

KS4 Computing

Super Curriculum

Welcome to the Computing KS4 Super Curriculum!

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

Read



Computational Fairy Tales by Jeremy-Kubica

This book focuses on computational thinking. The stories are written to introduce and illustrate computational concepts.

Algorithms to Live By: The Computer Science of Human Decisions, by Brian Christian Tom Griffiths : A fascinating exploration of how computer algorithms can be applied to our everyday lives.

BBC Bitesize KS4

<https://www.bbc.co.uk/bitesize/examspecs/zmtchbk>

Read the Forbes article on How AI is changing the way students learn

<https://www.forbes.com/councils/forbestechcouncil/2022/09/20/how-ai-is-changing-the-way-students-learn/>

BBC Tech now

<https://www.bbc.co.uk/programmes/m0029b3v>

Subscribe to free monthly magazine

<https://www.raspberrypi.org/hello-world>

Watch



Series of Pygame tutorials to build games

This is a whole series of tutorials on learning to use Pygame. I have included links to the first 3 tutorials. You will find others as you finish each tutorial

<https://www.youtube.com/watch?v=i6xMBig-pP4>

<https://www.youtube.com/watch?v=2-DNswzCkqk>

<https://www.youtube.com/watch?v=UdsNBIzsmII>

Watch videos on the Harvard CS50 website to learn programming concepts in different languages:

<https://cs50.harvard.edu/x/>

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Listen

Series of AI podcasts

[BBC Radio 4 - Understand, Tech and AI, 7. Where is AI Working Already?](#)

Raspberry Foundation Hello World podcast

<https://www.raspberrypi.org/hello-world/podcast>

Do

The annual GCHQ Christmas Challenge

The GCHQ Christmas Challenge - Archive | GCHQ - GCHQ.GOV.UK

Take part in a **virtual tour (Free) of the National Computing Museum** in Bletchley using the link below
<https://www.tnmoc.org/3d-virtual-tour2>

Computing news- tell a friend!

Keep up with weekly Computing news! Tell three of your friends about recent Tech news.

Complete the bronze award on the iDEA website. This is a recognised qualification which can be added to your CV when applying for jobs.

The GCHQ Puzzle Book

Why not pit your wits against the people who cracked the Enigma? This book will have you scratching your head for hours trying to solve some challenging problems.
<https://www.gchq.gov.uk/news/the-turing-challenge>

Talk to a Year 13 Computer Science student

Ask them the following questions:

1. What did they choose to do their coursework project on?
2. What skills have they learnt so far from completing their project?
3. Is there anything they would have done differently for the project now they are nearing the end?