

St Charles' CVA Design and Technology Knowledge Progression 2026–2027

Whole School at a glance

Class	Design	Make / procedural knowledge	Evaluate	Technical knowledge progression
Haddon – Reception	Explore materials and communicate simple ideas	Cut, join, thread, prepare food and construct	Test simple products and talk about improvements	Materials, simple structures, food, textiles, floating/mechanisms
Chatsworth – Y1	Design simple products for a user/purpose	Develop safe food preparation, sewing and slider construction	Test function and make simple improvements	Food preparation, stitches, sliders
Bolsover – Y2/3	Use design criteria and templates; consider user needs	Sew pouches, build linkages, prepare balanced food	Evaluate strength, movement, function and nutrition	Textiles, mechanisms, cooking/nutrition
Melandra – Y3/4	Adapt existing ideas and prototype solutions	Accurate measuring, fastenings, recipe adaptation, shell structures	Refine products against criteria and user feedback	Textiles, structures, cooking/nutrition
Peveril – Y4/5	Generate technical solutions to increasingly complex briefs	Integrate circuits/motors, gears/pulleys and develop recipes	Troubleshoot, gather feedback and iterate	Electrical systems, mechanical systems, cooking
Hardwick – Y6	Work increasingly independently from research to specification	Integrate electrical systems; construct refined textiles; cook multi-part products	Critically evaluate function, quality, user needs and constraints	Independent design–make–evaluate and technical knowledge

Haddon Class – Reception

Design and Technology Knowledge Progression

Term / unit	Builds on	Knowledge progression	D&T skills / application	Key vocabulary	Where this leads next
Structures: Junk modelling	Exploring everyday objects, materials and construction through play.	Know that materials have different properties and can be chosen for a purpose; structures are made by joining parts; temporary joins can be changed; models can represent an idea.	Explore and select junk materials; cut safely with scissors; join using tape/glue/temporary methods; make a simple model; talk about what works and what could improve.	material; model; structure; join; cut; scissors; tape; glue; design; evaluate	Provides foundations for KS1 structures, material selection and the design–make–evaluate cycle.
Cooking and nutrition: Soup	Experiences of food, taste, healthy choices and fine-motor activities.	Know that fruits and vegetables are plant foods; ingredients can be combined to make a product; hygiene and safety matter when preparing food; a simple product can be designed for a user.	Explore fruits/vegetables; practise safe preparation; design a soup; combine ingredients with adult support; design simple packaging; evaluate taste and appearance.	fruit; vegetable; ingredient; soup; healthy; hygiene; prepare; design; taste; packaging	Leads to Year 1 smoothies and later understanding of balanced diets, recipes and food preparation.
Textiles: Bookmarks	Threading, weaving and manipulating materials.	Know that textiles are flexible materials; threading and weaving join or interlace materials; a product can be designed for a purpose and decorated.	Thread and weave; practise simple sewing through open-weave fabric; choose colours/materials; design and create a bookmark; evaluate against the intended purpose.	textile; fabric; thread; weave; sew; needle; bookmark; design; decorate; evaluate	Prepares pupils for Year 1 simple stitches and later textile construction.
Structures: Boats	Playing with water, materials and construction.	Know some materials are waterproof; floating and sinking depend on material, shape and construction; boats need features that help them float and remain stable.	Test materials; investigate floating/sinking; observe boat features; design, build and test a simple boat; improve it after testing.	boat; float; sink; waterproof; material; test; stable; design; build; improve	Builds early testing and evaluation skills used throughout structures and mechanisms.

