

KS4 Physics

Super Curriculum

Welcome to the Physics KS4 Super Curriculum!

Below, you'll discover a variety of activities designed to challenge and extend your learning beyond the classroom curriculum.

Read



'Big Bang' by Simon Singh.

A highly readable account of the development of one of the crowning achievements of human scientific endeavour.

'An Ocean of Air' by Gabrielle Walker.

A fascinating natural history of our atmosphere. Almost every page will deliver factoids to amaze and impress your family and your friends.

'You Are Here' by Christopher Potter.

Want to know where you fit within the grand scheme of things? Then this book is for you.

'The Fifth Miracle' by Paul Davies.

Has been out of print for some time but is worth seeking out. Looks to explain that most important question: how can life emerge from lifeless atoms and molecules? A captivating read.

'The Demon-Haunted World' by Carl Sagan.

A fascinating treatise about the importance of scientific critical thinking and how we can dispel the need for irrational belief systems. (Astrology, anyone?)

'Seven Brief Lessons On Physics' by Carlo Rovelli.

A modern classic. Rovelli provides an engaging and surprisingly non-technical overview of the revolution of Physics in the twentieth century and astonishes with the enormity of the unknown.

Watch



There are some excellent TED talks:

[Nick Pizzo: The physics of surfing | TED Talk](#)

[Helen Czerski: The fascinating physics of everyday life | TED Talk](#)

BBC I player has some of the Brian Cox astronomy and forces in nature documentary videos still available

[Universe - BBC iPlayer](#)

[Forces of Nature with Brian Cox - BBC iPlayer](#)

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The infinite monkey cage has some really interesting Physics podcasts, these are just a few:

[BBC Radio 4 - The Infinite Monkey Cage, Series 34, Fusion – Ria Lina, Yasmin Andrew and Howard Wilson](#)

[BBC Radio 4 - The Infinite Monkey Cage, Series 31, Fantastic Elastic](#)

[BBC Radio 4 - The Infinite Monkey Cage, Series 28, Hollywood in Space](#)

Science Friday has some fun things to listen to, examples are below:

[Jump, Spin, Glide: The Science... - Science Friday - Apple Podcasts](#)

[How China Is Driving Down Elec... - Science Friday - Apple Podcasts](#)

Do

To stretch your written answers, try the stretch questions on Isaac Physics:

[GCSE Physics — Isaac Science](#)

For practical investigation work, have a look at focus e-learning

<https://www.focuselearning.co.uk/u/36593/kuCjckqgepmkobylqvopACuBsAqauobDI>

Stellarium App – point your phone at the night sky to highlight constellations and planets in real time

For things to do and see/learn about see the suggestions below:

Winchester Science Centre and Planetarium
<https://www.winchestersciencecentre.org/>

Science Museum, London
<https://www.sciencemuseum.org.uk/home>

Royal Observatory, Greenwich, including competition and displays for Young Astronomer of the Year

[Royal Museums Greenwich | Home](#)

[ZWO Astronomy Photographer of the Year exhibition](#)