










Computing Super Curriculum at TMWS Autumn term

	SEPT - OCT	NOV – DEC
YEAR 7	 <p>Write a poem about online safety</p>  <p>CS4FN magazine Read a magazine on the CS4FN website. There is a range of fun and intriguing articles and puzzles. https://www.cs4fn.org/</p>	 <p>Computational Fairy Tales by Jeremy Kubica A romp through the principles of computational thinking, illustrating high-level computer science concepts, the motivation behind them, and their application.</p>  <p>Watch a clip from BBC Click https://www.bbc.co.uk/programmes/b006m9ry/episodes/guide</p>
YEAR 8	 <p>How is data sent around the Internet? Watch these short videos to find out how your data gets to you. https://www.youtube.com/watch?v=5o8CwafCxnU https://www.youtube.com/watch?v=AYdF7b3nMto</p>	 <p>Listen to a podcast on science and technology. https://www.bbc.co.uk/programmes/w13xttzz/episodes/player</p>
YEAR 9	 <p>What are web pages? Watch this video to find out what makes up a web page. https://www.youtube.com/watch?v=kBXQZMmiA4s</p>	  <p>Computer science puzzles Flex your skills with some quick and fun computer science puzzles. https://brilliant.org/courses/computer-science-puzzles/</p>

YEAR 10



The Register

The Register (nicknamed El Reg) is a British technology news and opinion website. Keep up to date by subscribing and reading news articles regularly.

<https://www.theregister.com/>



Cyber Explorer

Register for this fun, free and interactive learning platform for future digital superstars.

<https://www.cyberexplorers.co.uk/>



How is data sent securely over the Internet?

Watch this short video explaining what encryption is and how it is used to send data over the Internet.

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

YEAR 11



Map of Computer Science

A fantastic short video summarising the field of computer science.

<https://www.youtube.com/watch?v=SzJ46YA RaA>



Computer science theory

Pick a topic you would like to know more about and use Khan Academy to investigate this area. Register and it will save your progress.














<https://www.khanacademy.org/computing/computer-science>



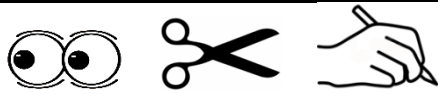
The questions computers have never answered.

There are still some problems which computers and their designers are yet to solve. But what are they?

<https://www.wired.com/2014/02/halting-problem/>

	JAN – FEB	MAR – APRIL
YEAR 7	 <p>Computer Science fundamentals A collection of interactive quizzes that will help you master computer science fundamentals. https://brilliant.org/levels/computer-science/</p>  <p>No more teachers Write a short essay debating the following question - <i>Will computer assisted education replace the need for teachers in the future?</i></p>	 <p>What is the Internet? Watch the creator of the Internet begin to explain what it is all about in these 2 videos. https://www.youtube.com/watch?v=Dxcc6ycZ73M https://www.youtube.com/watch?v=ZHEf7e4kopM</p>   <p>Code breaking Have some fun learning how to break code and solve ciphers on the gift for curiosity website by downloading the free worksheets. https://www.giftofcuriosity.com/secret-codes-for-kids/</p>
YEAR 8	 <p>Watch a clip from BBC Click https://www.bbc.co.uk/programmes/b006m9ry/episodes/guide</p>	 <p>Cybersecurity and crime Watch this short video to introduce how the Internet can have problems and some of the ways to stay safe. https://www.youtube.com/watch?v=AuYNXgO_f3Y</p>
YEAR 9	 <p>The birth of the computer How did computers come into being? https://www.youtube.com/watch?v=EF692dBzWAs&list=PLF7032F8EB1A4F9E2</p>   <p>More puzzling ideas Choose some of the puzzles from this site to see how your computational thinking skills are doing. https://teachinglondoncomputing.org/puzzles/</p>	 <p>Algorithms to Live By: The Computer Science of Human Decisions A fascinating exploration of how computer algorithms can be applied to our everyday lives.</p>   <p>Create a website Use this website to learn how to create a website from the very beginning. https://www.codecademy.com/learn/learn-html</p>

YEAR 10



TED Talks on Technology

Choose a TED talk on an area of technology you find interesting and create a short presentation about the topic.

<https://www.ted.com/talks?sort=relevance&topics%5B0%5D=technology>



Making all knowledge computational

Watch the TedTalk on Computing a theory of everything | Stephen Wolfram

<https://www.youtube.com/watch?v=60P7717-XOQ&list=PLF7032F8EB1A4F9E2>



Learn a second language.

Use the website below to develop your knowledge of Python.

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

YEAR 11



Careers with Computer Science

Find out about some of the careers available using computer science.

<https://www.youtube.com/playlist?list=PLzdnOPI1iJNflwSYPmLx83gGx-ckg1sh6>



Structured Query Language

Use these Khan Academy tutorials to learn how to use SQL to store, query, and manipulate data.

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



What is an SQL Injection?

Find out what this means and how you can prevent it from happening.




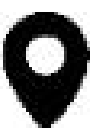





<https://www.youtube.com/watch?v=2OPVViv-GQk>
















No more teachers

Write a short essay debating the following question - *Will computer assisted education replace the need for teachers in the future?*

How did this differ to your essay in Year 7 if you completed that challenge?

	MAY-JUN	JUNE- JULY
YEAR 7	  <p>BBC Microbit Go to BBC Microbit website and create a project using MakeCode Editor. https://makecode.microbit.org/</p>	 <p>Technology Make a video on your favourite piece of technology.</p>
YEAR 8	  <p>Take a virtual trip Visit the National Museum of Computing. https://www.tnmoc.org/3d-virtual-tour2</p>  <p>Unplugged activities Go onto the website given and choose an activity from binary representation to looking at artificial intelligence. https://classic.csunplugged.org/activities/</p>	 <p>How does the Internet search work? Watch this short video to find out how searching really works. How are spiders involved? https://www.youtube.com/watch?v=LVV_93mBfSU</p>
YEAR 9	 <p>Unplugged activities Go onto the website given and choose an activity from binary representation to looking at artificial intelligence. https://classic.csunplugged.org/activities/</p>	 <p>Watch the Imitation Game to find out about the work carried out at Bletchley Park in World War 2.</p>

<p>YEAR 10</p>	 <p>More puzzling ideas Choose some of the puzzles from this site to see how your computational thinking skills are doing. https://teachinglondoncomputing.org/puzzles/</p>	 <p>Build your own Looking to purchase a new computer or laptop? Well, instead your challenge is to build your own! Research components separately to piece together in creating your own system. Put together a document detailing everything you need along with the cost.</p>
<p>YEAR 11</p>	 <p>Artificial Intelligence Write a short essay debating the following question - <i>Will Artificial Intelligence Replace Mankind?</i></p>	

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