NEXT

Haberdashers' Abraham Darby
Year 10 Physics Learning Journey

This way to Year 11

Exam Preparation
Build a portfolio of revision material, to help remember Powerful Knowledge and commit key information to long term memory.
You will be tested on all the content learned over the course of the year ready to build on in Year 11.

Exam Preparation

Astronomy
Describe the solar system & explain requirements for stable orbits. Compare Steady State & Big Bang theories, including supporting evidence. Explain Life Cycles of stars.

Forces doing Work & their Effects
Develop understanding of how forces transfer energy including via force fields. Use vector diagrams to work out what happens when several forces act on an object at one time. *Describe situations where forces cause rotation. Explain how levers & gears transmit the rotational effects of forces.*

Astronomy (Triple), Forces doing Work & their Effects
Summer Term 2

Forces & Motion
Describe how the motion of an object is determined by the forces applied to it. Understand the effects of changes to forces applied. Understand the link between force, momentum, mass & acceleration, linking their effects on vehicle motion and collisions. *Explain circular motion. Explain the link between inertial mass, force and acceleration.*

Forces & Motion
Summer Term 1

Motion
Describe how quantities can be expressed as vector or scalar measurements. Calculate speeds and accelerations. Be able to represent changes in distance moved, speed and velocity on graphs. Analyse motion graphs. Describe a range of methods to determine speed. Know typical speeds encountered in everyday examples..

Motion
Spring Term 2

Radioactivity
Know how our understanding of atomic structure has changed. Understand isotopes & instability. Compare radiation types & radioactive decay processes. Measure decay. *Relate half life to dangers & precautions. Explain uses in Medical Physics.*

Exam Preparation
Revise the Core and Powerful Knowledge and commit key information to long term memory. You will be tested on all content covered so far this year.

Radioactivity
Spring Term 1

Light
Understand the behaviour of light as a transverse wave. Investigate the refraction of light for materials. Describe *specular, diffuse and TIR. Explain the effects of different lenses. Explain how colour depends on absorption & transmission.*

Electromagnetic Spectrum
Name each component of the Spectrum, describing common features. Understand how changes to wavelength lead to differing uses & dangers associated with each component. *Know factors affecting emission & absorption.*

Light & Electromagnetic Spectrum
Autumn Term 2

Conservation of Energy
Know & describe the ways in which energy can be transferred, stored and how to reduce unwanted transfers. Calculate transfers & efficiency. Know about renewable & non-renewable resources.

Waves
Describe key features of waves & common behaviour e.g. energy transfer & information. Calculate wave speeds in different mediums. Describe transverse & longitudinal waves. *Explain uses of ultra and infrasound. Describe relationship between velocity, frequency & wavelength.*

Conservation of Energy & Waves
Autumn Term 1

NOW

Y10
Students will enter Y10 having worked through a comprehensive KS3 Science curriculum comprising elements of: Waves, Forces, Motion, Pressure, Energy including Resources; Forces & Space; Electricity; Heating & Cooling; Light & Sound and Magnetism. Key Concepts, Working and thinking scientifically underpins everything that we do. *(Triple Physics in Italics)*

THEN

Start here