Chatsworth Class – Year 1
Design and Technology Knowledge Progression

Term / unit	Builds on	Knowledge progression	D&T skills / application	Key vocabulary	Where this leads next
Advent – Cooking and nutrition: Making smoothies	Reception food preparation, fruits/vegetables, hygiene and designing food products.	Know the difference between fruits and vegetables and identify where some grow; understand that a smoothie combines prepared ingredients; hygiene and safe cutting are important; products can be designed for a user.	Taste and evaluate ingredients; design a smoothie; use safe preparation techniques; measure/combine ingredients; make and evaluate the finished drink and packaging.	fruit; vegetable; smoothie; ingredient; peel; cut; blend; hygiene; design; evaluate	Prepares pupils for balanced diets and adapting recipes in later years.
Lent – Textiles: Simple stitches	Reception threading, weaving and introductory sewing.	Know fabric can be joined using stitches; a needle and thread are tools for sewing; simple stitches can create functional joins and decorative effects; designs should meet a purpose.	Thread a needle with support; practise simple stitches; join fabric; choose materials and decoration; follow a simple design; evaluate the product.	textile; fabric; needle; thread; stitch; sew; join; template; decorate; design	Builds towards pouches, fastenings and increasingly accurate textile construction.
Pentecost – Mechanisms: Matching slider game	Reception instructions, moving parts and simple construction.	Know a mechanism makes something move; a slider moves backwards and forwards along a straight path; slots/guides control movement; mechanisms can be incorporated into a purposeful product.	Explore sliders; make a working sliding mechanism; design a matching game; measure/cut slots with support; assemble, test and improve movement.	mechanism; slider; slot; guide; movement; design; make; test; evaluate; user	Provides the foundation for moving monsters and more complex mechanical systems.

Bolsover Class – Years 2 and 3
Design and Technology Knowledge Progression

Term / unit	Builds on	Knowledge progression	D&T skills / application	Key vocabulary	Where this leads next
Advent – Textiles: Pouches	Year 1 simple stitches, joining fabric and decorative choices.	Know that a pouch is a functional textile product; templates help pieces match; running stitch can join fabric; seam allowance and secure stitching improve strength; design choices should reflect user and purpose.	Design a pouch; create/use a template; cut fabric accurately; pin/hold pieces; sew running stitch; add decoration; evaluate strength, appearance and function.	pouch; textile; fabric; template; running stitch; seam; needle; thread; join; function	Prepares pupils for fastenings, pattern pieces and more complex textile products.
Lent – Mechanisms: Making a moving monster	Year 1 sliders and understanding that mechanisms create movement.	Know linkages connect levers to create movement; pivots allow parts to rotate; changing pivot positions can alter the motion; a mechanism must be integrated into a product for a purpose.	Investigate linkage systems; make levers/pivots; prototype movement; design a moving monster; assemble accurately; test and improve the mechanism.	linkage; lever; pivot; mechanism; motion; input; output; prototype; design; evaluate	Leads to KS2 mechanical systems including gears, pulleys and more complex motion.
Pentecost – Cooking and nutrition: Balanced diet	Year 1 fruits/vegetables, food preparation, hygiene and simple product design.	Know foods can be grouped and balanced across a diet; ingredients have nutritional roles; a product should meet a design brief and user need; safe preparation and hygiene are essential.	Explore food groups; evaluate existing products; design a balanced meal/snack; prepare ingredients safely; assemble a product; evaluate against criteria.	balanced diet; food group; nutrition; ingredient; healthy; hygiene; prepare; design criteria; evaluate	Builds towards adapting recipes, nutritional choices and independent cooking.

Melandra Class – Years 3 and 4
Design and Technology Knowledge Progression

Term / unit	Builds on	Knowledge progression	D&T skills / application	Key vocabulary	Where this leads next
Advent – Cooking and nutrition: Adapting a recipe	Balanced diet, food groups and safe preparation.	Know recipes specify ingredients, quantities and methods; recipes can be adapted for taste, nutrition, cost or user needs; ingredient changes can alter flavour, texture and appearance; food should be prepared hygienically and safely.	Analyse a recipe; identify possible adaptations; measure accurately; use appropriate preparation/cooking techniques; modify ingredients; evaluate against design criteria and user needs.	recipe; adapt; ingredient; quantity; method; nutrition; texture; flavour; measure; evaluate	Prepares pupils for upper-KS2 recipe development, budgeting and increasingly independent food preparation.
Lent – Textiles: Fastenings	Pouches, running stitch, templates and fabric joining.	Know fastenings have different functions and suitability; products can use buttons, zips, hook-and-loop or other systems; accurate measuring, templates and stitching improve quality; prototypes help test ideas.	Investigate fastenings; design for a user; create templates/pattern pieces; cut and sew accurately; attach a fastening; test function and refine.	fastening; button; zip; hook-and-loop; template; pattern piece; seam; stitch; prototype; user	Builds towards Year 6 bags and independent textile design choices.
Pentecost – Structures: Constructing a castle	Early structures, stability, joining and material selection.	Know structures require strength, stability and suitable materials; shell structures can be strengthened through shape and reinforcement; tabs and joins connect components; design features should reflect a brief and intended user.	Investigate castle structures; draw annotated designs; create nets/templates; cut, score, fold and join accurately; add structural features; test and evaluate stability and appearance.	structure; castle; shell structure; net; tab; score; reinforce; stable; design brief; evaluate	Supports later structural problem-solving and precise construction in complex products.

