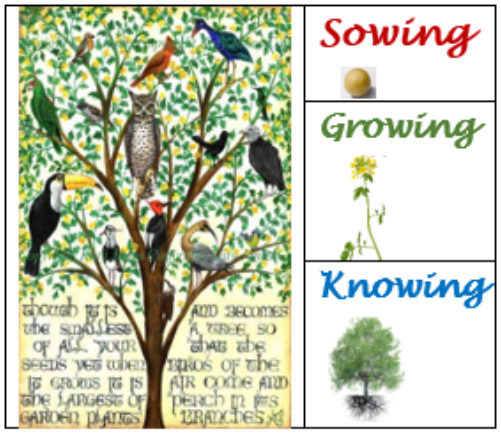

St Edmundsbury and Ipswich Diocesan Multi Academy Trust

Association of Bedfield & Wetheringsett C of E Primary Schools

Design Technology overview

Three big ideas

Composition: Children learn about different forms of design to understand and apply the mechanisms and practical techniques behind creating them
Construction: Children choose and use different materials to plan, design and construct a range of products for a purpose
Evaluation: Children trial, evaluate and know how to improve their designs

Cycle 1	Autumn	Spring	Summer
			
Reception	**Expressive art and design** Safely use and explore a variety	**Expressive art and design** Safely use and explore a variety	**Fine motor** Use a range of small tools,

	of materials, tools and techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the process they have used.	of materials, tools and techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the process they have used.	including scissors, paintbrushes and cutlery **Managing self** Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices
Year 1/2	**Textiles -** Puppets **Purpose -** To make a puppet linked to English and the story of The Snowqueen **Composition -** I can use skills I have acquired to design a glove puppet. **Construction - I can use** techniques to create my design and think about the appropriate materials to use. **Evaluation** I can discuss what materials may have worked differently	**Mechanical Systems -**Vehicles **Purpose -** racing competition **Composition -** I can explore and discuss the different ways of creating the vehicle's body. **Construction -** I can follow my designs to create and make my vehicle using a range of craft materials **Evaluation** - I can discuss what worked well and what i could improve	**Cooking and Nutrition** Perfect Pizzas **Purpose -** To investigate how food changes when cooked (reactions) **Composition - I can** discuss pizza toppings and food categories for a balanced diet. **Construction-** I can design and make a pizza **Evaluation**Children to discuss how the food changed when cooked and how their pizza tasted. Was it balanced
Vocabulary	hand puppets, template, over stick puppets, fabric design, string puppets, cutting decorate, marionette, stitch features, rod puppet running	parts, axels, wheels, rotate, washer, attached, chassis, body, design, product,	toppings, animal products, categories, protein, hygiene dairy, balanced plate, calcium vitamins, carbohydrates minerals, fibre
Additional DT	**Forest schools - see monitoring sheet** **- Design and make a house**	**Forest schools - see monitoring sheet** **- To make a desert**	**Forest schools - see monitoring sheet** **- Design and make a rocket/boat**

