



DESIGN & TECHNOLOGY CURRICULUM

Whole-School Progression

Knowledge | Skills | Vocabulary | EYFS to Year 6

Purpose of this document

This progression document sets out how designing, making, evaluating, technical knowledge, subject vocabulary and cooking and nutrition build across Park Road Academy's Design and Technology curriculum. It explicitly references the units in the long-term overview and helps teachers identify prior learning, the new disciplinary and technical step, and appropriate next steps.

Progression principles

SEQUENCED	USER-CENTRED	ITERATIVE	SAFE & RESPONSIBLE
Knowledge and practical techniques are revisited with increasing accuracy, complexity and independence.	Products are designed for a clear user, purpose and context rather than as identical craft outcomes.	Pupils research, design, make, test, evaluate and improve throughout the process.	Tools, food, materials and components are selected and used safely, hygienically and sustainably.

Curriculum strands

Designing & Research	Making & Practical Skills	Evaluating & Iterating	Structures, Mechanisms & Electrical Systems	Textiles	Cooking & Nutrition
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Indicative vocabulary is not exhaustive. Teachers should revisit earlier terms and model precise language while pupils analyse products, design, make, test and evaluate.

Progression focus

How pupils progress from expressing ideas through talk and play to researching users, analysing existing products, developing criteria and communicating increasingly detailed designs.

Year group	Curriculum unit(s)	Knowledge progression	Skills and application	Indicative vocabulary
Early Years Foundation Stage	All Nursery and Reception themes through continuous provision	Know that products are made for people and purposes. Ideas can come from play, stories, observation and simple problems.	Talk about a user or purpose; explore existing objects; draw, build or explain an idea; choose materials; make simple changes while working.	user, purpose, idea, design, choose, plan, problem, product
Year 1	Stable structures; Puppets; Fruits and vegetables	Understand that a design should meet a simple purpose and suit an intended user. Know that existing products can provide useful ideas.	Explore structures, puppets and food products; generate ideas through talk and drawing; use simple design criteria; label key features and materials.	design, user, purpose, product, criteria, label, idea, material
Year 2	Baby Bear's chair; A balanced diet; Fairground wheel	Know that designers compare products and use criteria to guide choices. Understand that models and labelled drawings help communicate how a product may work.	Investigate chairs, balanced meals and wheels; identify user needs; generate alternatives; make labelled sketches and simple templates; choose an idea against criteria.	research, design criteria, function, model, sketch, template, feature, audience
Year 3	Eating seasonally; Cushions; Constructing a castle	Understand that research into users, context and existing products informs a purposeful design. Know that annotated sketches and cross-sectional ideas communicate construction.	Research seasonal foods, cushion features and castles; develop a design brief and criteria; annotate sketches; use pattern pieces and nets; explain material choices.	design brief, research, annotate, cross-section, net, pattern piece, specification, context
Year 4	Pavilions; Adapting a recipe; Gears and pulleys	Know that design criteria should consider function, appearance, materials and user. Understand that prototypes and recipe trials support development.	Analyse pavilions, recipes and mechanical products; gather user views; create annotated designs and prototypes; compare options; plan a logical sequence.	prototype, aesthetic, functional, client, survey, adapt, diagram, sequence
Year 5	Doodlers; Gears and pulleys; Developing a recipe	Understand that designers define a problem, research competitors and write a detailed brief. Know that technical diagrams and testing evidence strengthen decisions.	Write problem statements and design briefs; conduct market research; develop annotated and exploded diagrams; model mechanisms and circuits; justify ingredients, components and dimensions.	problem statement, market research, competitor, exploded diagram, dimension, component, brief, justify
Year 6	Waistcoats; Steady hand game; Come dine with me	Know that successful products respond to a precise user, purpose and specification. Understand that designers manage constraints, risk, resources and presentation.	Research users and products; write measurable specifications; communicate with pattern pieces, circuit diagrams, menus and production plans; refine ideas before manufacture.	specification, constraint, innovation, circuit diagram, pattern piece, production plan, target user, feasibility

Teaching note: Progression is cumulative. Pupils should apply earlier knowledge and safe routines while working with more demanding users, materials, components, tools, specifications and levels of independence.

Progression focus

How pupils progress from manipulating and joining materials through play to selecting tools, ingredients, components and processes accurately, safely and independently.

