

# Engineering

## Curriculum Intent Statement

**“I have not failed, but found 1000 ways to not make a light bulb.”- Thomas Edison**

**At Lunesdale Learning Trust in Engineering we will enable pupils to develop an understanding of the basic principles that underpin the world of engineering. A combination of theoretical and practical activities will provide pupils with opportunities to develop determination, resilience, problem solving skills and the ability to work both independently and as part of a team.**

At KS4:

- access a broad engineering experience
- develop an understanding of engineering materials and manufacturing processes
- develop an understanding of engineering systems including mechanical, electrical, electronic, structural and pneumatic
- learn how to test and evaluate engineered products using physical methods, CAD and mathematical models
- understand the impact of modern technologies
- develop practical engineering skills including CAD and CAM, to engineer a product to solve a problem
- work with professional partners

At KS5:

- develop competence in engineering maths
- understand the properties of materials and the basic principles of fluid mechanics and thermal physics
- understand the basic principles of mechanical engineering including loading mechanical components; levers, pulleys and gearing; the properties of beams and the principles of dynamic systems

**KS3** : foundation content in Maths, Physics and D&T

**KS4** : **We offer** AQA GCSE Engineering

**KS5** : **we offer** OCR Level 3 Cambridge Technical Certificate in Engineering Principles