools safely and accurately • Construct products using permanent joining techniques • Make modifications as they go along • Pin, sew and stitch materials together create a product • Achieve a quality product

				techniques strengthen and improve the appearance of their product using ICT			
Evaluate	Adapts work where necessary	• Evaluate their product by discussing how well it works in relation to the purpose and attempting to say why. • Evaluate their product by asking questions about what they have made and how they have gone about it.	Evaluate against their design criteria • Evaluate their products as they are developed, identifying strengths and possible changes they might make • Talk about their ideas, saying what they like and dislike about them	• Evaluate their product against original design criteria e.g. how well it meets its intended purpose • Disassemble and evaluate familiar products	Evaluate their work both during and at the end of the assignment • Evaluate their products carrying out appropriate tests	Evaluate a product against the original design specification • Evaluate it personally and seek evaluation from others	Evaluate their products, identifying strengths and areas for development, and carrying out appropriate tests • Record their evaluations using drawings with labels • Evaluate and suggest ways that their product could be improved