Year 3/4	**Textiles-** Seasonal Stockings **Purpose -** Christmas stockings for someone **Composition -** I can use skills I have acquired to design a stocking **Construction-** I can use joining techniques and decorative sewing skills to make a Christmas stockings **Evaluation** - I can discuss how my product matches my plan and design criteria.	**Inventions and Achievements** Making Mini Greenhouses **Purpose -** Growing flowers for the playground **Composition** I can investigate stable structures **Construction** - I can make a mini greenhouses according to my plans and design criteria. **Evaluation** - I can think carefully about each step in the making process. and what changes I could do to improve my design.	**Cooking and Nutrition** Seasonal Food **Purpose -** environmental awareness **Composition -** I can talk about how fish are farmed. **Construction -** I can use information to create a factual presentation **Evaluation -** To compare my views through discussions
Vocabulary	Stocking, size, decorate, fabric, function, purpose, attractive, join, needle, thread, running stitch, back stitch, overstitch, zigzag stitch, visual appeal, texture, colour, embroidered, affect, product, user, design, combine, techniques	greenhouse, protect, survive, nutrients, transparents, glass, clear, ventilate, heat, trapped, framed, sections, structure, stable, suitable	stored, refrigerated, seasons, healthy, savoury, reared, caught, processed, dit, varied, farmed. nutritious, natural, imported, prepared
Additional DT	**Forest schools - see monitoring sheet** **- To cook a biscuit**	**Forest schools - see monitoring sheet** **To design a spacecraft**	**Forest schools - see monitoring sheet** **To design a minibeast home**
Year 5/6	**Textiles** Fashion and Textiles **Purpose -** A gift for a family member **Composition** To learn how or design and make a simple fabric container **Construction** To pin and	**Inventions and Achievements** Bird House **Purpose -** for forest schools or their garden **Composition** plan and design a birdhouse with a specific bird in mind. **Construction** To use woodwork	**Cooking and Nutrition** Builders Burgers **Purpose -** To make a sustainable healthy burger **Composition** To explore and discuss a range of burger buns and their suitability. They will taste and analyse different bread buns,

	hand-sew fabric pieces together, then either sew pieces they cut out and marked previously, **Evaluation**Children will evaluate on their seams and hems. Discussing ways they could have improved	skills to construct a birdhouse**.** **Evaluation** To evaluate the appearance of their bird house, the challenges they had making their design	thinking about their flavour, texture, appearance, shape and suitability for holding a burger together **Construction -** To use their nutritional knowledge to design and make a burger **Evaluation -** To evaluate the appearance and taste of the patties.
Vocabulary	Seams, hems, fabric, sew, pin, yarn, bobbins, synthetic, threads, basting stitch, straight stitch, whip stitch, back stitch, applique,	attract, veranda, waterproof, clamped, hammered, glued, drill, dimensions, rods, dowels, sanding, precautions	nutritious, carbohydrates, fats, proteins, calories. molecules, sugars, organs, balance, patty, suitability, texture, flavour, appearance, shape, hygiene,
Additional DT	**Forest schools - see monitoring sheet** **- To make a breakfast**	**Forest schools - see monitoring sheet** **- To design a**	**Forest schools - see monitoring sheet**

Cycle 2	**Autumn** 	**Spring** 	**Summer** 
Reception	**Fine motor skills** Use a range of small tools, including scissors, paintbrushes and cutlery **Managing self** Manage their own basic hygiene and personal needs, including dressing,	**Expressive art and design** Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the	**Expressive art and design** Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the

	going to the toilet and understanding the importance of healthy food choices	process they have used.	process they have used.
Year 1/2	**Cooking and Nutrition** **Purpose -** To explore fruits and vegetables from other countries **Composition -** I can design some new recipes only using fruits and vegetables, making sure they are colourful, tasty and healthy. **Construction -** I can look at a variety of different foods and the importance of eating more fruit and vegetables than certain other groups of foods. **Evaluation -** I can discuss how to improve my design	**Mechanical Systems -** Moving Minibeasts **Purpose -** To make a toy for a family member **Composition -** I can explore and discuss how it has been made, looking at how to hide the lever at the back of a picture too. **Construction-** I can use resources provided to create moving pictures**.** **Evaluation -** I can discuss how they could improve their lever	**Stable Structures -** **Purpose -** To build a structure to stand against the wind **Composition -** I can generate and compare ideas based on designs and models **Construction-** I can plan and begin to think about their own design ideas using reclaimed materials and construction kits **Evaluation -** I can think about strength, stability, malleability and modify existing plans.
Vocabulary	fruit, vegetable names, names of equipment, soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients,	Sliding mechanism, Wheel spin Arc, Attached, Paper fastener, Mechanism, Lever, Pivot, Slot Fixed point	Stable, structure, adapt, design, strong, materials, flexible, investigate, building
Additional **DT**	**Forest schools - see monitoring sheet** **- Make your own breakfast home learning**	**Forest schools - see monitoring sheet** **- Design and make a plane for History home learning**	**Forest schools - see monitoring sheet** **- Cake bake competition - friends cake sale**

