Year 9

<table>
<tr><th>Autumn Term
Why is biodiversity important?
Why is energy important?
What is climate change?</th><th colspan="2">Spring Term
B1 Cell Biology
C1 Atomic structure and periodic table</th><th colspan="2">Summer Term
C1 Atomic structure and periodic table
P1 Energy
Practical skills</th></tr>
<tr><td colspan="2">Key knowledge:
Food chains
Food webs
Bioaccumulation
Predator/Prey relationships and adaptations
Biodiversity and ecosystems
Flowering plants
Pollination and pollinators
Food security
Particle model
Energy and temperature
Conduction
Convection
Work done
Pulleys and levers
Generating electricity
Energy in the home
Energy efficiency in the home
Finite and infinite resources
Composition and evolution of Earth’s atmosphere
Carbon cycle
Deforestation
Carbon footprints
Greenhouse effect and global warming
Blast furnace and extracting metals
Recycling</td><td colspan="2">Key knowledge:

B1: Cell biology
Please refer to specification from AQA
https://filestore.aqa.org.uk/resources/science/specifications/AQA-8464-SP-2016.PDF

C1: Atomic structure and periodic table
Please refer to the specification from AQA
https://filestore.aqa.org.uk/resources/science/specifications/AQA-8464-SP-2016.PDF</td><td colspan="2">Key Knowledge:

C1: Atomic structure and periodic table
Please refer to the specification from AQA
https://filestore.aqa.org.uk/resources/science/specifications/AQA-8464-SP-2016.PDF

P1: Energy
Please refer to the specification from AQA
https://filestore.aqa.org.uk/resources/science/specifications/AQA-8464-SP-2016.PDF</td></tr>
<tr><td>Pupils will be able to: Use food webs to determine the effect upon an ecosystem if there is a change. Observe how energy is transferred within systems, and discuss the effect on the Environment by emitting greenhouse gases.</td><td>Key Vocabulary:
Abiotic, biotic, ecosystem, biome, habitat, trophic level, consumer, omnivore, carnivore, herbivore, conduction, convection, insulation, finite and infinite, enhanced greenhouse effect, greenhouse gas, displacement.</td><td>Pupils will be able to: Explore how structural differences between cells enables them to perform specific functions. Leading to stem cell research.
Be able to discuss the development of the periodic table and how atoms are arranged within it.</td><td>Key Vocabulary:
prokaryotic and eukaryotic, mitosis and meiosis, chromosomes, differentiated and undifferentiated cells, proton neutron, electron, nucleus, atom, ion, isotope.</td><td>Pupils will be able to:
Understand how energy is transferred, and discuss Energy stores and systems.</td><td>Key Vocabulary:
energy store and system, work, current, joules, newtons, gravitational field strength, power, efficiency, finite and infinite.</td></tr>
<tr><td colspan="2">Assessment:
1. Food chains and webs, adaptations of predator and prey.
2. VESNU conduction and convection
3. Evolution of the atmosphere, analysing data.</td><td colspan="2">Assessment:
5. Cell specialisation
6. Chromatography
7. Structure of the atom</td><td colspan="2">Assessment:
8. Periodic table
9. VESNU - kinetic energy, gravitational field strength, elastic potential, change in thermal energy, power</td></tr>
<tr><td colspan="2">Enrichment Opportunities:
https://www.bbc.co.uk/bitesize/levels/z4kw2hv</td><td colspan="2">Enrichment Opportunities:
https://www.bbc.co.uk/bitesize/levels/z98jmp3
https://www.physicsandmathstutor.com/</td><td colspan="2">Enrichment Opportunities:
https://www.bbc.co.uk/bitesize/levels/z98jmp3
https://www.physicsandmathstutor.com/</td></tr>
</table>