# Year 11 Physics Learning Map

# - TERM 1 -

#### **P8 Forces in Balance**

We and all objects around us are acted on by different forces at all times. In this topic, we look at the different forces and how we measure them and their effects.

# **P9 Motion**

In this topic we look at calculations of speed, relative speed and acceleration. Then, we learn how to analyse journeys on distance–time and velocity-time graphs.

# P10 Force and Motion

Engineers designing cars need to know about forces on the cars and how these forces affect the car and its occupants. This topic explores the forces involved in moving objects, such as cars, and their effect.



LINKS TO PRIOR LEARNING

Previously, you would have learnt about the different forces that act on stationary and moving objects and described their effects on those objects. You would also recall how to calculate resultant force.



#### - TERM 2 -

#### **P11 Wave Properties**

This topic starts by exploring the characteristics of waves, and then goes onto defining frequency, wavelength, and wave speed and how to calculate each of those. It ends with an in-depth look at reflection and refraction.

#### **P12 Electromagnetic Waves**

Light is part of a family of waves called electromagnetic spectrum, which all have some properties in common. In this topic we explore the characteristics, uses and harmful effects of the waves in different parts of the E.M spectrum.



#### LINKS TO PRIOR LEARNING

Previously, you would have studied about waves and explored some of its properties, such as reflection and refraction. You may also be able to describe terms such as frequency, amplitude and wavelength.



# - TERM 3 -

# P13 Electromagnetism

Electromagnetism has important scientific and technological applications. It is used in many electrical appliances to generate desired magnetic fields. Here, we learn about the properties of permanent magnets and electromagnets and their uses.



#### LINKS TO PRIOR LEARNING

Previously, you would have learnt about permanent magnets and electromagnets. You may be able to describe the interaction between two magnets.

