



| Intent | To support our pupils in answering the question, "How do we design, make and evaluate solutions to real and relevant problems?" Using creativity and innovation, we inspire pupils to develop skills which impact on daily life. | | |
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| Pupils are enabled to: | Become creative problem solvers, as individuals and members of a team, designing and making a range of products. | | |
| EYFS By the end of Reception... | KS1 By the end of Year 2... | Lower KS2 By the end of year 4... | Upper KS2 By the end of year 6... |
| <p>1.Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p> <p>2. Use what they have learnt about media and materials in original ways, thinking about uses and purposes.</p> <p>3. Represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role play and stories</p> | <p>Cut materials safely using tools provided.</p> <p>☐ Design products that have a clear purpose and an intended user.</p> <p>☐ Make products, refining the design as work progresses.</p> <p>☐ Explore objects and designs to identify likes and dislikes of the designs.</p> <p>☐ Suggest improvements to existing designs.</p> <p>☐ Explore how products have been created</p> | <p>Cut materials accurately and safely by selecting appropriate tools.</p> <p>☐ Design with purpose by identifying opportunities to design.</p> <p>☐ Make products by working efficiently (such as by carefully selecting materials).</p> <p>☐ Refine work and techniques as work progresses, continually evaluating the product design.</p> <p>☐ Improve upon existing designs, giving reasons for choices.</p> <p>☐ Disassemble products to understand how they work</p> | <p>Cut materials with precision and refine the finish with appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape).</p> <p>☐ Develop a range of practical skills to create products (such as cutting, drilling and screwing, nailing, gluing, filing and sanding).</p> <p>☐ Design with the user in mind.</p> <p>☐ Make products through stages of prototypes, making continual refinements.</p> <p>☐ Ensure products have a high quality finish, using art skills where appropriate.</p> <p>☐ Create innovative designs that improve upon existing products.</p> <p>☐ Evaluate the design of products so as to suggest improvements to the user experience</p> |



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| Vocabulary | | | |
| Evaluating | As previously plus | As previously plus | As previously plus |
| Plan, design, create, think, ideas | planning, investigating, design, evaluate, make, user, purpose, ideas, product, design criteria, function | model, prototype, annotated sketch, functional, innovative, investigate, label, drawing, annotated sketch, appealing, design brief, prototype, sensory evaluations | design decisions, functionality, authentic, user, purpose, design specification, design brief, innovative, research, evaluate, design criteria, annotate, evaluate, mock-up, prototype |
| Textiles | As previously plus | As previously plus | As previously plus |
| Feel, texture, rough, smooth, warm | Pattern, join, mark out, decorate, running stitch, needle, fabric, Template, quality, suitable, features, dye, overstretch, design, fray, mock-up, seam, joining and finishing techniques, tools, fabrics and components, pattern pieces, finish | Fastening, compartment, zip, finishing technique, function, prototype, back stitch, felted, woven, knitted, bonded, Aesthetics, seam allowance, pinning, embroidery, back/blanket/cross stitch, fabric, names of fabrics, button, structure, finishing technique, strength, weakness, stiffening, templates, stitch, | Specification, tacking, working drawing, clasp, pinking shears, design criteria, hem, reinforce, stem stitch, satin stitch, tie dye, applique, annotate Innovation, functionality, renewable, Authentic, chain stitch wadding, right side, wrong side, template, pattern pieces, name of textiles and fastenings used, pins, needles, thread, fastenings |
| Electrical systems | As previously plus | As previously plus | As previously plus |
| | | User, fault, toggle switch, insulator, conductor, battery holder, crocodile clip, Series circuit, connection, push-to-make switch, push to-break switch, innovative, appealing, control box, input device, output device, system battery, battery holder, bulb, bulb holder, wire, insulator, conductor, crocodile clip control, program | Parallel circuit, light emitting diode, monitor, flowchart, design specification, reed switch, tilt switch, Light dependent resistor, interface, control, micro switch, latching switch toggle switch, light emitting diode (LED), USB cable, system, parallel circuit |
| Mechanisms | As previously plus | As previously plus | As previously plus |
| Cut, fold, stick, join, make | Wheels & Axles: Wheel, axel, fixed, free, design, make, cutting, joining, hacksaw, vice, dowel, body, cab, shaping, vehicle, axle holder, chassis, body, cab assembling, finishing, fixed, free, moving, mechanism names of tools, equipment and materials used Slider & Leavers: Mechanism, lever, slider, slot, pivot, guide/bridge, masking tape, fastener, pull/push, down, straight, work, | Leavers & linkages: Loose/fixed pivot, system, input, process, process, output linear, rotary, reciprocating, innovative, appealing, linkage, oscillating, mechanism, lever, pivot, slot, bridge, guide system | Pulleys or Gears: Pulley, gear, driver, follower, rotation, motor, belt, spindle, motor, circuit, switch, ratio, transmit, annotated drawings, exploded diagrams, functionality, drive belt, ratio, circuit diagram, mechanical system, electrical system, input, process, output |



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| | design, evaluate, purpose, bridge/guide, card, paper fastener, join, pull, push, up, down, straight, curve, forwards, backwards | | |
| Structures | As previously plus | As previously plus | As previously plus |
| Cut, fold, stick, join | Freestanding Structures: Cut, fold, join, fix, weak, strong, Structure, base, underneath, thicker, thinner, corner, point, straight, curved, rectangle, cube, cuboid, cylinder | Shell Structures: Shell, structure, net, marking out, material, joining, three dimensional, stiff, Assemble, prism, vertex, breadth, capacity, scoring, adhesives, reduce, reuse, recycle, corrugating, ribbing, laminating, shape, net, cube, cuboid, prism, vertex, edge, face, length, width, breadth, capacity, marking out, shaping, tabs, accuracy, material, strong, corrugating, ribbing, laminating, font, lettering, text, graphics, decision | Frame structures: Reinforce, triangulation, stability, temporary, permanent, prototype, innovation, functional, design brief |
| Cooking | As previously plus | As previously plus | As previously plus |
| food, meal, snack, healthy, diet, chop, cut, peel, cook, healthy, farm, factory, fruit and vegetable names, names of equipment and utensils | Preparing Fruit & Vegetables: Fruit, vegetables, soft, juicy, crunchy, sticky, smooth, sharp, crisp, sour hard, flesh, skin, seed pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients, planning, tasting, arranging fruit and vegetable names, names of equipment and utensils | Healthy & Varied Diet: Texture, taste, appearance, preference, greasy, moist, fresh, savoury, hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested, fruit new fruit and vegetable names, names of equipment and utensils healthy/varied diet | Celebrating Culture & Seasonality: Ingredients, yeast, dough, wholemeal, unleavened, baking soda, spice, herbs, carbohydrate, sugar, fat, protein, vitamins, nutrients, gluten, allergy, intolerance, savoury, seasonality, pour, mix, knead, whisk, beat, combine, fold, rubbing in, bran, flour, wholemeal, unleavened, nutrition, healthy, varied, gluten, dairy, allergy, source, utensils, stir, pour, mix, rubbing in, roll out, shape, sprinkle, crumble |
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