Extended Learning and Reading in Science

Science is about much more than examinations. Reading, listening and exploring science beyond the classroom helps develop curiosity, scientific literacy, vocabulary and a deeper understanding of the world around us. The resources below have been selected to complement the Science curriculum and support pupils in developing their knowledge and interest in Biology, Chemistry and Physics.

Key Stage 3 (Years 7-9)

Recommended Reading

A Really Short History of Nearly Everything – Bill Bryson

An engaging introduction to the history of scientific discovery and the people behind it. A highly recommended starting point for young scientists.

Horrible Science Series – Nick Arnold

Fun, accessible and informative books that explain scientific ideas through humour and real-world examples.

Kay's Marvellous Medicine – Adam Kay

A fascinating look at the history of medicine and medical discoveries.

Life on Earth (Young Readers Edition) – David Attenborough

Introduces evolution, ecosystems and biodiversity through stories from the natural world.

Podcasts, Videos and Online Resources

- BBC Bitesize Science
- The Infinite Monkey Cage (selected episodes)
- Royal Institution Christmas Lectures
- David Attenborough documentaries
- BBC Earth YouTube Channel

Key Stage 4 (Years 10-11)

Biology

The Immortal Life of Henrietta Lacks – Rebecca Skloot

Explores cell biology, medical research and ethics through a remarkable true story.

I Contain Multitudes – Ed Yong

Introduces the hidden world of microorganisms and their importance to life on Earth.

Chemistry

Napoleon's Buttons – Penny Le Couteur & Jay Burreson

Examines how molecules and materials have influenced world history.

Periodic Tales – Hugh Aldersey-Williams

A fascinating journey through the elements of the periodic table.

Physics

Storm in a Teacup – Helen Czerski

Shows how physics explains everyday experiences and phenomena.

Seven Brief Lessons on Physics – Carlo Rovelli

A short and accessible introduction to some of the most important ideas in modern physics.

General Science and Critical Thinking

Bad Science – Ben Goldacre

Develops critical thinking and helps pupils evaluate scientific claims made in the media.

Sapiens (Young Readers Edition) – Yuval Noah Harari

Explores humanity through science, history and culture.

Podcasts, Videos and Online Resources

- BBC Radio 4: Inside Science
- The Infinite Monkey Cage
- Royal Institution Christmas Lectures
- TED-Ed Science Videos
- BBC Science Focus

Key Stage 5 (Years 12-13)

Biology

The Selfish Gene – Richard Dawkins

A thought-provoking exploration of evolution and genetics.

The Body – Bill Bryson

An accessible and engaging examination of human biology.

Chemistry

Uncle Tungsten – Oliver Sacks

A memoir that captures the excitement and wonder of chemistry.

Why Chemical Reactions Happen – James Keeler & Peter Wothers

Provides deeper insight into the chemistry studied at A Level.

Physics

We Have No Idea – Jorge Cham & Daniel Whiteson

Explores the unanswered questions of modern physics.

A Brief History of Time – Stephen Hawking

A classic introduction to cosmology and our understanding of the universe.

Medicine, Research and Scientific Thinking

The Man Who Mistook His Wife for a Hat – Oliver Sacks

A collection of neurological case studies that demonstrate the complexity of the human brain.

This Is Going to Hurt – Adam Kay

An honest and engaging account of life as a junior doctor.

Bad Science – Ben Goldacre

Essential reading for developing scientific literacy and evaluating evidence.

Podcasts, Lectures and Online Resources

- The Infinite Monkey Cage
- BBC Inside Science
- Royal Institution Lectures

- Gresham College Lectures
- Isaac Physics
- STEM Smart (University of Cambridge)
- FutureLearn Science Courses

Additional Opportunities

Pupils wishing to develop their interest in Science further may also:

- Visit science museums, observatories and exhibitions.
- Attend public lectures and science festivals.
- Participate in STEM clubs and competitions.
- Take part in the UK Chemistry Challenge, Biology Challenge and Physics Challenge.
- Explore STEM careers using Careerpilot.
- Follow organisations such as:
    - The Royal Society
    - The Royal Institution
    - STEM Learning
    - The BBC Science website
    - The Institute of Physics
    - The Royal Society of Chemistry
    - The Royal Society of Biology

Regular engagement with Science beyond lessons helps develop confidence, deepen understanding and inspire future study and careers in STEM.