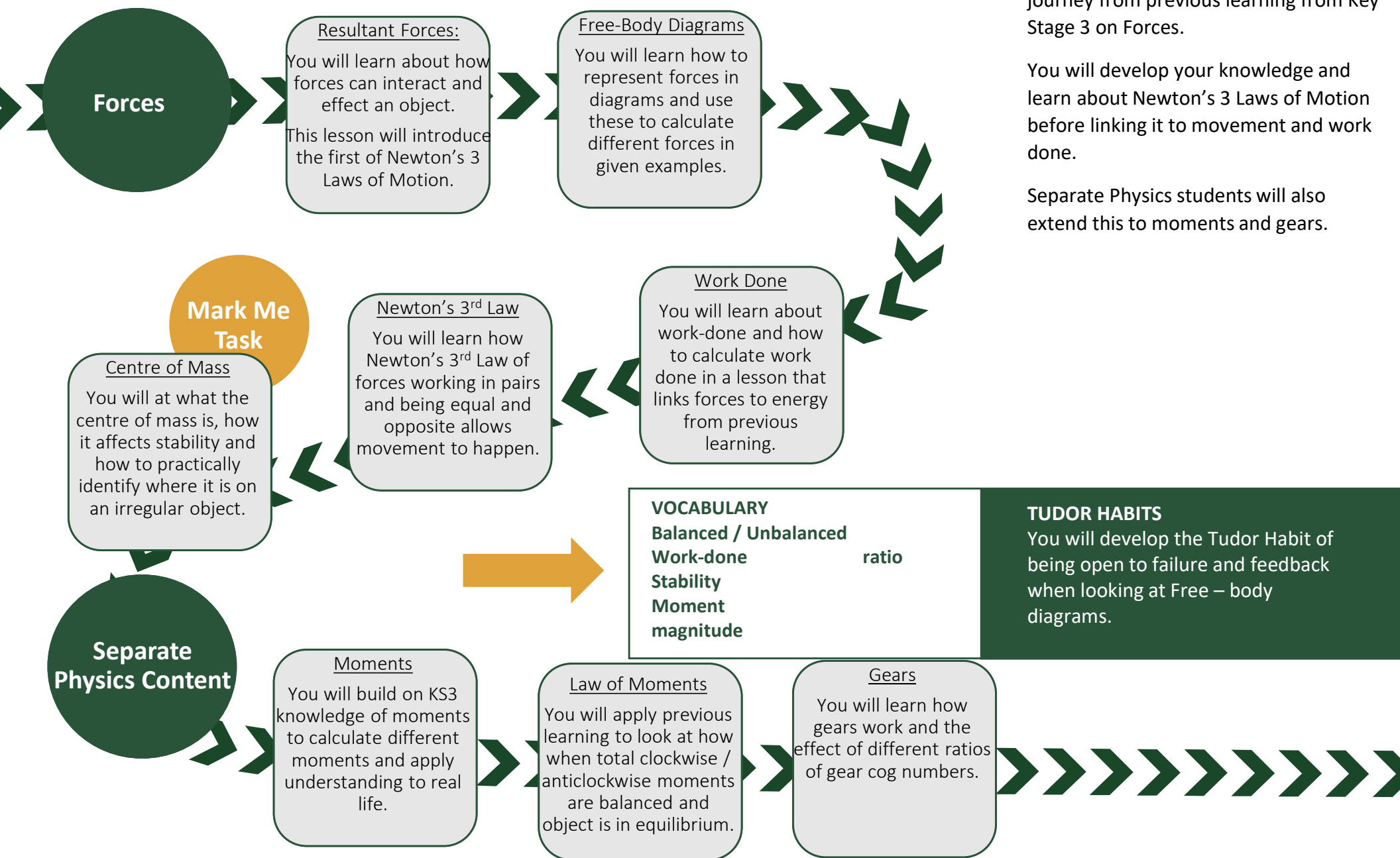




LEARNING JOURNEY

Physics

P5-1 - Forces



This module continues your learning journey from previous learning from Key Stage 3 on Forces.

