KEVICC KS3 Curriculum:	Subject: Science	Key terms and vocabulary.
Year: 8 Term: Across the year	Topic: Physics	***Which words will be explicitly taught & how frequently will understanding be checked? How will assimilation of new vocab be checked?*** ammeter, acceleration, atmospheric pressure, average speed, battery, cell, centre of mass, chemical store, compressed, conduction, conductor, convection, core, current, density, dissipated, elastic store , electric charge, electrical field, electromagnet, energy, energy resources, energy store, fossil fuel, gas pressure, gravitational potential store , infrared radiation, insulator, joules, kilowatts, kinetic store , law of moments, lever, lightning, magnetic field, magnetise, moment, motor, non-renewable, pole, ohms, parallel, pivot, positive, potential difference, power rating, pressure, proton, radiation, relative motion, relay, renewable, repel, resistance, series, speed, switch, temperature, thermal store, thermometer, voltage, voltmeter, volts, watt, work.

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

Autumn term – Electricity and Magnetism

In this unit students will investigate the world of electricity from how it is generated to how it moves arounds circuits and the rules that follow from that. The topic is also connected to electromagnetism when students will build and test electromagnets and magnetism where learners will investigate the behaviour of magnets and discover their magnetic fields.

Key Practicals – Building and testing series and parallel circuits. Discovering magnetic fields and building and investigating electromagnets.

Spring Term – Energy

Students are introduced to the idea of energy in the universe is distributed in various stores and that useful work can be done when energy is moved between those stores including heating and heat transfer. The relationship between energy, work and powers is introduced.

Key practicals – Energy and temperature. Energy transfer by conduction.

Summer term – Motion and Pressure

This topic looks at how objects exposed to forces move. Speed is investigated in terms of moving from a fixed place and relative motion and how to calculate speed and represent that movement on graphs. Pressure is investigated building on ideas about particles from year 7 and the effect of pressure on solids, liquids and gases is investigated. The final part of the topic looks at a 2000-year-old rule in physics and mechanics that every child learns on a see-saw.

Key practical: Investigating speed using speed traps. The effect of pressure on solids liquids and gases. What is the law of levers? (Moments)

What prior learning supports understanding of this content?
Students have already covered in KS2 and Y7 ideas around particles, and how forces move objects as well as the basics of electricity and magnets

How does this content link to future learning?
All parts of this topic are revisited in GCSE science building in greater detail about difference energy stores, the laws of electrical circuits and the relationship between energy, work and power.

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 to effectively communicate data. Conclusions to practical work is the most important form of scientific communication.

Key assessments:
Physics questions in Autumn , Spring 1, Spring 2 and Summer assessments
Skills tests 1 to 13 which are set as independent learning tasks.

How will feedback be received? Students will be given feedback 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.