

SCIENCE DEPARTMENT

The Science Department at Lacon Childe School is made up of the following staff:

Joel Amps	Faculty Leader: Mathematics, Science and ICT
Lynette Broome	Subject Leader
Helen Gilder	Teacher of Biology
Phil Hayes	Teacher of Physics
Charlotte Johnston	Teacher of Biology and Physics / Year Leader
Naomi Titley	Teacher of Biology and Chemistry
Nick Houghton	Science Technician

Intent – Aims

Our 5-year science curriculum aims to develop scientific knowledge and conceptual understanding through the specific disciplines of Biology, Chemistry and Physics. Developing an understanding of the nature, processes and methods of science through different types of science enquiries helps students to answer scientific questions about the world around them. The Department's aim is not just focused on exams but using science to understand the world around us, our own lives and the future we have ahead of us.

We endeavour to excite and enthuse our pupils in Science and share information on career opportunities and links to STEM. Practical skills are an important feature of our teaching and we strive to develop independence and their ability to formulate an investigation, using scientific method and analysing results, linking to the bigger picture.

Enjoyment in Science is key to ensure full engagement and to maximise progress within and throughout lessons.

Our curriculum:

Biology:

½ term	1	2	3	4	5	6
7	Microscopes and cells	Microscopes and cells	Body Systems	Body Systems	Reproduction	Reproduction
8	Health & Lifestyle	Health & Lifestyle	Ecosystems	Ecosystems	Adaptations	Adaptations
9	Microscopes and cells	Enzymes/Transporting Substances	Transporting Substances	Mitosis, (Meiosis) and asexual / sexual reproduction	Growth and Stem Cells	Nervous System
10	Genetics	Natural Selection	Health and Disease	Plant Structures	Plant Structures	Animal Co-ordination
11	Animal Co-ordination/Exchange and Transport	Exchange and Transport	Ecosystems	Ecosystems	Key Concepts revisited Core Practicals revisited	Revision

Chemistry:

½ term	1	2	3	4	5	6
7	Investigation Skills and Reactions	Investigation Skills and Reactions	Particles, Elements, Atoms	Particles, Elements, Atoms	The Periodic Table	The Periodic Table
8	Reactions	Reactions	Acids and Alkalis	Acids and Alkalis	Metals and the Earth	Metals
9	States of Matter/Pure & Mixtures	Separating Substances/Atomic Structure	The Periodic Table	Ionic Bonding	Covalent Bonding	Metallic Bonding
10	Acids and Alkalis	Acids and Alkalis	Calculations	Electrolysis	Ore and Equilibrium	Calcs, Electrolysis, Ores and Equilibrium revisited
Triple	Acids and Alkalis	Acids and Alkalis/Calculations	Calculations/ Electrolysis	Ores, Equilibrium and Metals	Calcs and Electrolysis Quantitative	Quantitative Chemistry
11	Groups in the PT & Reactions	Fuels	Earth and Atmosphere	Key Concepts Revisited Core practical revisited	Key Concepts Revisited Core practical revisited	Revision/Exams
Triple	Groups in the PT & Reactions/Fuels	Fuels, Earth and Atmosphere Fuels, Earth and Atmosphere/HCs, Alcohols & Carboxylic Acids, Polymers	Hydrocarbons, Alcohols, Carboxylic Acids, Polymers	Testing for Ions, Nanoparticles	Key Concepts Revisited Core Practicals Revisited	Revision/Exams

Physics:

½ term	1	2	3	4	5	6
7	Forces and Motion	Forces and Motion/Energy	Energy	Sound	Sound/Light	Light
8	Space	Space/Electricity	Electricity	Magnetism	Magnetism/Pressure	Pressure
9	Vector and Scalars	Forces and Motion	Forces and Motion	Energy	Energy/Waves	Waves
10	Electromagnetic Spectrum	Radioactivity	Radioactivity	Work, Power, Vector Diagrams	Electricity	Electricity
11	Electromagnetic Conduction and Magnetism	Electromagnetic Conduction	Particles and Matter	Particles and Matter	Key Concepts Revisited Core practicals revisited	Revision/ Exams
Triple	Astronomy					

Other useful information:

All GCSE Science past papers (there are only 2018 and 2019 available) are on:

[https://qualifications.pearson.com/en/support/support-topics/exams/past-papers.html?Qualification-Family=GCSE&Qualification-Subject=Sciences%20\(2016\)&Status=Pearson-UK:Status%2FLive&Specification-Code=Pearson-UK:Specification-Code%2Fgcse16-science](https://qualifications.pearson.com/en/support/support-topics/exams/past-papers.html?Qualification-Family=GCSE&Qualification-Subject=Sciences%20(2016)&Status=Pearson-UK:Status%2FLive&Specification-Code=Pearson-UK:Specification-Code%2Fgcse16-science)

Useful websites:

s-cool.co.uk

bbc bitesize

'crash course' biology/chemistry/physics (you tube)

Ted Ed (you tube)

Royal Society Chemistry

STEM.org.uk

- Notes from passmyexams.co.uk
- Various resources from revisionscience.com
- Seneca website for revision resources
- Khan academy

November 2020