Year group	Curriculum unit(s)	Knowledge progression	Skills and application	Indicative vocabulary
Early Years Foundation Stage	All Nursery and Reception themes through continuous provision	Know that materials and tools behave differently and can be cut, shaped, joined, mixed and combined. Safe routines help people make successfully.	Use construction kits, card, fabric, malleable materials and food tools; cut, fold, join, mix, pour and assemble with growing control; tidy and use tools safely.	make, tool, material, cut, fold, join, mix, build, safe
Year 1	Stable structures; Puppets; Fruits and vegetables	Know simple ways to make structures stable, join fabrics and prepare fruit and vegetables. Understand that tools are selected for a practical task.	Measure informally; cut card and fabric; use tabs, glue and simple sewing; peel, cut and blend with supervision; assemble and finish a product.	measure, cut, join, sew, running stitch, assemble, peel, blend, finish
Year 2	Baby Bear's chair; A balanced diet; Fairground wheel	Understand that shape, joining and accurate assembly affect strength and function. Know safe methods for preparing ingredients and constructing a wheel-and-axle system.	Measure and mark; strengthen card; make secure joins; prepare and combine ingredients hygienically; position axles and wheels accurately; apply purposeful finishing.	strengthen, measure, mark, axle, wheel, chassis, hygiene, prepare, assemble
Year 3	Eating seasonally; Cushions; Constructing a castle	Know that more accurate measuring, cutting and joining improve quality. Understand the properties of fabric, card and ingredients used in each product.	Use scales and measuring equipment; make seasonal food safely; thread needles and sew seams; create and join nets; add structural and textile finishing.	accurate, seam, allowance, thread, needle, fasten, net, score, ingredient
Year 4	Pavilions; Adapting a recipe; Gears and pulleys	Understand how tools and components are selected according to material properties and function. Know that accurate construction and controlled preparation support repeatable results.	Measure, saw or cut safely where appropriate; reinforce frames; assemble gears and pulleys; weigh ingredients accurately; follow and adapt a method; finish carefully.	reinforce, frame, saw, component, gear, pulley, ratio, weigh, knead, accuracy
Year 5	Doodlers; Gears and pulleys; Developing a recipe	Know that complex products require coordinated use of mechanical, electrical, construction and food processes. Understand that precision reduces failure.	Build series circuits with motors and switches; secure off-centre weights; construct gear and pulley systems; prepare ingredients using controlled techniques; troubleshoot during manufacture.	series circuit, motor, switch, off-centre weight, gear train, tension, troubleshoot, precision
Year 6	Waistcoats; Steady hand game; Come dine with me	Understand that high-quality manufacture depends on accurate pattern work, secure electrical connections, safe food preparation and an organised production sequence.	Create and use pattern pieces; cut fabric accurately; pin, tack and sew seams; build and conceal a circuit; prepare and present a multi-element dish; manage time and resources.	template, pin, tack, seam allowance, conductor, insulator, connection, presentation, workflow

Teaching note: Progression is cumulative. Pupils should apply earlier knowledge and safe routines while working with more demanding users, materials, components, tools, specifications and levels of independence.

Progression focus

How pupils progress from noticing whether something works to testing against criteria, using evidence and feedback, identifying faults and improving products through repeated design decisions.

