



The High School  
**Leckhampton**

# Year 9 **SCIENCE**



## Topic Titles

- 9B1 Biology Topic 1** Cell Structure, Cell Division and Transport in Cells
- 9C1 Chemistry Topic 1** Atomic Structure and the Periodic Table
- 9P1 Physics Topic 1** Particles, Internal Energy and Energy Transfers
- 9B2 Biology Topic 2** Infectious Diseases, Defence Systems and Medicines
- 9C2 Chemistry Topic 2** The Earth's Atmosphere and Using Earth's Resources
- 9P2 Physics Topic 2** Motion, Forces and Elasticity
- 9P3 Physics Topic 3** National and Global Energy Resources

## 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.  
**GEOGRAPHY** – Nutrient cycles and resources.  
**HISTORY** – Development of the periodic table, vaccinations and medication, and atmosphere composition.  
**MATHS** - Converting units, calculations, using and rearranging equations, rounding results, identifying patterns, and drawing scatter and bar graphs.

## How can parents help?

Encourage students to use the topic resources on the VLE, the Year 9 Science Topic Basics 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.

## 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.

## 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.

## Recommended Reading and Preparation for Learning

Ingredients: The Strange Chemistry of What We Put in Us and on Us – George Zaidan  
How the Body Works: The Facts Simply Explained – Dorling Kindersley  
Thing Explainer: Complicated Stuff in Simple Words – Randall Munroe  
100 Things to Know About Saving the Planet – Usborne Publishing  
Built: The Hidden Stories Behind our Structures – Roma Agrawal  
Science Tales: Lies, Hoaxes and Scams – Darryl Cunningham  
Galen and the Gateway to Medicine – Jeanne Bendick  
A Short History of Nearly Everything – Bill Bryson  
There Is No Planet B - Mike Berners-Lee  
The Disappearing Spoon – Sam Kean  
Get Your Boots On – Alex White  
The Periodic Table – Primo Levi

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