Adlington Primary School

Design & Technology :
Progression of Conceptual & Procedural Knowledge, Vocabulary and Concepts

CURRICULUM PILLARS	GLOBAL CITIZENS	CIVILISATIONS & NATIONS	LIFE ON EARTH	CULTURE & COMMUNITY

EYFS Expressive Arts and Design			
	Autumn term (Proposed topic: All about me, Where we live)	**Spring term (Proposed topic: Space, Farms)**	**Summer term (Proposed topic: Fairy tales, Exploration)**
Progression of content	Explore, use and refine a variety of visual effects and materials Modelling own houses from recycled materials	Explore, use and refine a variety of visual effects and materials. Refine ideas and develop ways to represent them. - Modelling the planets -	Explore, use and refine a variety of visual effects and materials. Safely use and store a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Share designs and products, explaining the processes used. - Make props /character masks for our stories e.g. traditional tales - Design models such as a trap for the Giant/strong house for the pigs.
Key Vocabulary	Paint, paintbrush, recycling, box, 3D, solid, stick, join, stable, make better, improve, flap, structure, papier mache, collage, cut	Papier mache, join, glue, improve, evaluate, wet, dry, hard, strong, weak, sphere, string	Join, cut, evaluate, improve, attach, colour, size, shape, create.

Year 1 & Year 2			
Cycle A	**Autumn term (Overarching topic: Animal Magic)**	**Spring term (Overarching topic: My Place in the World)**	**Summer term (Overarching topic: Roads & Routes)**
Progression of content	Select appropriate materials and apply a range of cutting, joining and strengthening techniques to design purposeful, functioning and appealing products for themselves Evaluate a design and improve it by refining as work progresses Use software to design Additional D & T Techniques (Materials) are delivered in Forest Schools.	Create models of varying scales using levers, wheels and winding mechanisms Identify appropriate materials and select suitable cutting, shaping and joining techniques Explore how products have been designed and created Additional D & T Techniques (Materials) are delivered in Forest Schools.	Colour and decorate textiles suitable for a specified produce. Join textiles using running stitch in the creation of a product. Additional D & T Techniques (Materials) are delivered in Forest Schools.
Key Vocabulary	Design, pattern, repeating, product, software, evaluate	Axle, axle holder, wheels, levers, winding mechanisms, chassis, mechanics, investigate, assemble, gluing, securing, strengthening, model, product, evaluation	Plan, design, shape, textiles, templates, fabric, colour, decorate, dye, running stitch, evaluation
Concepts	Design, functionality	technology	Design, evaluate

Year 1 & Year 2			
Cycle B	**Autumn term (Overarching topic: Explorers)**	**Spring term (Overarching topic: Spotting Spring)**	**Summer term (Overarching topic: Funny Bones)**
Progression of content	Design a food product that has a clear purpose and intended user Measure, prepare, assemble and cook ingredients safely and hygienically Additional D & T Techniques (Materials) are delivered in Forest Schools.	Explore series and parallel circuits and circuit diagrams Establish the understanding of electricity and hazards Diagnose faults in battery operated devices Additional D & T Techniques (Materials) are delivered in Forest Schools.	Measure, mark and cut materials safely Measure, prepare, assemble and cook ingredients safely and hygienically Additional D & T Techniques (Materials) are delivered in Forest Schools.
Key Vocabulary	cut, peel, peeler, slice, grate, ingredients, fruit, vegetable, recipe, safety, hygiene, assemble, mix, blend	Wire, bulb, battery, circuit, series, parallel, diagram, device, operate, electricity, hazard	recipe, ingredient, safety, hygiene, balanced diet
Concepts	Design, nutrition	Technology, evaluate	nutrition

Year 3 & Year 4			
Cycle A	**Autumn term (Overarching topic: Flash! Bang!)**	**Spring term (Overarching topic: Shang Dynasty)**	**Summer term (Overarching topic: Rainforests)**
Progression of content	• Design, make and evaluate shadow puppets and scenery using appropriate materials, tools and construction techniques. • Examine the construction of musical instruments from a range of cultures to inspire the design and construction of practical instruments from found materials • Additional D & T Techniques (Materials) are delivered in Forest Schools.	• Identify important feats of design including horticultural design, from an ancient civilisation and recreate examples in model form using appropriate materials and construction techniques. • Describe and recreate mechanisms for the transference of forces • Identify create series and parallel circuits. • Additional D & T Techniques (Materials) are delivered in Forest Schools.	• Identify the need for seam allowance and employ that in the creation of an object. • Design and create a fabric object utilising appropriate stitching and different decorative techniques. • Apply appropriate cutting, shaping and joining techniques. • Additional D & T Techniques (Materials) are delivered in Forest Schools.
Key Vocabulary	Design, instrument, practical, template, measure, assemble, construct, construction, levers, linkages, construct, glue, tie, attach	Battery, bulb, buzzer, cell, component, conductor, copper, design, criteria, electrical item, electricity, electronic item, function, insulator, series, circuit, switch, test, torch, wire. model, lever, linkage, mechanism, motion, pivot, joint, joining, construct, construction	Template, measurement, accurate, design, stitching, running stitch, cross stitch, seam, cutting, shaping, joining, technique(s), detail, decorate, decoration, evaluate
Concepts	Design, functionality, evaluate	Innovation, technology	Design, evaluate