You will develop your knowledge and learn about Newton's 3 Laws of Motion before linking it to movement and work done.

Separate Physics students will also extend this to moments and gears.

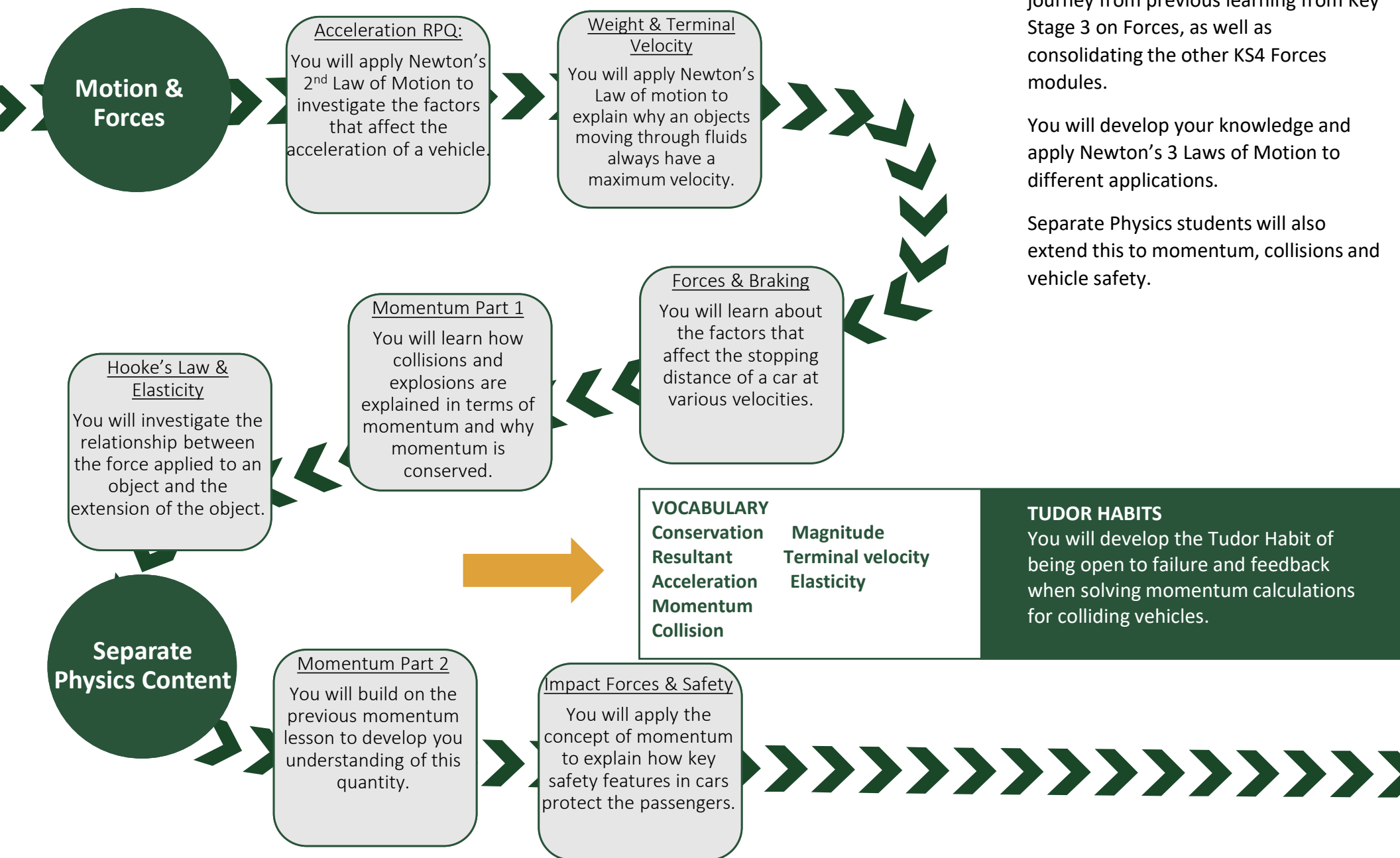


LEARNING JOURNEY

Year 11 Autumn Half Term 2

Physics

P5 Forces 3 - Motions + Forces (dynamics)





