



## SUPER-CURRICULAR ACTIVITIES

### GCSE: Computer Science Years 10 & 11

 Read <b>The Pattern on the Stone: the Simple Ideas that make Computers Work</b> by W Daniel Hills. It explains the basic concepts of computers in everyday life.	 Write a short essay debating the following question – <b>is technology increasing people’s quality of life?</b>	 Watch this video on the <b>theory of computation</b> where Ana Bell explains the aspects of computational thinking. Follow <b>Link 1</b> (below)
 Puzzles are great and fun. Try some activities from this document. Follow <b>Link 2</b> (below)	 IT is changing how people work and how companies are thriving. <b>But is this change for the good?</b> Read the Jan/Feb issue of Wired magazine to find out more. Follow <b>Link 3</b> (below)	 Technology has evolved beyond our imaginations. Write an article on the <b>‘Rise of Machines’</b> that explores how machines have shaped our society. Follow <b>Link 4</b> (below)
 Undertake some of the activities from the <b>Human Face of Computing</b> section of the website given. Follow <b>Link 5</b> (below)	 Try your hand at <b>code breaking</b> . Complete as many tasks as possible at the school code breaking website. Follow <b>Link 6</b> (below)	 Watch the Ted Talk on <b>How bad data keeps us from good AI</b> , where the presenter explores how data can be biased and leads to AI making the wrong decisions. Follow <b>Link 7</b> (below)
 Go to Khan Academy website to learn how to use <b>SQL</b> to manipulate data. Follow <b>Link 8</b> (below)	 Watch the <b>Social Dilemma</b> documentary that explores the dangerous impact of social networking on people.	 Develop your <b>Python programming skills</b> by completing as many tasks as you can on the Snakify website. Follow <b>Link 9</b> (below)

#### Links to websites used in this Super-Curricular GCSE Activities sheet:

Link 1: <https://ocw.mit.edu/courses/electrical-engineering-and-computer-science/6-0001-introduction-to-computer-science-and-programming-in-python-fall-2016/lecture-videos/lecture-1-what-is-computation/>

Link 2: <https://cs4fndownloads.files.wordpress.com/2016/02/cs4fnpuzzlebook11.pdf>

Link 3: <https://www.wired.co.uk/magazine/january-2021>

Link 4: [https://www.ted.com/talks/mainak\\_mazumdar\\_how\\_bad\\_data\\_keeps\\_us\\_from\\_good\\_ai](https://www.ted.com/talks/mainak_mazumdar_how_bad_data_keeps_us_from_good_ai)

Link 5: <https://classic.csunplugged.org/activities/>

Link 6: <https://schoolcodebreaking.com/code-breaking-competition/>

Link 7: [https://www.ted.com/talks/mainak\\_mazumdar\\_how\\_bad\\_data\\_keeps\\_us\\_from\\_good\\_ai/details](https://www.ted.com/talks/mainak_mazumdar_how_bad_data_keeps_us_from_good_ai/details)

Link 8: <https://www.khanacademy.org/computing/computer-programming/sql>

Link 9: <https://snakify.org/en/>

	Reading task		Creative task		Watching task		Student-led task
	Research task		Writing task		Listening task		Trip or visit