



COMPUTER  
SCIENCE

# The Super Curriculum

# **The Super Curriculum**

Super curricular activities are those that take your regular curriculum further. They take the subjects you study in the classroom beyond that which your teacher has taught you or what you've done for home learning. For example, you may go into more depth on something you picked up in the classroom or learn about a new topic altogether.

These activities are normally in the form of extra reading, but they can take many other forms, like watching videos online, downloading podcasts, attending lectures, visiting museums or entering academic competitions.









Engaging in super curricular activities will help you develop a love for your favourite subject or subjects. In this booklet, there are a range of activities, suggested by your teachers. They are by no means exhaustive lists but should get you started.










We encourage you to share ideas and opportunities you come across with your teachers so that, over time, the recommended activities in this booklet can grow.












In the future, employers or universities will be interested to hear about what super curricular activities you have engaged in; they will be interested in what you have learnt and impressed by your efforts.









# Super Curriculum – Year 7, 8 & 9

## Subject: Computer Science

	Reading Task		Writing Task
	Listening Task		Watching Task
	Research Task		Trip or Visit
	Creative Task		Student Led Task












SC1		SC2		SC3	
	<b>BBC Click</b> - Stay updated with the latest in consumer technology, innovations, and digital trends with this weekly BBC program. 📺 <a href="http://www.bbc.co.uk/programmes/b006m9ry/episodes/player">http://www.bbc.co.uk/programmes/b006m9ry/episodes/player</a>		<b>Artist Coding Challenge</b> – Use code to draw amazing patterns and designs! Learn programming concepts while creating your own digital artwork. 🧠 <a href="#">Start here.</a>		<b>Where Could Computer Science Take You?</b> – Explore unusual careers in the tech industry! Could you be a digital locksmith, a drone operator, or even a professional hacker? Research and write how computer science is shaping exciting new job opportunities.
	<b>Where it all started:</b> Watch TedTalk on The birth of the computer.   George Dyson <a href="https://www.youtube.com/watch?v=EF692dBzWAs&amp;index=1&amp;list=PLF7032F8EB1A4F9E2">https://www.youtube.com/watch?v=EF692dBzWAs&amp;index=1&amp;list=PLF7032F8EB1A4F9E2</a>		<b>Basketball Coding Challenge</b> – Learn to code by designing your own basketball game! Use block-based coding to control players, make shots, and build a fun interactive experience. 🏀 <a href="#">Start here.</a>		<b>No more teachers</b> – Write a short essay debating the following question - <i>Will computer assisted education replace the need for teachers in the future?</i>
	<b>Map of Computer Science</b> - Watch this fantastic short video that summarizes the entire field of computer science in an engaging way. 📺 <a href="#">Watch here.</a>		<b>Dance Party Code</b> – Get ready to code your own dance party! Use programming to make characters move to the beat, add cool effects, and create a fun animated performance. 🎮 <a href="#">Start here.</a>		<b>The year 2100</b> – Imagine that it is the year 2100. <i>What will the world be like? How will technology have changed? What new inventions will have been created?</i> Sketch a picture of a large city giving a perspective on what you think the world will be like in 2100.



	<b>Animation18</b> – Using software of your choice, create a one-minute animation about cybersecurity threats and staying safe online. You could enter your creation into this competition - <a href="https://brilliant.org/courses/computer-science-fundamentals/">https://brilliant.org/courses/computer-science-fundamentals/</a>		<b>Frozen: Code with Anna &amp; Elsa</b> – Join Anna and Elsa on a coding adventure! Use programming to create stunning ice patterns and explore the magic of computational thinking. ❄️ <a href="#">Start here.</a>		<b>Intelligent Machines</b> – Write a short essay debating the following question – <i>Are computers more intelligent than the people who make them?</i>
	<b>Computer Science Fundamentals</b> - A collection of interactive quizzes that will help you master computer science fundamentals. <a href="https://brilliant.org/courses/computer-science-fundamentals/">https://brilliant.org/courses/computer-science-fundamentals/</a>		<b>Star Wars Coding Adventure</b> – Bring Star Wars to life with coding! Program droids like BB-8 and R2-D2 to complete exciting challenges using block-based coding. 🚀 <a href="#">Start here.</a>		<b>Raspberry Pi</b> – <i>Why not get yourself a credit card sized computer?</i> There are so many projects you can complete with this tiny computer. Take a look here for inspiration. <a href="https://raspberrypi.org/magpi-issues/Projects_Book_v1.pdf">https://raspberrypi.org/magpi-issues/Projects_Book_v1.pdf</a>
	<b>Be Internet Awesome – Interland</b> - Explore the exciting world of Interland and learn how to stay safe online! Play interactive games that teach you about cyber safety, digital citizenship, and protecting your personal information. 🌐🛡️ <a href="#">Start your adventure here</a>		<b>Flappy Bird Game Builder</b> – Learn to code by creating your own Flappy Bird-style game! Adjust the rules, set challenges, and make your own version of the viral game. 🐦 <a href="#">Start here.</a>		<b>Create your own website</b> - Use this Codecademy tutorial to develop your skills using HTML and CSS to build your own website. <a href="https://www.codecademy.com/courses/web-beginner-en-HZA3b/0/1">https://www.codecademy.com/courses/web-beginner-en-HZA3b/0/1</a>
			<b>Python</b> - Develop your Python programming skills by challenging yourself to complete as many tasks on Snakify as you can. <a href="https://snakify.org/">https://snakify.org/</a>		<b>Centre of Computing History</b> - Plan a visit to the Centre of Computing History Rene Court, Coldhams Road, Cambridge, CB1 3EW <a href="http://www.computinghistory.org.uk/">http://www.computinghistory.org.uk/</a>

