

Southam St James CoE Academy- Design & Technology Curriculum Overview

	AUTUMN	SPRING		SUMMER	
Early Years curriculum					
<p>The development of children’s artistic and cultural awareness supports their imagination and creativity. It is important that children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials. The learning within structured activities and continuous provision will allow children to develop the following skills.</p> <p>-Creating with materials</p> <p>-Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p> <p>-Developing creativity through child-led exploration of mixed-media, making collages and transient art.</p> <p>-Share their creations, explaining the process they have used.</p> <p>-Exploring the sculptural qualities of malleable materials and natural objects; developing the use of tools and joining techniques; designing and making clay sculptures.</p> <p>-Investigate shapes and structures to build for a specific purpose (eg a boat to float on water).</p>					
Year 1	Cook Jam Tarts/Mince Pies	Sew Animal Sock Puppets		Build Vehicles	
	<p>Concepts What is a recipe? Cooking from different cultures—England Sweet v savoury, cooked v raw A pie can be made with pastry Seasonality, preserving fruit for the winter</p>	<p>Skills Following a simple recipe Measuring in spoonful’s Rubbing fat into flour Mixing Making, rolling and cutting pastry Baking Cooling</p>	<p>Concepts Process of design Making products with fabric Properties of a range of materials Using suitable materials Fixing fabric together Reusing/recycling materials Features of a puppet Features of different animals</p>	<p>Skills Research and Investigate: Existing products Design: Understand criteria (user, purpose, function, appeal), generate/develop ideas, talking, drawing, labelling Make: Select tools/materials, making paper templates, drawing/cutting shapes, gluing, joining fabric, drying Use and Evaluate: Recording of children using puppets, evaluate against criteria</p>	<p>Concepts Process of design Vehicles: user and purpose Mechanical systems: wheels and axles Wheels and axles in everyday examples Structures and materials—strong, stiff and stable. Materials—properties and functionality Vehicles and pollution</p>
Year 2	Cook Gingerbread	Sew Pencil Cases		Build Moving Pictures	
	<p>Concepts Spices, spicy/sweet History of food, food transport and cost of ingredients Decoration Cooked v raw Baking</p>	<p>Skills Following a simple recipe Measuring using spoons Chopping, Mixing Rubbing fat into flour Cracking an egg Making a dough, rolling, cutting Baking, cooling, decorating</p>	<p>Concepts Process of design Features of a pencil case—size, materials, fastenings, shape, joining, decoration Using suitable materials Properties of different materials Making products with fabric Join fabric together—sewing and</p>	<p>Skills Research and Investigate: Existing products Design: Understand criteria (user, purpose, function, appeal), generate/develop ideas, talking, drawing, labelling Make: Select tools/materials, making</p>	<p>Concepts Process of design Mechanical systems: levers and sliders Levers and sliders in everyday examples Structures and materials to make levers and sliders in moving pictures strong, stiff and stable.</p>

			gluing Creating stiches with a needle and thread	paper templates/ patterns, drawing/cutting shapes, threading a needle, tying a knot, running stitch, sewing on a button, gluing on decoration Use and Evaluate: Photograph pencil cases, written evaluation against criteria		purpose, function, appeal), generate/innovate/develop ideas, talking, drawing, labelling, creating a mock up Make: Select tools/materials for cutting, different ways of joining decorating, finishing Use and Evaluate: Photograph pictures, evaluation against criteria and existing products
Year 3	Sew Keyrings/Decorations		Build Pop Up Books		Cook Pasta	
	Concepts Process of design Making products with fabric Types of fabric - natural/synthetic Properties of fabric— thickness, softness, stretchiness How fabric is fit for purpose Features of a key ring/decoration— size, materials, shape, joining, stitching, decoration	Skills Research and Investigate: Examples of key rings/ decorations, different fabrics, how to make felt Design: Devising criteria (user, purpose, function, appeal), generate/innovate/develop ideas, annotated drawings Make: Select tools/materials, making paper templates/ patterns, drawing/cutting shapes, pinning, threading a needle, tying a knot, running stitch, backstitch, joining, stuffing, gluing, sewing/gluing on a loop Use and Evaluate: Photograph, written peer evaluation— against criteria and existing products	Concepts Process of design Mechanical systems: linkages: moving pivot, fixed pivot, types of motion Linkages uses and purpose in everyday examples Materials to make linkages in moving books: strong, stiff and stable.	Skills Research and Investigate: Linkages, examples of what products which used these: clothes horse, lifts, tool box, engines Design: Devising criteria (user, purpose, function, appeal), generate/innovate/develop ideas, create annotated drawings and prototypes Make: Select tools/materials for making pop-up book with linkages, cutting, different ways of joining, decorating, finishing Use and Evaluate: Photograph books, written evaluation against criteria and existing products	Concepts Sweet/Savoury Food from different cultures Pasta, pasta production Vegetables are part of a healthy diet Tomatoes— production, preserving	Skills Following a recipe Weighing using scales Using a knife—claw method Using a chopping board Chopping Peeling Pressing
Year 4	Sew Cushions		Build Moving Miniature Playgrounds		Cook Ratatouille and Couscous	
	Concepts Process of design Making products with fabric Types of fabric - natural/synthetic Properties of fabric— thickness, softness, stretchiness Features of a	Skills Research and Investigate: Appliqué, cushions, running stitch, backstitch, overcast stitch (whipstitch) Design: Devising criteria (user, purpose, function, appeal),	Concepts Process of design Mechanical systems: gears, teeth, interlock, motion transfer, drive gear, driven gear, gearing up, gearing down Gears: user and purpose in everyday	Skills Research and Investigate: Gears; examples of products which used these: tin openers, bicycles, how gears on a bicycle work, history of gears, ancient	Concepts Sweet/Savoury Ratatouille—food from France Couscous—food from North Africa Vegetables as part of a healthy diet	Skills Following a recipe Weighing using scales Using a knife—bridge and claw method Using a chopping board, chopping Peeling an onion Cooking vegetables Soaking