Year 3/4	**Mechanical Systems Storybook** **Purpose -** To create a story book to share with KS1 **Composition -** I know the importance, and effects, of good graphic design and font selection for storybooks. **Construction-** I can use a range of sketching, shading, writing techniques or use computer software to explore how fonts can be selected and altered so they are appropriate for a purpose **Evaluation -** I can compare their designs to others.	**Inventions and Achievements -** British Inventors **Purpose -** To create a poster to explain who the most influential inventor was **Composition -** I know about W B Wilkinson's invention of reinforced concrete. To explore and explain different ways that reinforced concrete has been used to build record breaking buildings **Construction-** I can investigate the different ways to reinforce modroc, paper and to look at waterproof fabrics following the invention of the mackintosh. **Evaluation** - I can investigate the word 'reinforce' and evaluate their designs.	**Programming and Electrical Systems -** Light-Up Signs **Purpose -** **Composition-** I know ways in which electrical components in a simple circuit can be partially 'hidden' inside products to make them more attractive **Construction-** I can design their own decorative, light box-style sign. Children will consider ways in which they can make more permanent circuits to fit and fix inside their finished decorative illuminated light box signs. **Evaluation** - I can look at how they could improve the placement of their circuit
Vocabulary	Designing, moving parts, mechanisms, layout, wording, fonts, purpose, audience,graphics, linkage, rotate, lever, pivot, techniques, pop out, evaluate, product	Designing, www (world wide web), web address, internet, building, connect, webpages, streaming, blogging,designers, properties, inventions, inventors,	Font, illuminate, estimate, electrical components, circuits, power supply, terminals, negative, positive
Additional **DT**	**Forest schools - see monitoring sheet** **- To make lunch for a family member - Home learning**	**Forest schools - see monitoring sheet** **- Design an inventor**	**Forest schools - see monitoring sheet** **Cake bake competition - friend cake sale**
Year 5/6	**Stable Structures -** Building Bridges **Purpose -** Having been presented with a design brief, children must develop criteria for a bridge design	**Mechanical Systems /Inventions and Achievements-** Chinese Inventions **Purpose -** To make a kite	**Programming and Electrical Systems** **Composition** I can develop ideas for a product with an embedded

	that will meet the terms of the brief. They will then either design a bridge according to their criteria, or generate more criteria for a range of given design briefs **Composition -** I can talk about different types of bridge designs designs **Construction -** I can design a prototype and make a freestanding bridge **Evaluation** - I can compare my prototype against the success criteria	**Composition -** I can use my knowledge of materials and their properties to predict test results and make a kite prototype **Construction -** I can use desirable materials to build a kite **Evaluation -** I can evaluate the productivity of the properties of their materials	computer system that controls it. **Construction** I can write a program to monitor and control **Evaluation** To evaluate your design for a computer controlled system
Vocabulary	gravity, downward force, squeeze, stretch, bend, compression, strengthen, distribute, abutment, pillar, parapet, pier, truss, engineers, arches, flexible, tension, suspension, anchorage point, prototype	machines, preform, industry, gears, pullys, leavers, cams, movement, powers, crank, durable, structures, motion, rotating, joint, driver, follower, idler, design, unsuitable, properties, resistance, sail, spine, frame, balance, strength, weight,	thermostat, controlled, components, indicator, motor, sensors, memory chips, embedded, microcontrollers, prototype,monitor, code, LED, resistors, algorithm,
Additional **DT**	**Forest schools - see monitoring sheet** **- To make lunch for a family member - Home learning**	**Forest schools - see monitoring sheet** **- To make a chinese meal (stir fry)**	**Forest schools - see monitoring sheet** **Cake bake competition - friend cake sale**