	Reading Task		Writing Task
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	Creative Task		Student Led Task

# Super Curriculum – Year 10 & 11

## Subject: Computer Science

SC1		SC2		SC3	
	<b>The Daily Coding Problem</b> - Get tailored problems from our experts who have interviewed at top companies. You Solve Them Solve problems every day before you get the solutions the next morning. Show any completed tasks to your teacher. <a href="https://www.dailycodingproblem.com/">https://www.dailycodingproblem.com/</a>		<b>Computer Science General</b> - Website full of recommended reading, courses, magazines, journals, history for computer science. Complete any read and describe to your teacher. <a href="https://www.cs.ox.ac.uk/admissions/undergraduate/why_oxford/background_reading.html">https://www.cs.ox.ac.uk/admissions/undergraduate/why_oxford/background_reading.html</a>		<b>Computing General</b> - Website of courses for all sorts of knowledge, including computer science, web design, programming. Complete any course and show it to your teacher. <a href="https://www.futurelearn.com/subjects/it-and-computer-science-courses">https://www.futurelearn.com/subjects/it-and-computer-science-courses</a>
	Computer Science for fun Website of links to resources, articles, magazines and puzzles. <a href="http://www.cs4fn.org/">http://www.cs4fn.org/</a>		<b>iDEA Award</b> Like DofE, but digital! Complete badges in topics such as Teamwork, Video Games, and colour! <a href="https://idea.org.uk/">https://idea.org.uk/</a>		<b>CISCO Packet Tracer</b> - A network simulation tool! Can you simulate the school network? Can you simulate your home network? Includes courses that you can take" <a href="https://www.netacad.com/courses/packet-tracer">https://www.netacad.com/courses/packet-tracer</a>
	<b>Reith Lectures 2021 - Living With Artificial Intelligence</b>  Stuart Russell delivers four lectures that explore the impact of AI on our lives and discuss how we can retain power over machines more powerful than ourselves. <a href="#">Listen</a>		<b>National Computing Museum</b> The National Museum of Computing is a museum in the United Kingdom dedicated to collecting and restoring historic computer systems <a href="https://www.tnmoc.org/">https://www.tnmoc.org/</a>		<b>Project Euler</b> Project Euler is a series of challenging mathematical/computer programming problems that will require more than just mathematical insights to solve. Although mathematics will help you arrive at elegant and efficient methods, the use of a computer and programming skills will be required to solve most problems. <a href="https://projecteuler.net/about">https://projecteuler.net/about</a>
	<b>Tech and Science Daily</b> Daily bulletins reporting the latest news from the world of science and technology, from the Evening Standard <a href="https://play.acast.com/s/tech-science-daily">https://play.acast.com/s/tech-science-daily</a>				<b>Bletchley Park</b> Bletchley Park is an English country house and estate in Bletchley, Milton Keynes that became the principal centre of Allied code-breaking during the Second World War <a href="https://bletchleypark.org.uk/">https://bletchleypark.org.uk/</a>

	<b>TLDR Tech Newsletter</b> A fantastic, free email newsletter showcasing recent tech developments. <a href="#">Sign up link</a>				
	<b>Blog of Bill Gates</b> The blog from Bill Gates, covering all kinds of topics, not just Computing! Lots and lots of book recommendations <a href="https://www.gatesnotes.com/">https://www.gatesnotes.com/</a>				