	cushion – size, materials, shape, joining, decoration Decoration—appliqué	generate/innovate/develop ideas, annotated drawings Make: Select tools/materials, making paper templates/ patterns, drawing/cutting shapes, pinning, threading a needle, tying a knot, running stitch, backstitch, overcast stitch (whipstitch), appliqué, stuffing Use and Evaluate: Photograph, written evaluation, peer evaluation—against criteria	examples Structures and materials to make a product with gears — 3d shapes, strong, stiff and stable. Electrical systems: circuits, batteries, bulbs and buzzers	Greek Antikythera mechanism (used to predict astronomical positions) Design: Devising criteria (user, purpose, function, appeal), generate/innovate/develop ideas, create annotated drawings and exploded diagrams Make: Select tools/materials for making a moving toy with gears and an electrical circuit, cutting, different ways of joining, decorating, finishing Use and Evaluate: Written evaluation against criteria and existing products	The different parts of a plant which we eat	
Year 5	Build Cams Toys		Cook Pitta Bread		Sew Bags	
	Concepts Process of design Mechanical systems: cams, followers, sliders, camshaft, rotary motion, linear motion, cam profiles Everyday examples and purpose of cams mechanisms Structures and materials to make products with cams and followers — 3d shapes, strong, stiff and stable	Skills Research and Investigate: Cams mechanisms, examples of what products use cams and followers (mechanical toys, sewing machines, engines, clocks), history of cams and mechanisms (Ismail al-Jazari), structure of a cams toy Design Devising criteria (user, purpose, function, appeal), generate/innovate/develop ideas, create annotated drawings, cross-sectional diagrams Make Select tools/materials for making a cam toy, cutting, different ways of joining, decorating, finishing Use and Evaluate Videoed peer evaluation—against criteria and existing products	Concepts Sweet/Savoury Bread as part of a balanced, healthy diet, different types Using yeast— leavened/unleavened bread, baking Cooking from different cultures Wheat production	Skills Following a recipe Measuring using scales Activating yeast Mixing Making a dough, kneading Rolling and shaping Baking, cooling	Concepts Process of design Making products with fabric Types of fabric— natural/synthetic Properties and suitability of fabric How fabrics are made—weaving Features of a bag – size, materials, fastenings, shape, joining, decoration, handles. Decoration—appliqué, embroidery	Skills Research and Investigate: Methods of decoration— appliqué, embroidery, bag design, materials and features Design: Devising criteria (user, purpose, function, appeal), generate/innovate/develop ideas, annotated drawings Make: Select tools/materials, drawing/cutting shapes, pinning, threading a needle, tying a knot, backstitch, overcast stitch (whipstitch), joining, embroidery, appliqué, plaiting Use and Evaluate: Written evaluation, photograph, film peer evaluation—against criteria and existing products
	Build		Cook		Sew	

	Water Walls	Mezze		Upcycling Fashion		
Year 6	<p>Concepts Process of design Mechanisms: pulleys, Archimedes' screw Everyday examples and purpose of pulleys, purpose of Archimedes' screw Structures and materials to make products with pulleys in everyday examples—3d shapes, strong, stiff and stable Plastics pollution/recycling/reuse Use of electricity and connection to global warming Engineering systems to create environmentally friendly solutions—Nav Sawhney and the Washing Machine Project. Appropriate use of materials</p>	<p>Skills Research and Investigate: Investigate water wall and pulleys Design: Devising criteria (user, purpose, function, appeal), generate/innovate/develop ideas, create annotated drawings and prototypes Make: Select tools/materials for making a water wall for Reception with recycled objects, cutting, tying knots, sticking, making holes Use and Evaluate: Evaluation with user (Reception)—against criteria and existing products</p>	<p>Concepts Sweet/Savoury Bread as part of a balanced, healthy diet, different types Using yeast—leavened/unleavened bread, baking Cooking from different cultures Wheat production</p>	<p>Skills Following a recipe, weighing ingredients using scales Using a knife—bridge and claw method Chopping, grating Squeezing a lemon Using a garlic press, seasoning Soaking, mixing, mashing Cracking an egg, cooking with meat</p>	<p>Concepts Process of design Fast fashion and globalisation Waste and pollution Upcycling, recycling, sustainability Processes for making clothes—seams and hems Decoration—appliqué, embroidery, buttons, gluing</p>	<p>Skills Research and Investigate: Fast fashion, upcycling, recycling, sustainability Design: Devising criteria (user, purpose, function, appeal), generate/innovate/develop ideas, annotated drawings, pattern pieces Make: Experimentation with upcycling existing garments, select tools/materials, drawing/cutting shapes, creating pattern pieces, pinning, threading a needle, tying a knot, joining, appliqué, embroidery, running stitch, backstitch, overcast stitch, plaiting, attaching a button Use and Evaluate: Written evaluation, photograph, evaluation—against criteria and existing products, film fashion show</p>