

Hardwick Primary School – Long term Design and Technology Planner



Cohort	Autumn 1	Spring 1	Summer 1
<p>EYFS</p>	<p>Please see the individual Long Term EYFS Plan</p>		
<p>Year One</p>	<p>Mince Pies</p> <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</p> <ul style="list-style-type: none"> • Following a simple recipe • Measuring in spoonfuls • Rubbing fat into flour • Mixing Making, rolling and cutting pastry Baking Cooling 	<p>Animal Sock Puppets</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</p> <ul style="list-style-type: none"> • Research and Investigate: Existing products. • Design: Understand criteria, user, purpose, function, appeal, generate and develop ideas, talking, drawing and labelling. • Make: Select tools, materials, making paper templates, drawing, cutting shapes, gluing, joining fabric and drying. 	<p>Vehicles</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> <p>Skills</p> <ul style="list-style-type: none"> • Research and Investigate: Different types of vehicles, different parts of a vehicle, explore wheels and axles in toy cars • Design: Understand criteria (user, purpose, function, appeal), generate/innovate/develop ideas, talking, drawing, labelling • Make: Select tools/materials for making a toy vehicle with wheels and axles, cutting, different ways of joining decorating, finishing

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		<ul style="list-style-type: none"> • Use and Evaluate: Recording of children using puppets, evaluate against criteria. 	<ul style="list-style-type: none"> • Use and Evaluate: Car racing in the playground exploring speed, film/photograph children doing this, evaluation against criteria and existing products
Year two	<p>Gingerbread</p> <p>Concepts Spices, spicy/sweet History of food, food transport and cost of ingredients Decoration Cooked v raw Baking</p> <p>Skills</p> <ul style="list-style-type: none"> • 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>Pencil Cases</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 gluing Creating stitches with a needle and thread</p> <p>Skills</p> <ul style="list-style-type: none"> • 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/patterns, drawing/cutting 	<p>Moving Pictures</p> <p>Concepts Process of design Mechanical systems: levers and sliders Lever and sliders in everyday examples Structures and materials to make levers and sliders in moving pictures strong, stiff and stable.</p> <p>Skills</p> <ul style="list-style-type: none"> • Research and Investigate: Levers and sliders, examples of what products which used these: see saw, scissors, hammer, wheelbarrow, shaduf, research examples of moving pictures • Design: Understand criteria (user, purpose, function, appeal), generate/innovate/develop ideas, talking, drawing, labelling, creating a mock up

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		<p>shapes, threading a needle, tying a knot, running stitch, sewing on a button, gluing on decoration.</p> <ul style="list-style-type: none"> • Use and Evaluate: Photograph pencil cases, written evaluation against criteria 	<ul style="list-style-type: none"> • Make: Select tools/materials for making a moving picture with levers and sliders, cutting, different ways of joining decorating, finishing • Use and Evaluate: Photograph pictures, evaluation against criteria and existing products
Year three	<p>Decorations</p> <p>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</p> <p>Skills</p> <ul style="list-style-type: none"> • Research and Investigate: Examples of key rings/ decorations, different fabrics, how to make felt • Design: Devising criteria (user, purpose, function, 	<p>Pop up Books</p> <p>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.</p> <p>Skills</p> <ul style="list-style-type: none"> • Research and Investigate: Linkages, examples of what products which used these: clothes horse, lifts, tool box, engines 	<p>Bread and Butter Pudding</p> <p>Concepts Sweet/Savoury Making bread with flour made from wheat Yeast , wholegrains and health Baking Dairy products, milk and butter production</p> <p>Skills</p> <p>Skills</p> <ul style="list-style-type: none"> • Following a recipe, measuring using scales Using yeast • Mixing Making a dough, kneading, rising Baking • Cooling • Slicing, spreading

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	<p>appeal), generate/innovate/develop ideas, annotated drawings</p> <p>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</p> <ul style="list-style-type: none"> • Use and Evaluate: Photograph, written peer evaluation— against criteria and existing products 	<ul style="list-style-type: none"> • 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 	
Year four	<p>Cushions</p> <p>Concepts Process of design Making products with fabric Types of fabric - natural/synthetic Properties of fabric—thickness, softness, stretchiness Features of a cushion – size, materials, shape, joining, decoration</p>	<p>Moving miniature Playgrounds</p> <p>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 examples Structures and materials to make a product with gears — 3d shapes, strong, stiff and stable.</p>	<p>Ratatouille and Couscous</p> <p>Concepts Sweet/Savoury Ratatouille—food from France Couscous—food from North Africa Vegetables as part of a healthy diet The different parts of a plant which we eat</p> <p>Skills Following a recipe Weighing using scales</p>

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	<p>Decoration—appliqué</p> <p>Skills Research and Investigate: Appliqué, cushions, running stitch, backstitch, overcast stitch (whipstitch) 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, overcast stitch (whipstitch), appliqué, stuffing Use and Evaluate: Photograph, written evaluation, peer evaluation—against criteria.</p>	<p>Electrical systems: circuits, batteries, bulbs and buzzers</p> <p>Skills Research and Investigate: Gears; examples of products which used these: tin openers, bicycles, how gears on a bicycle work, history of gears, ancient 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</p>	<p>Using a knife—bridge and claw method Using a chopping board, chopping Peeling an onion Cooking vegetables Soaking</p>
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<p>Year five</p>	<p>Cams</p> <p>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</p> <p>Skills</p> <ul style="list-style-type: none"> • 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 	<p>Pitta bread and Honey Cake</p> <p>Concepts 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>Sweet/Savoury Honey production and history Health benefits of honey Cooking from different cultures Baking</p> <p>Skills</p> <p>Following a recipe Measuring using scales Activating yeast Mixing Making a dough, kneading Rolling and shaping Baking, cooling</p> <p>Following a recipe, measuring using scales Mixing Cracking an egg Beating Pouring</p>	<p>Bags</p> <p>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</p> <p>Skills</p> <p>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</p>
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	<p>drawings, cross-sectional diagrams</p> <ul style="list-style-type: none"> • 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 	Sprinkling Baking, cooling	Use and Evaluate: Written evaluation, photograph, film peer evaluation—against criteria and existing products
Year six	<p>Upcycling fashion</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</p> <ul style="list-style-type: none"> • Research and Investigate: Fast fashion, upcycling, recycling, sustainability • Design: Devising criteria (user, purpose, function, 	<p>Mezze</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</p> <ul style="list-style-type: none"> • Following a recipe, weighing ingredients using scales Using a knife—bridge and claw method 	<p>Water Walls</p> <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>

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	<p>appeal), generate/innovate/develop ideas, annotated drawings, pattern pieces</p> <ul style="list-style-type: none"> • 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 <p>Use and Evaluate: Written evaluation, photograph, evaluation—against criteria and existing products, film fashion show</p>	<ul style="list-style-type: none"> • Chopping, grating Squeezing a lemon Using a garlic press, seasoning • Soaking, mixing, mashing Cracking an egg, cooking with meat 	<p>Skills</p> <p>Research and Investigate: Investigate water wall and pulleys</p> <p>Design: Devising criteria (user, purpose, function, appeal), generate/innovate/develop ideas, create annotated drawings and prototypes</p> <p>Make: Select tools/materials for making a water wall for Reception with recycled objects, cutting, tying knots, sticking, making holes</p> <p>Use and Evaluate: Evaluation with user (Reception)— against criteria and existing products</p>
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