LEARNING JOURNEY

Physics

P6 Waves 1 and 3

Waves

Wave Types and Features:

You will learn the main types of wave, in terms of direction of oscillation and medium required

Wave Properties:

You will learn the features of waves, and how to measure and calculate quantities; and how to use waves on graphs

Practical:

You will develop practical skills and learn how we can measure a range of quantities to calculate wave speed.

You will learn a good deal of technical knowledge about waves and their features. You will study how waves are used in nature and in science.

You will learn how to measure waves, and how to calculate a range of quantities from such information.

You will learn more about ray diagrams, and how these allow you to show refraction, a concept which you will take forward when you are learning about lenses.

Reflection and Refraction

You will learn how to draw ray diagrams and what the rules of refraction and reflection are

Refraction Practical

You will develop practical skills further, planning a valid method. You will learn how the reflection and refraction practical work.

Mark Me Task

Sound Waves:

You will learn what sound waves need to travel and how to measure sound waves

VOCABULARY

Transverse

Longitudinal

Refract

Transmit

Optically dense

medium

amplitude

front

compression

TUDOR HABITS

You will develop the Tudor Habit of Positive Self Regulation because it the practical work requires a lot of careful planning and measurement

SEPS ONLY

Ultrasound

you will learn what uses Ultrasound has in medicine or sports science.

SEPS ONLY

Seismic Waves

you will learn that the different types of seismic wave can help us understand the structure of the Earth.

SEPS ONLY

Lenses

You will learn how refraction works in lenses, creating images from light reflected off objects



P6 Waves 2- EM Spectrum

Waves

Wave Types:

You will revise the two types of waves and link transverse to the upcoming content in this module.

Electromagnetic Spectrum

You will learn about the properties of electromagnetic spectrum and where it is useful.

Non-Ionising Radiation

You will learn about the non-ionising part of the spectrum and its uses and dangers associated with each part.

Ionising Radiation

You will at ionising radiation and how this is used in the medical profession.

VOCABULARY

Transverse
Electromagnetic
Ionising

frequency
wavelength
exposed

This module continues your learning journey from previous learning from Waves modules.

You will now learn specifically about the electromagnetic spectrum and how it is useful for many purposes but how some parts are dangerous and even ionising.

TUDOR HABITS

You will develop the Tudor Habit of Positive Self Regulation because it looks at how too much sun exposure could lead to harm to your health.

LEARNING JOURNEY

Physics

P7 Magnetism + Electromagnetism

Magnets & Electromagnets

Magnetic Fields

You will recap KS2 / KS3 learning on magnets and magnetic materials, explore the field produced by a bar magnet and the different types of magnet.

Electromagnets

You will learn how to create an electromagnet, the fields they produce, how to optimise the design to increase field strength and how they are used in the real world.

Motors

Motors

You will learn how a basic dc motor works, Flemings left-hand rule and the equation for magnetic field strength.

Seps Content

The Generator Effect

You will learn how can magnets generate currents, how an ac generator works and Flemings Right Hand Rule.

Transformers

You will learn how transformers changed the world by making electricity distribution easy. But how?

VOCABULARY

Alternating current Transformer
Current split-ring commutator
Electromagnet
Magnetic Flux density
Solenoid induced magnet

Electrical power fills the modern world with artificial light and sound, information and entertainment, remote sensing and control. The fundamentals of electromagnetism were worked out by scientists of the 19th century. However, how do electric fields and magnetic fields interact to generate electricity?

TUDOR HABITS: You will continue to work on building your toolbox of problem solving skills to support your metacognition.