

Redscope Primary School Year 1 - 6 progression document for Design and Technology 2022

Technical/Substantive knowledge

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<u>Structures</u>	<ul style="list-style-type: none"> •begin to measure and join materials, with some support •describe differences in materials •Know how to make freestanding structures stronger, stiffer and more stable. 		<ul style="list-style-type: none"> •use appropriate materials •work accurately to make cuts and holes • join materials • develop and use knowledge of how to construct strong, stiff shell structures. • develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes. 		<ul style="list-style-type: none"> •select materials carefully, considering intended use of product and appearance •explain how product meets design criteria •measure accurately enough to ensure precision •ensure product is strong and fit for purpose • understand how to strengthen, stiffen and reinforce 3-D frameworks. 	
<u>Vocabulary</u>	cut, fold, join, fix, structure, wall, tower, framework, weak, strong, base, top, underneath, side, edge, surface, thinner, thicker, corner, point, straight, curved, metal, wood, plastic circle, triangle, square, rectangle, cuboid, cube, cylinder		shell structure, three-dimensional (3-D) shape, net, cube, cuboid, prism, vertex, edge, face, length, width, breadth, capacity, marking out, scoring, shaping, tabs, adhesives, joining, assemble, accuracy, material, stiff, strong, reduce, reuse, recycle, corrugating, ribbing, laminating, font, lettering, text, graphics, decision		frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent	

<u>Mechanisms.</u>	<ul style="list-style-type: none"> •explore and use levers and sliders •understand that different mechanisms produce different types of movement. 	<ul style="list-style-type: none"> •explore and use wheels, axles and axle holders. •distinguish between fixed and freely moving axles. 		<ul style="list-style-type: none"> •select most appropriate tools / techniques •use levers and linkages to create movement •distinguish between fixed and loose pivots. 		<ul style="list-style-type: none"> •Understand that mechanical and electrical systems have an input, process and an output. • Understand how gears and pulleys can be used to speed up, slow down or change the direction of movement.
<u>Vocabulary</u>	slider, lever, pivot, slot, bridge/guide, card, masking tape, paper fastener, join, pull, push, up, down, straight, curve, forwards, backwards	vehicle, wheel, axle, axle holder, chassis, body, cab assembling, cutting, joining, shaping, finishing, fixed, free, moving, mechanism, equipment and materials used		mechanism, lever, linkage, pivot, slot, bridge, guide system, input, process, output, movement types: linear, rotary, oscillating, reciprocating		pulley, drive belt, gear, rotation, spindle, driver, follower, ratio, transmit, axle, motor, circuit, switch, circuit diagram, annotated drawings, exploded diagrams, mechanical system, electrical system, input, process, output
<u>Electrical systems</u>				<ul style="list-style-type: none"> •use a simple circuit in product •use number of components in circuit •understand and use electrical systems in their products linked to science coverage. •apply their understanding of computing to program and control their products. 		<ul style="list-style-type: none"> •use different types of circuit linked to science coverage in product •think of ways in which adding a circuit would improve product •apply their understanding of computing to program, monitor and control their products.
<u>Vocabulary</u>				series circuit, fault, connection, toggle switch, push-to-make switch, push-to-break switch, battery, battery holder, bulb, bulb		reed switch, toggle switch, push-to-make switch, push-to-break switch, light dependent resistor (LDR), tilt switch, light

				holder, wire, insulator, conductor, crocodile clip, control, program, system, input device, output device		emitting diode (LED), bulb, bulb holder, battery, battery holder, USB cable, wire, insulator, conductor, crocodile clip control, program, system, input device, output device, series circuit, parallel circuit
<u>Textiles</u>		<ul style="list-style-type: none"> •measure textiles •understand how simple 3-D textile products are made, using a template to create two identical shapes. •understand how to join fabrics using different techniques e.g. running stitch, glue, over stitch, stapling. •explore different finishing techniques 	<ul style="list-style-type: none"> •know how to strengthen, stiffen and reinforce existing fabrics. •understand how to securely join two pieces of fabric together. •understand the need for patterns and seam allowances. 		<ul style="list-style-type: none"> •think about user and aesthetics when choosing textiles •use own template <p>Produce a 3-D textile product from a combination of accurately made pattern pieces, fabric shapes and different fabrics.</p> <ul style="list-style-type: none"> •understand how fabrics can be strengthened, stiffened and reinforced where appropriate. •begin to understand that a single 3D textiles project can be made from a combination of fabric shapes. 	
<u>Vocabulary</u>		joining and finishing techniques, tools, fabrics and components, template, pattern pieces, mark out, join, decorate, finish	fabric, names of fabrics, fastening, compartment, zip, button, structure, finishing technique, strength, weakness, stiffening, templates, stitch, seam, seam allowance		seam, seam allowance, wadding, reinforce, right side, wrong side, hem, template, pattern pieces, name of textiles and fastenings used, pins, needles, thread, pinking shears, fastenings,	

