

# Engineering

**Subject Leader:** Mr T Priest [tpriest@taptonschool.co.uk](mailto:tpriest@taptonschool.co.uk)

**Curriculum Intent:** Through a combination of traditional and technological approaches, the Engineering programme will enable students to solve problems by learning from their mistakes when creating electronic and mechanical products and systems.

	<b>Core Knowledge</b>	<b>Procedural Knowledge</b>
	<p><b>Topics:</b></p> <ul style="list-style-type: none"> <li>Material properties of metals.</li> <li>Metalworking processes and tools.</li> <li>Lathe and milling machine operation.</li> <li>Computer Aided Design.</li> <li>Quality control.</li> <li>Selection of materials.</li> <li>Extracting information from engineering drawings</li> <li>Health and safety and risk assessment.</li> <li>Sustainable design.</li> </ul>	<p><b>Students will:</b></p> <ul style="list-style-type: none"> <li>Follow Engineering drawings to plan making a Phone Holder.</li> <li>Risk Assess.</li> <li>Plan for making.</li> <li>Take part in practical lessons on manufacturing the Phone Holder.</li> <li>Explain why materials have been chosen.</li> <li>Evaluate the completed product including if it meets tolerances.</li> </ul>

**Homework:**

Homework is set on Satchel:One for every six hours taught.  
Homework will comprise a presentation on the negative impact of Technology and revision for tests.

**Assessment:**

Formative verbal and other feedback.  
Exploration grade (research).  
Create grade (making).  
Evaluation grade.  
Principles grade through a multiple-choice test.  
Presentation skills and content grade.

**Links to Personal Development:**

Iterative design.  
Dexterity and soldering skills.  
Coding.  
Self-evaluation of work.  
Presentation skills.

**How is my knowledge further developed in Year 9?**

In Year 9, students that opt to take Engineering will explore electronics and structures, create a can crusher and a torch/flashlight, evaluate their work and develop a good understanding of Computer Aided Design.