Holy Cross Catholic Primary - Skills & Knowledge Progression in Design Technology

	EYFS	Year 1&2 (Year A)	Year 1&2 (Year B)	Year 3	Year 4	Year 5	Year 6
Construction	Creating through exploration: Safely explore and use a variety of materials, tools and techniques, experimenting with design, texture, form and function. Shaping own ideas: Use what they have learnt about media and materials in original ways, thinking about uses and purposes. Represent their own ideas, thoughts and feelings through art and stories.	Design Design simple models with a clear function (e.g. a bridge for a toy car) using verbal prompts or stories for inspiration. Talk about their ideas and draw simple pictures to show what they want to make. Make Use basic tools like scissors, glue sticks and masking tape with support (e.g. to cut and stick card pieces together for a tower). Choose materials based on simple properties (e.g. cardboard is stiff for building a wall). Evaluate Talk about construction toys and simple real-world structures (e.g. houses, playground equipment) and what they notice about their shapes or features. Say what they like or would change about what they made (e.g. "It fell over, so I need to make it more stable"). Technical Knowledge Build simple models and experiment with joining methods (e.g. stacking blocks or taping card). Use construction kits to make simple moving models (e.g. a spinning wheel or a sliding door).	Design Design more purposeful products with user needs in mind (e.g. a chair for a favourite toy, designed to be stable and comfortable). Produce labelled drawings and simple mock-ups to explore ideas in more detail (e.g. designing a garage using cardboard boxes and masking tape). Make Begin using tools more independently and with purpose (e.g. folding, scoring and taping materials to create a box structure). Select materials more deliberately for strength and function (e.g. choosing corrugated card for a roof because it's strong and waterproof-looking). Evaluate Compare different structures and say what works well (e.g. "That tower is stronger because it has a wide base"). Evaluate their product by checking if it meets their original purpose (e.g. "My bridge is long enough for the car to cross and it didn't collapse"). Technical Knowledge Use techniques to reinforce structures (e.g. folding paper to create beams, adding cross-braces or using wider bases for stability). Build more complex models incorporating mechanisms (e.g. a vehicle with moving wheels or a slider to open a window on a model house).	Design Begin using simple research to inform ideas (e.g. exploring different bridge types before designing one to span a gap). Sketch and label basic design ideas and build mock-ups (e.g. a model playground using cardboard and straws). Make Use tools with growing accuracy (e.g. junior hacksaws, hole punchers for card or wood joints). Choose materials for simple properties (e.g. card for walls, corrugated plastic for roofs). Evaluate Look at how everyday buildings or objects are joined and constructed (e.g. Lego sets, furniture). Begin reflecting on whether the model works as intended (e.g. "My bridge holds a toy car, but wobbles"). Learn about famous construction achievements (e.g. the Eiffel Tower or Brunel's bridges). Technical Knowledge Use techniques like folding, layering and bracing to strengthen paper or card (e.g. truss bridges). Create working models with linked parts (e.g. drawbridge with string pulley system)	Design Develop criteria based on user needs (e.g. designing a shelter for a pet using features like waterproofing and ventilation). Begin using cross-sectional diagrams and templates (e.g. for designing a tunnel or a bridge with internal supports). Make Increase precision and care (e.g. using mitre blocks or glue guns safely when assembling wooden frames). Select with function in mind (e.g. using triangular struts to strengthen corners). Evaluate Examine how real-world structures solve problems (e.g. bridges resisting wind or earthquakes). Use peer feedback to suggest improvements (e.g. strengthening a structure after testing). Understand how construction techniques have evolved (e.g. timber frames vs. steel structures). Technical Knowledge Experiment with internal supports or external frames (e.g. buttresses for stability). Incorporate gears or cams to introduce movement (e.g. rotating windmill sails).	Design Use purposeful research (e.g. exploring architecture to design a model house with sustainable features). Use exploded diagrams or pattern pieces to refine designs (e.g. a multi-room model building with removable parts). Make Use more refined equipment to achieve clean finishes (e.g. using sandpaper to smooth edges of balsa wood). Combine materials for function and appearance (e.g. foam for padding, fabric for aesthetics). Evaluate Compare and critique design features (e.g. prefabricated houses vs. traditional brick homes). Evaluate prototypes and adjust accordingly (e.g. modifying a roof design to make it waterproof). Study designers or engineers (e.g. Isambard Kingdom Brunel, Zaha Hadid). Technical Knowledge Reinforce using real construction techniques (e.g. joining beams using dowels or tabs). Add a switch to control an LED in a model (e.g. light inside a model house). Begin exploring programmable devices (e.g. Crumble or Micro:bit to control lights or buzzers).	Design Create and refine complex design criteria to meet specific user needs and contexts (e.g. designing an emergency relief structure for a disaster zone). Use IT tools (e.g. a drawing programme) to visualise, plan, and adjust construction models. Make Work with independence, combining tools confidently (e.g. sawing, drilling and constructing a stable model structure with complex joins). Justify material choices based on performance and aesthetics (e.g. "I chose acrylic because it's waterproof and looks professional"). Evaluate Analyse form and function critically (e.g. modern stadium design vs. Roman amphitheatres). Lead a review of strengths, weaknesses and refinements (e.g. presenting design pitches and justifying improvements). Reflect on how technology and innovation influence construction (e.g. smart homes or sustainable architecture). Technical Knowledge Combine several strengthening strategies in complex designs (e.g. geodesic domes, interlocking structures). Use motors or buzzers in functioning models (e.g. electric fan in a greenhouse model). Program lights to flash or motors to spin using block coding.

