Design & Technology Curriculum Overview

Intent

At Park Schools Federation, our D&T curriculum enables children to become creative problem-solvers, resourceful designers, and critical evaluators. We want pupils to:

- Design purposeful, functional, and appealing products for themselves and others.
- Learn how to select and use a wide range of tools, materials, and components effectively.
- Understand key principles of *mechanisms, structures, textiles, cooking and nutrition, electrical systems,* and *digital control*.
- Appreciate the role of designers, engineers, and inventors from different times, places, and cultures.
- Build confidence to take risks, become resilient, and learn from mistakes in practical contexts.

Implementation

- **Progressive structure**:
    - In **KS1**, pupils focus on *fundamental skills* such as cutting, joining, assembling, and simple mechanisms, alongside basic food preparation.
    - In **KS2**, children apply these foundations to more complex projects involving *structures, electrical systems, pulleys/gears, digital technology, textiles,* and *cooking & nutrition*.
- **Enquiry-based learning**: Each unit is framed around a "big question" (e.g. *How can we make a puppet come alive?*).
- **Flashback questions**: Lessons start with recall tasks to strengthen memory of prior skills and knowledge.
- **Key concepts**: *Design, function, evaluation, innovation, resilience,* and *fitness for purpose* are explicitly revisited across projects.
- **Vocabulary focus**: Technical terms (e.g. *axle, structure, stable, join, evaluate, prototype*) are explicitly taught and revisited.
- **Cross-curricular links**: D&T connects with Science (forces, electricity, nutrition), History (Victorian mining, Roman structures, WW2 rationing), Geography (food sources, sustainability), and Computing (programming motors, digital design).
- **Real-world context**: Pupils study and are inspired by the work of designers, engineers, and inventors (e.g. Isambard Kingdom Brunel, Zaha Hadid, Tim Berners-Lee)

Impact

By the end of KS2, pupils will be able to:

- Design products with a clear purpose and specific user in mind.
- Select and use tools, materials, and techniques confidently and safely.
- Evaluate their own work and that of others, suggesting improvements.
- Apply their technical knowledge to solve real-world problems.
- Talk about the work of key designers and engineers and its relevance to their own projects.

Pupils leave Park Schools Federation as imaginative, practical learners who can design, make, and evaluate in ways that connect creativity with real-world solutions.

Topic Overview

Year Group	Autumn Term	Spring Term	Summer Term
FS2	Activities linked to Expressive Arts & Design. (See Art & Design curriculum overview)		
Year 1	Mechanisms – Sliders and Levers	Cooking & Nutrition - Sandwiches	Textiles - Puppets
Year 2	Structures - Fairgrounds	Cooking & Nutrition – Grow and eat your own healthy food	*Mechanisms – Wheels & Axles*
Year 3	Textiles – Felt Cap	*Structures – Build a House with Natural Materials*	*Cooking & Nutrition – Bread*
Year 4	*Cooking – Adapting a Recipe (Roman Honey Biscuits)*	*Electrical Systems – Torches*	*Structures – Viking Longboats*
Year 5	*Levers, Pulleys & Gears – Drawbridge*	*Structure – Earthquake Resistant Building*	Cooking - Pasta
Year 6	Design & Make a Vehicle to Transport a Load with Sphero	Cooking – Adapt a Recipe (WW2 Link)	Textiles – Upcycling Old Clothes