

Key Stage 1: Linear Foundations Model

In Key Stage 1, D&T is taught in discrete year groups, alternating with Art units to build foundational fabrication, structural logic, and mechanical understanding

Year Group & Term	Unit Title & Disciplinary Role	Technical D&T Strand	Project Brief & Deliverable
Year 1 - Autumn 2	The Time Traveller (Junior Builder)	Structures: Timber-framing & bracing	Wattle and Daub Miniature Section: Construct a freestanding timber-frame wall section using lolly sticks and clay/straw daub, applying triangulation for stability
Year 1 - Spring 2	The Urban Ranger (Product Designer)	Structures & Materials: User-centred design	Urban Bird Feeder: Design and assemble a weather-resistant hanging bird feeder tailored to local birds, selecting tools to cut, punch, and join components
Year 1- Summer 2	The Story Seeker (Nutritionist)	Cooking & Nutrition: Food preparation & provenance	Sports Day Energy Snack: Design and prepare a nutritious athlete's snack from basic food groups, mastering hygienic slicing, mixing, and ingredient origins

Year Group & Term	Unit Title & Disciplinary Role	Technical D&T Strand	Project Brief & Deliverable
Year 2- Autumn 2	The Junior Architect (Structural Engineer)	Structures: Cylinders & standardisation	The Whitworth Tower: Engineer a freestanding tower using standardised parts, rolled paper cylinders, and internal triangulation to support vertical loads
Year 2- Spring 2	The Global Explorer (Textiles Designer)	Textiles: Stitching & joining	Continental Hand Puppet: Design and fabricate a 3D character puppet representing a chosen continent, using a running stitch to securely bond fabric layers
Year 2- Summer 2	The Human Engineer (Mechanisms Engineer)	Mechanisms: Linear sliders	Climate Converter Tool: Engineer a moving card device using a precise linear slider track to demonstrate human shelter and clothing adaptations between climates

Lower Key Stage 2: Disciplinary Guilds (Years 3 & 4)

In our mixed-age Lower Key Stage 2 setting, projects rotate across a two-year cycle (Cycle A and Cycle B).

Younger scholars act as **Lead Witnesses** and older scholars lead as **Expert Analysts**

Year Group & Term	Unit Title & Disciplinary Role	Technical D&T Strand	Project Brief & Deliverable
Year 3/4-Autumn 2	The Structural Analyst (Architectural Engineer)	Structures: 3D nets & shell structures	Monumental Shell Peak: Construct a 3D pyramid shell structure from a 2D net, mastering L-brace joints, 90-degree flanges, and mineral texturing.
Year 3/4Spring 2	The Map Explorer (Topographical Modeller)	Structures: Additive layering	Topographic Relief Model: Translate 2D OS map contour intervals of Lyme Park into a scaled 3D model by slicing and stacking clay strata.
Year 3/4Summer 2	The Hydrologist (Civil / River Engineer)	Structures: Surface reinforcement	Riverbank Revetment: Build a protective revetment prototype along a river bend using rip-rap stones and timber anchors to resist water flow.

Upper Key Stage 2: Strategic Architects (Years 5 & 6)

In Upper Key Stage 2, scholars tackle complex mechanical advantage, food chemistry, electrical circuitry, and civic architectural modelling

Year Group & Term	Unit Title & Disciplinary Role	Technical D&T Strand	Project Brief & Deliverable
Year 5/6Autumn 1	The Global Trader (Caravan / Rigging Engineer)	Mechanisms: Pulleys & mechanical advantage	Heavy-Lift Pulley System: Construct a wooden framed lifting system combining fixed and moveable pulleys, testing effort with Newton meters.
Year 5/6Autumn 2	The Molecular Merchant (Artisan Chemist)	Cooking & Nutrition: Dough proving & food chemistry	Artisan Loaf: Partner with local bakery experts to weigh baker's percentages, knead, prove, and bake bread, analysing irreversible transformations.
Year 5/6Spring 2	The Pulse Auditor (Textile Engineer)	Textiles: Appliqué & reinforced seams	Wellbeing Wall Square: Construct a multi-layered square with fabric appliqué and backstitch, joining pieces via reinforced structural seams