

Intent: What are we trying to achieve?

Subject Vision - Engineering

To provide pupils with a good quality insight into the world of Engineering and equip pupils with a secure knowledge of the different Engineering principles. This is an extremely useful starting point for pursuing further education and employment in the Engineering sectors.

The Engineering Level 2 course at Parklands aims to demonstrate to pupils which areas of Engineering they may wish to pursue a career in. It aims to give an insight in what employment looks like in each of the Engineering principles and also what skills and knowledge would be required to be successful in their chosen field. We have identified at Parklands the many opportunities available within the local area, should pupils wish to pursue employment in Engineering. We aim to help pupils develop the knowledge, confidence and practical skills to pursue such careers.

Curious Learners

Curious learners are creative learners. At every opportunity we encourage pupils to make creative decisions independently. This includes responding to synoptic challenges and making informed decisions on appropriate materials and practical techniques. We encourage pupils to think 'outside the box', so they may solve problems with solutions which are innovative and purposeful.

Respectful Citizens

Pupils will learn the importance of how decisions as a designer can have an impact on others. Pupils will learn how engineered outcomes can impact the environment and the availability of finite resources. They will also understand how Engineers will be fundamental in achieving a sustainable future. Learners in Engineering will learn how to work in a potentially hazardous environment safely, ensuring their own safety and the safety of others. They will learn how to produce risk assessments and about the Health and safety at work act.

Aspirational Individuals

Our assessment policy helps to add value to key pieces of work and celebrates achievement throughout year 10. This assists with guiding pupils to better outcomes and helps to outline what steps need to be taken to achieve more. This will also help prepare pupils for the independent nature of the year 11 synoptic challenge.

Modelling outcomes is a strength within the department and helps to set the standard for expectations.

Motivated Achievers

In year 10 Engineering, pupils have opted to choose this GCSE pathway. This is an exceptionally popular GCSE and places are competitive. Pupils value their place on the course and as thus are motivated and committed learners. Links to industry and estimated salaries throughout our schemes of work also adds a sense of relevance to their achievements and helps instill a desire to succeed.

The Key concepts that run through Engineering:

- Pupils must continue to have an understanding of the working and theoretical properties of our material categories.
- Pupils must continue to solve engineering problems by applying theoretical understanding and practical techniques..
- Pupils must know how to remain safe in the workshop and use this to develop confidence and precision.
- Pupils must develop a strong understanding of the wider issues related to material categories and manufacturing processes. This includes the impact of the environment and potential issues with health and safety.
- Pupils must understand the different Engineering principles to develop a more accurate picture of what Engineering in employment looks like.