Year group	Curriculum unit(s)	Knowledge progression	Skills and application	Indicative vocabulary
Early Years Foundation Stage	All Nursery and Reception themes through continuous provision	Know that products can be tested, talked about and changed. People may have different preferences and needs.	Try a model or product; say what works; compare simple features; notice problems; make a change with support; explain a preference.	test, work, change, improve, like, problem, strong, stable
Year 1	Stable structures; Puppets; Fruits and vegetables	Understand that testing checks whether a product meets its purpose. Know that evaluation should identify a successful feature and an improvement.	Test stability, movement, joining and taste; compare with simple criteria; gather peer response; make one purposeful improvement.	evaluate, test, criteria, successful, improve, stable, user, feedback
Year 2	Baby Bear's chair; A balanced diet; Fairground wheel	Know that products can be tested systematically and compared with design criteria. Understand that failure gives useful information.	Use load, movement and taste tests; record observations; compare outcome with drawings and criteria; identify causes of problems; adapt components or ingredients.	test method, result, load, function, fault, evidence, adapt, feedback
Year 3	Eating seasonally; Cushions; Constructing a castle	Understand that evaluation includes existing products, process and final outcome. Know that user feedback and functional testing guide refinement.	Analyse products; test seams, structure and flavour; evaluate against brief and criteria; explain changes made during construction; suggest realistic improvements.	analysis, functional, quality, refine, user feedback, durability, appearance, outcome
Year 4	Pavilions; Adapting a recipe; Gears and pulleys	Know that prototypes, trials and measurements provide evidence for improvement. Understand that technical and sensory evaluation may use different criteria.	Test frame strength, mechanical efficiency and recipe changes; record comparable results; identify trade-offs; adapt a prototype or recipe and justify the final choice.	prototype, trial, sensory evaluation, efficiency, comparison, trade-off, justify, modification
Year 5	Doodlers; Gears and pulleys; Developing a recipe	Understand iterative design as repeated research, making, testing and refinement. Know that faults may arise from components, dimensions, assembly or user assumptions.	Diagnose circuit and mechanical faults; test performance using agreed measures; use market and user feedback; improve designs and record evidence of iteration.	iteration, diagnose, performance, reliability, variable, tolerance, user testing, evidence
Year 6	Waistcoats; Steady hand game; Come dine with me	Know that evaluation considers specification, quality, safety, sustainability, user experience and presentation. Understand that designers justify compromises.	Carry out quality-control checks; test fit, circuit sensitivity and food presentation; evaluate against a detailed specification; incorporate feedback; explain compromises and next steps.	quality control, specification, user experience, sensitivity, sustainability, compromise, review, refinement

Teaching note: Progression is cumulative. Pupils should apply earlier knowledge and safe routines while working with more demanding users, materials, components, tools, specifications and levels of independence.

Progression focus

How pupils build technical knowledge of stability, strengthening, wheels and axles, gears and pulleys, circuits, motors and switches, applying this knowledge to functional products.

Year group	Curriculum unit(s)	Knowledge progression	Skills and application	Indicative vocabulary
Early Years Foundation Stage	Farm models, shelters, vehicles, bug hotels, boats and imaginative constructions	Know that structures need a base and suitable joins; moving products have parts that move; electrical products use components to make something happen.	Build, stack and balance; compare stable and unstable models; explore wheels, ramps, levers and simple moving parts; investigate everyday switches with an adult.	structure, base, stable, balance, join, move, wheel, ramp, switch
Year 1	Structures: Stable structures	Understand that the shape and width of a base affect stability and that structures can be strengthened through careful construction.	Identify natural and manufactured structures; test bases and shapes; build a freestanding structure; select materials and joins; evaluate stability.	structure, stable, unstable, base, freestanding, strengthen, join, test
Year 2	Structures: Baby Bear's chair; Mechanisms: Fairground wheel	Know that folding or rolling material can strengthen it. Understand that wheels rotate around an axle and need suitable spacing and support.	Test structural shapes; construct a strong chair; make and align axle holders, axles and wheels; explain how the mechanism creates rotation.	strength, load, frame, wheel, axle, axle holder, rotate, mechanism
Year 3	Structures: Constructing a castle	Understand shell structures, nets and features that strengthen and stabilise a castle. Know how tabs and accurate scoring support assembly.	Identify structural features; create and adapt nets; score, cut and join accurately; add turrets and reinforcements; test stability and purpose.	shell structure, net, tab, score, turret, reinforce, stability, façade
Year 4	Structure: Pavilions; Mechanical systems: Gears and pulleys	Know that triangulation, bracing and reinforced joints strengthen framed structures. Understand that gears transfer rotation and pulleys change force or direction.	Construct and reinforce a frame; apply cladding; mesh gear teeth; compare gear sizes; build fixed and movable pulley arrangements; explain mechanical advantage simply.	frame, triangulation, brace, cladding, gear, driver, follower, pulley, mechanical advantage
Year 5	Electrical systems: Doodlers; Mechanical systems: Gears and pulleys	Understand how a series circuit powers a motor and how an off-centre weight creates vibration. Know how gear ratios and pulley arrangements affect speed, direction and force.	Construct and troubleshoot circuits; position motors and switches; alter weights and pen positions; make gear trains and pulley systems; predict and test effects of changes.	series circuit, motor, switch, vibration, gear ratio, driver, follower, belt, tension
Year 6	Electrical systems: Steady hand game	Know that a complete circuit requires conductive connections and that a break prevents current flow. Understand how circuit layout and wire shape affect game difficulty.	Draw and build a circuit with cell, buzzer and switch; create a conductive loop and course; insulate selected areas; test continuity, sensitivity and reliability.	circuit, cell, buzzer, conductor, insulator, continuity, terminal, current, sensitivity

Teaching note: Progression is cumulative. Pupils should apply earlier knowledge and safe routines while working with more demanding users, materials, components, tools, specifications and levels of independence.