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Textiles	Talk about their ideas and explore different ways to record them. Experiment with mark-making in an exploratory way.	Design Begin to design simple textile items based on familiar experiences (e.g. a hand puppet for a story character). Talk about what they want to make and draw a picture of their idea (e.g. sketching a glove puppet with two colours). Make Use basic tools safely with support (e.g. plastic needles, blunt scissors, glue). Choose from a selection of fabrics based on colour and texture (e.g. felt for softness, shiny fabric for decoration). Evaluate Look at familiar textile products (e.g. hats, puppets, cushions) and talk about materials and how they are joined. Say what they like about their product and what they would change (e.g. "I like the colour, but the eyes keep falling off"). Technical Knowledge Join fabric by gluing or simple stitches and add decorations (e.g. gluing googly eyes onto felt or sewing two pieces of fabric with support). Add simple decorative elements (e.g. sticking on buttons or using fabric pens).	Design Design more functional textile items for specific users or purposes (e.g. a pouch for carrying marbles or a felt bookmark for a friend). Draw labelled diagrams and use templates or mock-ups to help plan the textile product (e.g. tracing around a shape to make two identical fabric pieces for a toy). Make Use a wider range of tools more confidently (e.g. threading a plastic needle, cutting with improved accuracy, beginning to use running stitch). Make more informed choices based on properties (e.g. using stronger fabric for structure, soft fabric for comfort, buttons for fastening). Evaluate Describe what works well in other textile items and suggest improvements (e.g. "The stitches on this badge are neater than mine – I could try making smaller stitches"). Begin to evaluate how well their product meets the design criteria (e.g. "My puppet moves well and fits my hand, but I'd add more detail next time"). Technical Knowledge Use techniques like running stitch to securely join fabric and experiment with strengthening (e.g. doubling layers for a sturdier felt coaster). Begin to incorporate simple fastenings or moving parts (e.g. a flap on a pouch with Velcro, or a tab to pull a puppet's mouth open).	Design Research familiar fabric items (e.g. pencil cases) to generate simple criteria (e.g. must open and close, hold items). Draw labelled designs showing fabric types and decoration (e.g. a felt animal puppet with button eyes). Make Use basic stitching tools (e.g. plastic needles, embroidery hoops) and use running stitch. Choose from a selection of fabrics and decorations (e.g. felt, cotton, buttons, sequins). Evaluate Examine textile products for how they're made (e.g. seams, fastening types). Say how their design meets the criteria and suggest improvements. Learn about textile innovations (e.g. invention of Velcro, recycled fabrics). Technical Knowledge Reinforce fabric with interfacing or layered felt (e.g. to stiffen a bookmark). Incorporate simple flaps or Velcro closures in textile items.	Design Develop user-focused criteria (e.g. a purse for a younger child that is easy to open, soft, and colourful). Use templates or pattern pieces to prepare for making (e.g. tracing shapes for a textile phone sleeve). Make Apply a range of stitches with growing accuracy (e.g. back stitch, over-stitch to join two pieces neatly). Select materials based on both properties and design needs (e.g. soft lining fabric for a glasses case). Evaluate Compare different construction methods or fastenings (e.g. Velcro vs. zip on wallets). Gather peer feedback and use it to make simple improvements (e.g. neatening stitches). Explore key figures in textile design (e.g. William Morris, Vivienne Westwood). Technical Knowledge Use padding or quilting to improve structure (e.g. a padded pencil case). Use mechanisms such as poppers in wearable items.	Design Refine criteria based on specific needs or preferences (e.g. a wearable badge that is secure, durable and decorative). Create annotated, scale drawings and test ideas with paper or card mock-ups (e.g. testing fastenings on a pencil wallet). Make Use appropriate techniques and tools confidently (e.g. pins, fabric scissors, measuring tape for seam allowance). Match materials to both purpose and appearance (e.g. waterproof outer fabric, zip fastening). Evaluate Analyse textile products for durability, user-friendliness, and finish. Reflect on the product's usability, durability, and aesthetic appeal. Understand the social impact of textiles (e.g. Fair-Trade cotton). Technical Knowledge Incorporate internal supports (e.g. card inserts in a textile box). Integrate more refined fastenings (e.g. buttons, toggles, zips).	