<p>Food and nutrition</p>	<ul style="list-style-type: none"> •describe textures •wash hands & clean surfaces •say where some foods come from, (i.e. plant or animal) •discuss how fruit and vegetables are healthy •understand where a range of fruit and vegetables come from e.g. farmed or grown at home. •cut, peel and grate safely, with support 	<ul style="list-style-type: none"> •explain hygiene and keep a hygienic kitchen •describe how food is reared, home-grown, caught •draw eat well plate; explain there are groups of food •describe “five a day” •cut, peel and grate with increasing confidence 	<ul style="list-style-type: none"> •carefully select ingredients •describe how healthy diet involves a variety and balance of food and drinks •know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught. •know how to use appropriate equipment and utensils to prepare and combine food e.g. peeling, chopping, slicing, grating, mixing, spreading, kneading and baking •prepare and cook some dishes safely and hygienically 	<ul style="list-style-type: none"> •explain how to be safe/hygienic •think about presenting product in interesting/attractive ways •understand ingredients can be fresh, pre-cooked or processed •begin to understand about food being grown, reared or caught in the UK or wider world •describe eat well plate and how a healthy diet=variety/balance of food and drinks •explain importance of food and drink for active, healthy bodies •prepare and cook some dishes safely and hygienically •use some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking 	<ul style="list-style-type: none"> •explain how to be safe/hygienic and follow own guidelines •know how to use utensils and equipment including heat sources to prepare and cook food. •Understand about seasonality in relation to food products and the source of different food products. •describe how recipes can be adapted to change appearance, taste, texture, aroma •explain how there are different substances in food/drink needed for health •use range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking. 	<ul style="list-style-type: none"> •understand a recipe can be adapted by adding/substituting ingredients •explain seasonality of some foods •learn about food processing methods •adapt recipes to change appearance, taste, texture or aroma. •describe some of the different substances in food and drink, and how they can affect health •prepare and cook a variety of savoury dishes safely and hygienically including, where appropriate, the use of heat source. •use a range of techniques confidently such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.
<p>Vocabulary</p>	<p>fruit and vegetable names, names of equipment and utensils sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard</p>	<p>fruit and vegetable names, names of equipment and utensils sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard</p>	<p>name of products, names of equipment, utensils, techniques and ingredients, peeling, chopping, slicing, grating, mixing, spreading, kneading, baking, texture, taste, sweet, sour, hot, spicy, appearance, smell,</p>	<p>name of products, names of equipment, utensils, techniques and ingredients, peeling, chopping, slicing, grating, mixing, spreading, kneading, baking, texture, taste, sweet, sour, hot, spicy, appearance, smell,</p>	<p>ingredients, yeast, dough, bran, flour, wholemeal, unleavened, baking soda, spice, herbs, fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy,</p>	<p>ingredients, yeast, dough, bran, flour, wholemeal, unleavened, baking soda, spice, herbs, fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy,</p>

	flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients,	flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients, reared, home-grown, caught, five a day, hygiene	preference, greasy, moist, cook, savoury, hygienic, safe, edible, grown, reared, caught, frozen, tinned, seasonal, harvested healthy/varied diet	preference, greasy, moist, cook, fresh, pre-cooked, savoury, hygienic, safe, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet	intolerance, savoury, source, seasonality, utensils, taste, texture, aroma, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble	intolerance, savoury, source, seasonality, utensils, taste, texture, aroma, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble, adapted, substituting, food processing
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