KEVICC KS3 Curriculum:	Subject: Science	Key terms and vocabulary.
Year: 7 Term: Across the year	Topic: Physics	

What is the essential knowledge from this unit? *What do students need to remember and understand?*

Content - Autumn term – Forces

- Students will learn about the Forces that keep you from falling through the floor and allow astronauts to stand on the moon
- Students will discover the different Forces that explain why objects move or don't.
- Students will learn about Forces including gravity, friction and magnetic force and how to measure Forces using a Newtonmeter
- Students will be taught how to calculate some Forces using equations

Key practicals – Measuring Forces, Investigating Hooke's law and Investigating friction

Spring Term - Space

- Students will learn about the place of Earth in the Universe
- Students will be given an introduction to the objects that can be seen in the night sky
- Students will learn about the Solar system and the objects in it
- Students will be told about the Earth and Moon and why we have day and night, eclipses and the phases of the moon

Key practical – demo of why we have seasons using models

Summer term – Sound and Light

- Students will learn about how we see and hear and about different types of waves
- Students will be taught about frequency and wavelength and how sound waves travel.
- Students will discover how sounds are detected and how sounds can be used to measure distances and will learn about ultrasound and its uses
- Students will be taught how to describe light and how it is reflected and refracted
- Students will be given the chance to explore colour with prisms and filters and mixing.

Key practicals – Looking at how an oscilloscope represents different sounds. Investigating the law of reflection and investigating refraction using prisms. Making a pinhole camera

What prior learning supports understanding of this content? From KS2

- The Force of gravity pulls objects to the Earth
- Friction, air resistance, and water resistance slow down moving objects
- You see things because light reflects on them
- Light travels in straight lines, which explains the size and shape of shadows, Vibrating objects make sound, pitch and loudness.
- The Earth orbits the Sun and the Moon orbits the Earth and day and night and the Sun's movement across the sky happens because the Earth spins on its axis
- The changes in day length and the temperature

How does this content link to future learning? For GCSE Physics

- Students will develop their understanding of Forces between objects and resultant forces, momentum and acceleration
- Students will enhance their grasp of how light behaves regarding reflection, refraction and colour
- Students will develop their understanding of the properties of waves including sound and electromagnetic waves
- Students advance their knowledge of the Universe and solar system to include the Solar system formation and the expanding universe

Reading: *Where in the unit are students supported to read complex academic text?*
Reading activities from textbook and comprehension activities in the integrated Skills Tests that run throughout the year. Scientific literacy also includes reading graphs and tables in order to extract meaning from data.

Writing: *Independent writing tasks and how they are structured*
Writing skills include concise and accurate communication that includes appropriate keywords. Scientific literacy includes the ability to draw graphs and tables. Conclusions to practical work is the most important form of scientific communication.

Key assessments:

Physics questions in Autumn and Spring 1, Spring 2 and Summer assessments

How will feedback be received?

Students will be given feed back via DIRT sheets after each topic, regular feedback on skills tasks 12 times a year and tests 4 times a year. The students will be actively involved in all of these processes via 'purple pen'

What will be seen in books?

Books will include notes on the content and practical/skills along with feedback via DIRT sheets (see above), skills sheets and tests will be found with purple pen relating to them all

Which words will be explicitly taught & how frequently will understanding be checked? How will assimilation of new vocab be checked?

air resistance, balanced, compress, contact force, drag force, elastic limit, electrostatic force, equilibrium, extension, field, friction, gravitational field strength, gravity, Hooke's law, magnetic force, mass, Newton, Newtonmeter, non-contact force, reaction force, stretch, streamlined, tension, unbalanced, upthrust, water resistance, weight, amplify, amplitude, cochlea, compression, decibel, diaphragm, eardrum, frequency, hertz, infrasound, longitudinal, oscillation, oscilloscope, ossicle, oval window, peak, pinna, pitch, semi-circular canal, superpose, transverse, trough, ultrasound, vibration, wavelength, absorb, angle of incidence, charge-coupled device, colour, converging, convex, diffuse, scattering, filter, focal point, focus, incident ray, law of reflection, lens, luminous, normal, opaque, photoreceptor, pixel, primary colour, prism, real image, refraction, retina, secondary, transmit, spectrum, reflection, translucent, transmit, transparent, virtual image, artificial satellite, asteroid, axis, comet, dwarf planet, exoplanet, galaxy, gravity, gas giant, lunar eclipse, meteor, meteorite, Milky Way, Moon, natural satellite, orbit, penumbra, solar eclipse, Solar System, terrestrial, umbra, Universe

Vocabulary is modelled by teachers and scientific literacy is marked during feedback. Scientific communication is directly reported to parents as part of the college report.