



What will you see in Engineering lessons? Pupils will engage in both theoretical and practical learning, applying engineering principles to real-world contexts. Lessons will include problem-solving tasks, design projects, and technical drawing. Pupils will develop skills in CAD (Computer-Aided Design), materials testing, and mechanical/electrical systems analysis. They will be encouraged to plan and carry out investigations, risk assess and evaluate outcomes. Numeracy skills will be developed through calculations involving forces, stress/strain, electrical circuits, and efficiency. Literacy skills will be enhanced through technical report writing, interpreting command words in assessments, and using key terminology accurately.	What are the common misconceptions that pupils have and make in Engineering that we need to address? • Engineering is only about “fixing machines” rather than design, innovation, and analysis. • CAD software does all the thinking for you. • Electrical current is “used up” in a circuit. • Stronger materials are always better, regardless of application. • Safety procedures are optional if you “know what you’re doing.” • Engineering is the same as physics, without practical application.	What will you see in pupils’ Engineering books/portfolios? • Clear titles, dates, and learning objectives. • Evidence of technical drawings, design projects, and calculations. • Practical investigation write-ups and project portfolios. • Self and peer assessment, alongside teacher feedback. • Application of equations, CAD proficiency, and practical project success. • Focus for improvement: extended technical writing, linking theory to industry case studies, and applying engineering principles to unfamiliar contexts.
What assessment (formative and summative) methods do we use in Engineering? Formative assessment is embedded in lessons through questioning, peer review, and live marking. Teachers identify gaps and provide targeted support. Summative assessments occur each half term, including written exams, practical projects, and portfolio reviews. Pupils reflect on feedback and set improvement targets.	Secondary ENGINEERING Engineering is about.... solving real-world problems by applying science, maths, and creativity. At Level 3 BTEC, students explore how systems, machines, and structures are designed, tested, and improved to meet human needs. It’s not just about fixing things — it’s about innovation and design, whether that’s creating efficient electrical circuits, developing sustainable energy solutions, or designing mechanical components that work safely and reliably.	What will you see in Physics at Liverpool College that extends beyond the National Curriculum and / or exam specifications? • Exposure to industry-standard CAD software and simulation tools. • Guest lectures and workshops from engineering professionals. • Links to STEM careers and apprenticeships. • Opportunities to explore advanced topics such as renewable energy systems, robotics, and automation.
Parents can help their children in their Engineering studies by.... ✓ Discussing new learning and reviewing portfolios together. ✓ Supporting with homework and project deadlines. ✓ Encouraging use of online resources such as BBC Bitesize Engineering, STEM Learning, and manufacturer technical guides. ✓ Promoting awareness of engineering in everyday life (e.g., transport, energy, construction).		