Design Conduct purposeful research (e.g. sustainable fashion) to design innovative items (e.g. upcycled tote bags for a school fair). If available, Use digital design tools or software (e.g. digital templates for fabric layout or embroidery patterns) to refine ideas. Make Work independently using advanced tools (e.g. sewing machines with supervision, fabric punches, eyelet setters). Justify choices of textiles and embellishments (e.g. "I chose denim for strength and contrast stitching for design impact"). Evaluate Evaluate complex products (e.g. sustainable fabric items, technical garments) for performance and innovation. Lead evaluations that include peer and user feedback, and offer specific revisions (e.g. "I would change the thread colour so the stitching is less visible"). Research contemporary issues in textiles (e.g. fast fashion, sustainable production). Technical Knowledge Combine construction techniques for structure and finish (e.g. hemming and interfacing for a structured fabric bag). Combine textile construction with a mechanical system (e.g. pull-tab message banner made of fabric)

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Cooking and Nutrition	Talk about their artwork, stating what they like about it.	Recognise that fruit and vegetables grow on trees or underground, and that animals give us foods like milk and eggs (e.g. "Apples grow on trees", "Milk comes from cows"). Talk about how some food can grow in a garden or be bought from shops (e.g. "We grew tomatoes at school"). Begin to recognise the main food groups with support (e.g. sorting cut-out food pictures into groups like fruit and vegetables, dairy, etc.). Know that fruit and vegetables help us stay healthy (e.g. "We need to eat lots of colourful fruit"). Follow basic hygiene routines with support (e.g. washing hands, cleaning surfaces before preparing food). Begin using tools with support (e.g. using a child-safe knife to cut a banana, peeling a cucumber with help).	Describe more clearly where food comes from (e.g. "Carrots grow underground", "Fish is caught from the sea", "Bread is made from wheat which is grown on farms"). Name different methods of food sourcing (e.g. farming vegetables in fields, catching fish, growing herbs on a windowsill). Confidently name and group foods into the five Eatwell Guide categories: fruit & vegetables, carbohydrates, protein, dairy, and oils/fats (e.g. "Cheese goes in dairy", "Rice is a carbohydrate"). Talk about what counts as a portion and suggest ways to include more fruit and veg in meals (e.g. "I had strawberries on my cereal and carrot sticks at lunch – that's two!"). Follow basic hygiene routines (e.g. washing hands, cleaning surfaces before preparing food).	Identify food that is grown (e.g. potatoes), reared (e.g. pigs), or caught (e.g. fish) in the UK. Recognise where common foods come from (e.g. "Wheat grows in fields and is made into bread.") Begin to sort foods into the Eatwell Plate categories and understand why a balanced diet is important (e.g. "Fruit gives you vitamins, dairy helps your bones.") Know that food gives us energy to work and play (e.g. "I eat breakfast to help me concentrate at school.") Prepare simple cold dishes safely (e.g. vegetable wrap, salad pot), following basic hygiene rules with support (e.g. washing hands, tying back hair, using chopping boards). Use basic techniques such as peeling, chopping, mixing and grating with support.	Begin to describe how different foods are produced in the UK, Europe and the wider world (e.g. "Cocoa beans grow in hot countries like Ghana; fish is caught in the North Sea.") Identify food groups confidently and begin to explain the function of each (e.g. protein for growth, carbohydrates for energy, "You need protein to build muscles, and wholegrains give you energy.") Understand that different foods provide different types of energy and nutrients for the body (e.g. "Bananas give quick energy for running; milk helps bones grow.") Begin using heat safely under supervision (e.g. boiling, baking). Prepare and cook a basic savoury dish (e.g. baked vegetable frittata or soup). Use a wider range of techniques with growing accuracy and independence (e.g. slicing, kneading, spreading, baking).	