Progression focus

How pupils progress from exploring and joining flexible materials to using templates, seams, stitches, fastening and pattern pieces to create functional textile products.

Year group	Curriculum unit(s)	Knowledge progression	Skills and application	Indicative vocabulary
Early Years Foundation Stage	Celebration objects, puppets, costumes, shelters, flags and role-play products	Know that fabric is a flexible material that can be cut, folded, joined and decorated. Different joins suit different purposes.	Explore fabric, ribbon, wool and felt; thread, wrap and weave; cut and join with glue, staples or simple lacing; select materials for a prop or model.	fabric, textile, thread, cut, join, decorate, flexible, pattern
Year 1	Textiles: Puppets	Understand that a template helps create matching shapes and that fabric pieces need a secure join. Know a running stitch can join two layers.	Design a puppet; use a template; cut fabric; thread a needle with support; use running stitch or suitable alternatives; decorate for a user and purpose.	textile, fabric, template, running stitch, needle, thread, seam, decorate
Year 2	Revisited through construction and classroom design opportunities	Know that textiles have properties such as flexibility, thickness and strength, and can be selected for a functional or decorative purpose.	Compare fabrics; choose according to properties; use simple templates and joining methods when appropriate; evaluate how well the material suits the purpose.	property, flexible, absorbent, strong, layer, join, template, purpose
Year 3	Textiles: Cushions	Understand that cushions are made from accurately cut fabric pieces joined with a seam and can include decoration and fastening.	Create a template; measure and cut fabric; thread a needle; use running or cross stitch; sew a secure seam; add appliqué or fastening; stuff and finish.	cushion, seam, seam allowance, running stitch, cross stitch, appliqué, fastening, stuffing
Year 4	Revisited through pavilions and design work	Know that textiles may act as skins, coverings or flexible components and that their properties affect structure, weather resistance and appearance.	Investigate fabric as cladding or covering; select and attach textiles to a frame; create tension; consider durability and finish; evaluate suitability.	cladding, tension, durable, weather-resistant, weave, attach, flexible, finish
Year 5	Revisited through product design and prototyping	Understand that textiles can be combined with other materials and components and that prototypes help test size, shape and joining before manufacture.	Model textile components with paper or scrap fabric; test fastenings, seams and decorative techniques; select materials using functional and aesthetic criteria.	prototype, fastening, seam, pattern, component, aesthetic, functional, reinforce
Year 6	Textiles: Waistcoats	Know that pattern pieces, seam allowance and accurate construction determine garment fit and finish. Understand that fabric orientation and fastening choices affect function.	Adapt a template; take account of seam allowance; pin and cut accurately; tack and sew seams; add fastening and decoration; try, adjust and evaluate fit.	waistcoat, pattern piece, seam allowance, pin, tack, stitch, fastening, fit

Teaching note: Progression is cumulative. Pupils should apply earlier knowledge and safe routines while working with more demanding users, materials, components, tools, specifications and levels of independence.

Progression focus

How pupils progress from sensory exploration and simple food preparation to understanding food origins, seasonality, nutrition, recipe development, hygiene and presentation.

