



Design and technology

The Subject Vision

At Fleetville, we want every child to see themselves as a designer, maker and innovator. We believe that Design and Technology (DT) is about solving real problems, trying out ideas, and learning through hands-on experience. Because making things can sometimes feel daunting, we teach DT through clear, step-by-step processes so every child gains the practical skills and confidence to build functional products.

Our DT curriculum is built upon four Big Ideas:

- **Design:** Understanding who we are making for, coming up with creative ideas, and sharing them through sketches, diagrams and design templates.
- **Make:** Choosing the right materials and learning to use tools safely to make high-quality products.
- **Evaluate:** Testing our designs, seeing what works well, and taking feedback to make our work even better.
- **Technical Knowledge:** Learning the key mechanics, structural rules, circuits, and food skills that make products work.

The Learning Journey

	Aut 1	Aut 2	Spr 1	Spr 2	Sum 1	Sum 2
Year 3		Structures Constructing a castle		Textiles Animal cushions		Cooking and nutrition Eating seasonally
Year 4		Cooking and nutrition Adapting a biscuit recipe		Electrical circuits Making lamps		Structures Making helmets
Year 5	Mechanical systems/Textiles Young People's Puppet Theatre Project				Cooking and nutrition Developing a recipe	
Year 6	Cooking and nutrition Two course meal	Electrical circuits Steady hand games		Textiles Waistcoats	Mechanical systems K'Nex challenge	

Implementation

DT is taught through practical, structured lessons that value the process of design and problem-solving just as much as the final piece:

- **A Hybrid, Progressive Model:** We use the Kapow scheme of work as our foundation. Skills are built step by step so children practise specific techniques before applying them to a main project.
- **Direct Tool Teaching:** Before using tools like saws, glue guns, craft knives, or needles, children are explicitly taught how to handle them safely.
- **Individual Choice:** Even when a whole class makes a similar item (such as a helmet, a waistcoat, or a steady hand game), pupils make key design choices. They choose materials, colours, and finishes to suit a specific purpose and target user.
- **Design Templates:** Children use design templates, pattern pieces, paper nets, and CAD software to help turn their ideas into accurate physical models.
- **Hands-on Enrichment:**
 - **Year 5 Puppet Theatre Project:** Year 5 pupils work on an immersive project with the Young People's Puppet Theatre. They combine art and DT to design, build, and perform with real puppets in a special show for parents.
 - **Year 6 K'Nex Challenge:** Year 6 pupils enter the annual Hertfordshire STEM Point K'Nex Challenge, putting their mechanical and structural engineering skills to the test.

Support

We believe every child can succeed in DT when given the right scaffolding and tools:

- **Granular Steps:** Units are broken down into small, simple tasks so children build confidence as they go.
- **Process Over Product:** We embrace testing and making changes along the way. Mistakes are just a normal part of the design process.
- **Visual Steps to Success:** Teachers provide clear visual guides, physical examples, and design templates to support independent work.
- **Practical Modelling:** Teachers demonstrate every technique and safety rule clearly before pupils start making.

Impact

- **Formative Feedback:** Assessment is ongoing. Teachers provide immediate, verbal feedback at the desk or via the visualiser, to help children adjust their techniques in real time.
- **Summative Evaluation:** At the end of a unit, teachers review design sheets, and final products against our progression framework. Kapow end-of-unit quizzes are used to check that core vocabulary and technical knowledge have stuck.
- **The Ultimate Test:** This is demonstrated when pupils can confidently show that they know more about design and technology, can speak knowledgeably about how mechanisms, structures, and circuits work, and can showcase a diverse range of taught practical skills in their independent work.