Understand that some foods are seasonal and may be grown at specific times of year in the UK (e.g. "strawberries are grown in the summer in the UK but imported in winter"). Describe how common ingredients are made from raw materials (e.g. "Wheat is milled into flour, which is used to make bread.) Begin adapting recipes by changing ingredients to suit preferences or dietary needs (e.g. "I swapped cheddar for mozzarella to make the pizza stretchier.") Identify that food contains substances like protein, vitamins, carbohydrates, fats, fibre and water, and understand their basic roles (e.g. "Protein helps muscles grow, and fibre helps digestion.") Prepare a range of savoury dishes using heat safely and with increasing independence (e.g. cooking pasta bakes, roasting vegetables, making soup on the hob.) Use a variety of food prep techniques with control (e.g. kneading, slicing, grating, mixing).	Explain how seasonality affects food availability and choices locally and globally (e.g. "In winter, we import fresh tomatoes from Spain because the UK climate is too cold.") Explain and sequence how foods are processed and refined for cooking or preservation (e.g. "Milk is pasteurised before we drink it; oats are rolled and dried for porridge.) Adapt recipes to alter appearance, flavour, texture or aroma, and explain the changes (e.g. "I replaced sugar with honey to sweeten the muffins more naturally.") Explain the function of key nutrients in the body and make informed food choices (e.g. "Iron is important for blood, I need calcium for my bones – I get both from green vegetables.") Prepare more complex savoury dishes involving multiple steps and heat sources, with accuracy and safety (e.g. baking vegetable pasties, grilling marinated chicken.) Apply all key techniques fluently, selecting the most appropriate for the task.
Possible Vocabulary	Use a range of drawing materials such as pencils, chalk, felt tips and wax crayons. Work on a range of materials of different textures (e.g. playground, paper, sugar paper). Begin to develop observational skills (e.g. using mirrors to include the main features of faces in their drawings).	Idea, plan, make, draw, talk, choose, picture, scissors, glue, tape, paper, card, fabric, needle, thread, cut, stick, join, sew, fold, mix, stir, pour, colour, pattern, shape, decorate, button, puppet, structure, wheel, soft, hard, shiny, strong, tall, short, same, different, like, don't like, change, fix, better, fruit, vegetables, farm, grow, chicken, egg, milk, healthy, food group, sugar, energy, wash, clean, safe, spoon, bowl, plate, taste, smell.	purpose, user, design, label, template, mock-up, plan, cut, make, choose, fold, tape, sew, stitch, needle, button, compare, strong, improve, fits, design criteria, what went well, reinforce, wheel, slider, running stitch, fastening, pattern, fruit, vegetables, dairy, protein, portion, healthy, hygiene, wash, grow, farm.	Research, design criteria, idea sketch, fabric, decoration, product, user, function, join, punch, measure, stitch, felt, needle, thread, cotton, flap sequins, button, material, fabric, embroidery hoop, stable, wobble, improve, test, success, seam, fastening, invention, design feature, structure, brace, layer, reinforce, truss, pulley, Velcro, interface, mechanism, closure, moving part, dairy, protein, balanced, energy, Eatwell Plate, hygiene, clean, chop, grate, mix, peel, reared, grown, caught, field, sea.	design brief, properties, ventilation, template, pattern piece, structure, measure, accuracy, glue gun, stitch, back stitch, over-stitch, zip, Velcro, material, textile, test, feedback, improvement, compare, fastening, stable, designer, support, frame, buttress, gear, cam, movement, mechanism, padded, reinforced, protein, carbohydrates, energy, nutrient, wholegrain, prepare, bake, slice, hygiene, heat.	Research, annotate, pattern piece, scale drawing, sustainable, aesthetic, purpose, fabric scissors, measuring tape, seam, balsa wood, sandpaper, dowel, zip, fastening, technique, prototype, critique, reflect, usability, durability, adjust, Fair-Trade, engineer, internal support, LED, switch, programmable device, Micro:bit, seasonal, ingredient, recipe, adapt, substitute, protein, fibre, digestion, knead, roast, prepare.	user needs, digital tools, refine, visualise, upcycle, performance, saw, drill, construct, join, textile, sewing machine, embellishment, justify, contrast stitching, analyse, review, refine, feedback, improvement, innovation, sustainable production, peer evaluation, structure, strengthening, motor, buzzer, hemming, interfacing, seasonality, availability, preservation, adapt, texture, iron, calcium, nutrient, savoury.