YEAR 10 SUBJECTS

Physics

This course is intended for students who have an interest in understanding the fundamentals of motion and energy principles and how applications of these impact on every day life. You will study the following topics: designing and undertaking practicals for analysis and presentation of findings; describing motion (distance, speed, and acceleration); the combination of forces that result in motion; analysis of physical interactions by the consideration of the energy of a system and its energy conservation. ICT is extensively used in practicals and for learning purposes.

Generic skills that are considered across all the subjects in the Science faculty include:

- Application and analysis of theory to practical situations as part of the scientific model specific to the practical
- Use equipment, materials and instruments responsibly and safely
- Present experimental results appropriately; correct use of the selected report writing format
- Apply techniques to locate more precise information from websites, including searching general and specialised directories; use of selected software and hardware to enhance and support the application of content

Subject specific skills are:

- You will explain the change in the motion of an object in terms of its position, speed and acceleration
- You will account for the motion of an object in terms of the forces acting on the object and the energy transformations it undertakes
- You will develop an understanding of kinetic, gravitational potential and elastic potential energies; and their relationship as the total energy of a system, including energy transfer to heat and sound in non-isolated systems
- You will design and undertake practicals, analyse data and present practical reports

"There are many things that I enjoy about Physics. Firstly, I love how Physics dives into the fundamentals of nature and how things work. Everything that I have learnt in class could be applied in my everyday life. I would think to myself I wonder how that happens, or how could I calculate that? And because of Physics, I am able to understand simple and challenging things in my daily life. Secondly, I love how Physics always has one answer. With English you have to be creative and go in-depth about a book, it doesn't matter how you think it is always the right answer, but with Physics there is only one answer, and that is how my brain works."

Joshua Attard