Year group	Curriculum unit(s)	Knowledge progression	Skills and application	Indicative vocabulary
Early Years Foundation Stage	Food, celebration, farm, garden and pirate themes	Know that food comes from plants or animals and can be prepared in different ways. Clean hands, safe tools and careful tasting support healthy food experiences.	Wash hands; name ingredients; wash, peel, tear, mix, pour and spread with support; explore flavour and texture; help plan and evaluate simple food.	food, ingredient, fruit, vegetable, wash, mix, taste, healthy, safe
Year 1	Cooking and nutrition: Fruits and vegetables	Know the difference between fruits and vegetables and that they grow in different places. Understand that preparation changes texture and taste.	Identify and classify produce; taste and describe; cut safely using appropriate techniques; select ingredients; make and evaluate a fruit or vegetable product.	fruit, vegetable, seed, root, peel, chop, blend, flavour, texture
Year 2	Cooking and nutrition: A balanced diet	Understand that a balanced diet includes different food groups in suitable proportions. Know that ingredients can be combined to create a healthy snack.	Classify foods; design a balanced wrap or snack; use hygienic preparation; cut, spread and assemble; evaluate taste, appearance and balance.	balanced diet, food group, protein, carbohydrate, dairy, portion, hygiene, nutritious
Year 3	Cooking and nutrition: Eating seasonally	Know that seasonal produce is available at particular times and that climate affects where food grows. Understand that local and seasonal choices can reduce impact.	Identify seasonal produce; locate food origins; follow a recipe; measure and prepare safely; make a seasonal dish; evaluate flavour and sustainability.	seasonal, climate, import, local, produce, harvest, recipe, sustainability
Year 4	Cooking and nutrition: Adapting a recipe	Understand that recipes can be adapted for taste, nutrition, cost or user needs and that changing one variable may affect texture or appearance.	Analyse a recipe; measure accurately; make controlled adaptations; conduct a sensory test; compare results; calculate or compare ingredient quantities.	adapt, ingredient quantity, sensory evaluation, texture, appearance, nutrition, cost, variable
Year 5	Cooking and nutrition: Developing a recipe	Know how ingredients move from farm to fork and that nutritional value can be changed through ingredient choices. Understand that recipes are developed iteratively.	Investigate nutritional information; prepare ingredients safely; alter a traditional sauce or meal; record quantities and method; test, refine and present a developed recipe.	farm to fork, nutritional value, protein, carbohydrate, fibre, fat, modify, portion
Year 6	Cooking and nutrition: Come dine with me	Understand that a successful meal balances nutrition, taste, appearance, timing, hygiene and the needs of guests. Know that hospitality involves coordinated roles and service.	Plan a menu and workflow; scale quantities; prepare and cook safely; manage time; plate and present food; gather guest feedback; evaluate the complete dining experience.	menu, course, portion, workflow, cross-contamination, presentation, hospitality, feedback

Teaching note: Progression is cumulative. Pupils should apply earlier knowledge and safe routines while working with more demanding users, materials, components, tools, specifications and levels of independence.



Using the Progression Document

Planning, teaching, assessment and subject leadership

Planning from the progression

1 START WITH PRIOR LEARNING Identify the technical knowledge, vocabulary, tool skills and safety routines pupils need before the unit.	2 DEFINE USER & PURPOSE Make the design problem, intended user, purpose and criteria explicit before pupils generate ideas.	3 MODEL THE NEW STEP Demonstrate technical knowledge, accurate tool use, food hygiene and design communication before guided practice.
4 ASSESS PROCESS & PRODUCT Use talk, designs, prototypes, observation, testing and outcomes rather than judging only appearance.	5 BUILD ITERATION Plan purposeful opportunities to test, gather feedback, diagnose faults and improve during making.	6 DEVELOP INDEPENDENCE Adapt access without reducing ambition so pupils make choices, solve problems and justify decisions.

What progression should look like in pupils' learning

KNOW MORE Pupils recall connected knowledge about users, materials, mechanisms, structures, textiles, circuits and nutrition.	DO MORE Pupils use a broader range of tools, ingredients, components and processes with greater accuracy and safety.	CHOOSE MORE Pupils select materials, methods and components according to function, properties, user and purpose.	IMPROVE MORE Pupils test, diagnose, evaluate and refine against increasingly precise criteria and evidence.
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Suggested evidence for subject leadership

PUPIL VOICE Can pupils explain the user, purpose, technical knowledge, choices, tests and improvements?	DESIGNS & PRODUCTS Do research, criteria, diagrams, prototypes, practical work and final products show increasing accuracy and independence?	LESSON VISITS Are teachers modelling technical concepts, vocabulary, safe practice and iterative thinking?	ASSESSMENT Do judgements reflect designing, making, evaluating and technical knowledge, with clear next steps?
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This document should be read alongside the Design and Technology Long-Term Overview, Kapow Primary unit planning and knowledge organisers, risk assessments, food-safety guidance, assessment materials and examples of pupils' work.