Year 3 & Year 4			
Cycle B	**Autumn term (Overarching topic: Blood, Bones & Body Bits)**	**Spring term (Overarching topic: Stone Age to Romans)**	**Summer term (Crossing Continents)**
Progression of content	• Use appropriate materials, construction techniques and mechanisms to model a human joint. • Apply appropriate cutting, shaping and joining techniques for the create of an animated and annotated diagram. • Additional D & T Techniques (Materials) are delivered in Forest Schools.	• Describe and apply a range of craft techniques developed during the Bronze and Iron Ages such as coil pottery, natural dyes and weaving. • Measure, hygienically prepare and cook ingredients following a recipe based on a food from a historical period. • Describe and evaluate aspects of Roman design and technical innovation and their influence over time • Additional D & T Techniques (Materials) are delivered in Forest Schools.	• Combine a wide range of visual design styles and techniques in the realisation of a substantial classroom display combining 2d, 3d and audio-visual elements. • Additional D & T Techniques (Materials) are delivered in Forest Schools.
Key Vocabulary	Diagram, model, lever, linkage, mechanism, motion, pivot, joint, joining, construct, construction	Research, seasonal, nutrients, recipe, ingredients, adapt, equipment, method, flavour, unit of measurement, Evaluation , design criteria, inspiration, strength, weakness, reinforce, structure,	Graphic, sculptural, relief, audio-visual, text, layout, multi-media, aesthetics, communication, interactive, evaluate, refine
Concepts	Functionality, evaluate	Technology, innovation, nutrition	Technology, evaluate

Year 5 & Year 6			
Cycle A	**Autumn term (Overarching topic: Ancient Greece)**	**Spring term (Overarching topic: Extreme Earth)**	**Summer term (Overarching topic: Conflict & Resolution – World War 11)**
Progression of content	• Select and cut materials with precision and to show understanding of their qualities in both 3d and graphic presentations. • Design a varied and imaginative book with the audience in mind, making refinements where appropriate and aiming for a high -quality finish • Within science activities, design and create circuits with a number of different components • Additional D & T Techniques (Materials) are delivered in Forest Schools.	• Design and model a product to fulfil a precise container brief, linked to extreme weather conditions or natural disasters, carrying out tests and making refinements as required • Design and realise an interactive information box utilising either electrical components or mechanics so engage the audience and reveal its content • Additional D & T Techniques (Materials) are delivered in Forest Schools.	• Research, refine and scale recipes relevant to an historical context, using a range of ingredients and cooking techniques. • Research and evaluate the designs of air raid shelters including their location, materials and specific internal features • Create an appropriately scaled model using suitable materials and construction techniques • Additional D & T Techniques (Materials) are delivered in Forest Schools.
Key Vocabulary	Aesthetic, audience, 3D, design brief, design criteria, exploded-diagram, function, graphics, input, linkage, materials, mechanism, output, presentation, prototype, slider, structure, template Battery, buzzer, circuit, component, conditions, conductor, copper, function insulator, parallel circuit, series circuit,	Suitable materials, resistant, water-proof, durable, submerge, insulated, watertight seals, rigid, flexible, fastening, joints Design brief, interactive, aesthetic, informative, text, graphics, structure, prototype, model, diagram, (battery, circuit, component, series circuit, mechanism, rotary, linear, slider)	Adapt, equipment, farm, flavour, healthy, ingredients, preparation, rationing, ration book, recipe, unit of measurement, substitute, seasonality. Practical, economical, structure, prototype, diagram, design-criteria, efficiency, resources, resistant, durable, material properties.
Concepts	Design, evaluate, functionality	Data, design, technology, functionality, innovation	Nutrition, evaluate,

Year 5 & YEAR 6			
Cycle B	**Autumn term (Overarching topic: Ways of Seeing, Ways of Being)**	**Spring term (Overarching topic: Global Citizens)**	**Summer term (Overarching topic: Building a Nation)**
Progression of content	• Combine elements of design from a range of inspirational designers, in the creation of original pieces. • Select materials and techniques appropriate for the realisation and/or modelling of an original design. • Additional D & T Techniques (Materials) are delivered in Forest Schools.	• Combine text design, imagery and layout skills in creating informative effective and persuasive publicity. • Research and source ingredients to produce entirely fair-trade products, selecting, refining and realising recipes to fulfil a specific brief. • Design and evaluate products (and their scientific principals) which utilise and combine mechanisms for the adaptation and transference of forces • Additional D & T Techniques (Materials) are delivered in Forest Schools.	• Combine text design, imagery and layout skills in creating informative effective and persuasive publicity inspired by an historical context. • Research and describe the speed of design developments over recent decades identifying significant designers and products. • Additional D & T Techniques (Materials) are delivered in Forest Schools.
Key Vocabulary	Visual, tactile, decorative, illustrative, transformative, precision, refine, evaluate, prototype, model, diagram, cross-section.	Adapt, source, fair-trade, producer, consumer, flavour, ingredients, preparation, recipe, unit of measurement, substitute. Product, design process, annotated, motion, force, mechanism, transference, lever, pulley, winding, gears, cams, rotary, linear	Aesthetic, audience, design brief, design criteria, exploded-diagram, function, graphics, materials, mechanism, presentation, prototype, slider, structure, template
Concepts	Design, innovation, evaluate	Nutrition, design, evaluate	Data, innovation, technology