



The High School
Leckhampton

Year 7 **SCIENCE**



Topic Titles

7WS Working Scientifically Topic The Lab Licence

7B1 Biology Topic 1 Cells, Organisation and Reproduction

7C1 Chemistry Topic 1 Matter, Particles and Physical Changes

7P1 Physics Topic 1 Waves and Space

7B2 Biology Topic 2 Photosynthesis, Ecosystems and Health

7C2 Chemistry Topic 2 Atoms, Elements, Compounds and Mixtures

7P2 Physics Topic 2 Motion, Forces and Pressure

Intent

Our main aim and ambition in science is for our students to develop a curiosity and a desire to want to find out and understand more about the world around them. Science is a subject rich in knowledge that can change lives and open so many doors for our students. Through teaching a varied curriculum of biology, chemistry and physics, students develop the skills that they require to be able to apply their understanding of science to situations all around them and allow them to make informed choices as an educated citizen who promotes inclusivity. Students will be encouraged to question and recognise the power of rational explanation, fostering a sense of enthusiasm and creativity about natural phenomena.

Links with other subjects

ART – Drawing accurate, annotated scientific diagrams.

DT – Properties of materials.

ENGLISH – Using comparative terms, learning word etymology, recalling exact definitions, writing and following detailed instructions.

MATHS – Converting units, calculating averages, rates and percentages, rounding results, using and rearranging equations, drawing scatter and bar graphs.

PSHE – The effects of drugs, exercise and puberty on the body.

How will knowledge and skills be taught?

In lessons students will learn from their teacher, and work individually or with others, to develop their scientific knowledge and conceptual understanding.

Practical activities will help students understand the nature, processes, and methods of science, as well as the uses and implications of science for today and the future.

Completing homework using provided resources will help consolidate students' understanding and prepare them for future lessons.

Optional activities will challenge and extend students' scientific application.

How can parents help?

Encourage students to use the topic resources on the VLE, the Year 7 Science Basics booklet and the CGP KS3 Science Study Guide provided.

Extend students' understanding using appropriate YouTube channels [e.g. Cognito, PrimroseKitten, KhanAcademy, FuseSchool, AmoebaSisters, Freesciencelessons, AsapScience, Crash Course, SciShow, Veritasium, Kurzgesagt – In a Nutshell, BBC Earth Lab, TED-Ed, Royal Society of Chemistry] and relevant Science-related films, series, and documentaries on various streaming services.

Take an interest – be curious and ask students about their learning.

Recommended Reading and Preparation for Learning

How to Grow a Human: Adventures in Who We Are and How We Are Made – Philip Ball

Where the Wild Things Grow: A Forager's Guide to the Landscape – David Hamilton

The Strange Chemistry of Plants, Poisons and Processed Foods – George Zaidan

KEW: Grow, Forage and Make: Fun things to do with plants – Alys Fowler

How the Body Works: The Facts Simply Explained – Dorling Kindersley

George's Secret Key to the Universe – Lucy and Stephen Hawking

Fourteen Wolves: A Rewilding Story – Catherine Barr

A Short History of Nearly Everything – Bill Bryson

The Incredible Human Journey – Alice Roberts

Diary of a Young Naturalist – Dara McAnulty

Horrible Science Collection – Nick Arnold

The Disappearing Spoon – Sam Kean

More recommendations at:
<https://www.hsl.glouc.sch.uk/literacy-and-recommended-reading>