CREATE Federation
Taddington, Peak Dale and Dove Holes Primary School

Design Technology Assessment Rationale

Integrating Technical Mastery with Attitudes to Learning (A2L)

Curriculum Philosophy: The "Iterative" Approach

Our Design Technology (DT) curriculum empowers children to become problem-solvers who can design, make, and evaluate products for a range of users. Assessment is focused on the core disciplines of **Mechanisms, Structures, Textiles, Electrical Systems,** and **Food & Nutrition**. We distill the curriculum into key technical endpoints—from the simple slider to complex gear systems—underpinned by specific vocabulary and safety protocols.

Detailed **Knowledge Organisers** and **Learning Overviews** provided at the start of each block ensure that both substantive knowledge (how things work) and disciplinary skills (how to build them) are tracked. Parents can view the full long-term plan to see how skills like sewing and carpentry evolve.

The A2L "Litmus Test"

We utilize the **Attitude to Learning (A2L)** criteria (Levels 1-10) as a "litmus test" for technical achievement. High A2L scores indicate a child is effectively analyzing briefs and iterating their designs. Conversely, an **A2L Barrier** identifies a high potential for gaps in safety awareness, tool accuracy, or the resilience needed to fix a failing prototype.

Integrated DT Progress & A2L Barrier Map

Phase-Specific Support at Home

Phase 1: Pre-school & Reception (Foundations of Making)

- **Behaviour:** Practice "Tool Safety" by helping to set the table with cutlery correctly every day.
- **Active Voice:** Use "How could we join these?" prompts when playing with blocks or cardboard boxes.
- **Ownership:** Let them be the "Fixer"—helping to tape up a broken toy or book.
- **Fixed Mindset:** If a tower falls, ask: "Which part was the weakest? How can we make the base wider?"

Phase 2: Year 1 & Year 2 (The Young Engineer)

- **Behaviour:** Practice "Precision" when following a simple recipe (e.g., weighing flour for playdough).

Level / Year	Assessment Endpoints	Active Voice Barrier	Behaviour Barrier	Ownership Barrier	Mindset / Safety Net
L1-4 (EYFS)	Use cutlery/scissors accurately. Join materials with masking tape/PVA. Use staples/hammers safely with supervision.	Unable to explain why they chose a specific fixing (e.g. tape vs glue).	Impulsivity with tools (scissors/cutlery) leads to safety risks.	Failure to return tools to the "lab" area after use.	Quitting when materials don't join immediately. Waiting for adult to fix it.
L5-6 (Y1-Y2)	Construct sliders/levers. Build stable freestanding towers. Use running stitch. Use claw/bridge food prep techniques.	Failing to use technical terms like "axle" or "chassis" correctly.	Rushing mark-making/cutting leads to weak structural joins.	Disorganised workspace prevents following a step-by-step recipe.	Fear of a tower toppling stops the testing of its height limit.
L7-8 (Y3-Y4)	Create complex linkages. Use levers for mechanical advantage. Construct bridge arches/piers. Build circuits with switches.	Inability to describe how energy is converted/controlled.	Rushing sewing or kneading leads to poor quality final outcomes.	Missing components (e.g. fasteners) prevents finishing a pouch.	Ignoring anomalies in a fair test of material strength.
L9-10 (Y5-Y6)	Use gears/pulleys for advantage. Reinforce frames with gussets/braces. Build parallel circuits. Master stir-fry/sautéing.	Passive participation stops the critical analysis of a design brief.	Lack of precision with carpentry tools leads to unstable frames.	Failing to manage project deadlines for complex structures.	Avoiding difficult physics concepts like friction or load bearing.

- **Active Voice:** Look for "Mechanisms" in the house: Find three things that use a slider, a hinge, or a lever.
- **Ownership:** Help them maintain a "Fix-it Box" with tape, string, and scrap card for independent making.
- **Safety Net:** Set a 5-minute challenge to build a bridge between two chairs using only newspaper.

Phase 3: Year 3 & Year 4 (The Analytical Builder)

- **Behaviour:** Discuss "Efficiency" when using kitchen tools (e.g., using a peeler vs a knife).
- **Active Voice:** Debate at dinner: "Which is the most important energy source in our house? Why?"
- **Ownership:** Quiz them on "Technical Terms" from their DT Organiser (e.g., *linkage, fulcrum, starch*).
- **Fixed Mindset:** Celebrate "Broken Circuits"—discussing why a battery might be flat or a wire loose.

Phase 4: Year 5 & Year 6 (The Master Designer)

- **Behaviour:** Model "Patience" during slow processes like bread proving or fabric dyeing.
- **Active Voice:** Ask them to explain how a household appliance (like a bike or toaster) works using five key terms.
- **Ownership:** Have them manage the "Resources List" for a weekend baking project or DIY repair.

– **Safety Net:** Encourage “Self-Governing” research into sustainable materials or alternative energy.

Note: Identification of an A2L barrier suggests potential gaps in technical knowledge or construction skills. Learning overviews cover the specific Textiles, Food, Mechanisms, and Structures domains.