Peveril Class – Years 4 and 5
Design and Technology Knowledge Progression

Term / unit	Builds on	Knowledge progression	D&T skills / application	Key vocabulary	Where this leads next
Advent – Electrical systems: Wobble bots	KS2 structures and science knowledge of simple electrical circuits.	Know an electrical product needs a complete circuit; motors convert electrical energy into movement; an off-centre weight can create vibration/wobble; switches control a circuit; components must be positioned securely within a designed product.	Build/test simple circuits; connect a motor and switch; create an off-centre rotating mass; design a product around the mechanism; construct housing; troubleshoot and evaluate.	circuit; motor; switch; battery; component; vibration; electrical system; input; output; troubleshoot	Prepares pupils for Year 6 electrical products and more independent circuit integration.
Lent – Mechanical systems: Gears and pulleys	Levers/linkages and understanding input/output movement.	Know gears transmit rotational movement and can change speed/direction; meshing gears rotate in opposite directions; pulleys use wheels and belts/cord to transfer movement; gear size affects mechanical advantage and output.	Investigate gear trains and pulleys; compare systems; select suitable components; prototype mechanisms; design and construct a functional mechanical product; test and refine.	gear; gear train; pulley; axle; rotation; driver; follower; speed; direction; mechanical advantage	Deepens technical understanding ready for KS3 mechanisms and engineering.
Pentecost – Cooking and nutrition: Developing a recipe	Adapting recipes, measuring and evaluating food products.	Know recipes can be developed systematically to meet a brief; ingredient quantities affect flavour, texture, nutrition and cost; food provenance and nutritional balance inform design decisions; evaluation can lead to iterative improvement.	Research/evaluate products; develop a recipe; calculate/adjust quantities; prepare and cook safely; consider cost/nutrition; gather feedback and refine the final product.	develop; recipe; quantity; ratio; nutrition; cost; provenance; method; feedback; refine	Prepares pupils for independent food design and practical work at KS3.

Hardwick Class – Year 6

Design and Technology Knowledge Progression

Term / unit	Builds on	Knowledge progression	D&T skills / application	Key vocabulary	Where this leads next
Advent – Cooking and nutrition: Come dine with me	Recipe development, nutrition, measuring, cost and evaluation.	Know a successful menu considers nutrition, seasonality, flavour, presentation, user needs and practical constraints; recipes can be scaled and adapted; safe, hygienic preparation and cooking techniques are essential.	Research and plan a menu; select complementary dishes/ingredients; scale quantities; use increasingly independent preparation/cooking techniques; present food attractively; evaluate using feedback.	menu; course; seasonality; nutrition; presentation; portion; hygiene; method; feedback; evaluate	Culminates primary cooking and nutrition and prepares pupils for KS3 food preparation and nutrition.
Lent – Electrical systems: Steady hand game	Year 5 circuits, switches, motors and integrating components into products.	Know a steady-hand game uses a complete circuit in which contact acts as a switch; buzzers provide an output; circuit diagrams use standard symbols; electrical components must be selected and housed safely in a functional structure.	Design to a brief; draw/use a circuit diagram; build a circuit with battery, buzzer and contact switch; construct a stable game; troubleshoot; test and evaluate against criteria.	circuit; buzzer; switch; contact; conductor; insulator; circuit diagram; symbol; component; troubleshoot	Consolidates electrical-system knowledge and prepares pupils for KS3 electronics and systems.
Pentecost – Textiles: Bags	Fastenings, templates, pattern pieces and accurate stitching.	Know bags are designed around user needs, function, material properties, construction and finish; pattern pieces and seam allowances support accuracy; different stitches and fastenings suit different purposes; prototypes and evaluation improve quality.	Research bags; write design criteria; develop pattern pieces; select fabric; cut and sew accurately; incorporate suitable fastening/handle; finish neatly; evaluate and refine independently.	bag; pattern piece; seam allowance; fastening; fabric; stitch; handle; prototype; design criteria; finish	Culminates primary textile progression and supports independent product design and manufacture at KS3.

