

Year 10

Term 2

PHYSICS

Course Content

The term starts by discussing the concepts of centre of mass, stability and moments. We'll then discuss momentum and impulse and its application in automobile safety and rocketry. The concepts of work, energy use and power will follow. Students will have the opportunity to investigate their ability to do physical work and find their personal power. The concept of pressure will then be covered including pressure in fluids and its application to hydraulic systems, barometers and manometers. Thermal physics follows including the kinetic theory of matter, state changes, evaporation and the gas laws. Thermal energy transfer will then be investigated together with temperature, thermometers and internal energy (please note that this section may spill over to Term 3, depending on the class progress).

Resources.

- Text: Pople, Stephen. 2014. *Complete Physics for Cambridge IGCSE, 3rd Ed.*, Oxford University Press
 - Section 2, parts 2.11-2.12
 - Section 3, parts 3.02 to 3.03 and 3.05 to 3.10
 - Section 4, Forces and Energy parts 4.01 to 4.04
 - Section 5, Thermal effects - all
- Class handouts, including past exam questions
- Further resources, links, video clips, computer simulations etc. posted on Edmodo.

Assessment.

- Class participation, assignments, investigations and experimental reports 20%
- IGCSE-style, controlled, written assessments 80%