A Level Computer Science

Transition from GCSE

Your transition task is to develop your understanding of an interest in Computer Science by learning something new about it. This could be something practical, e.g. experimenting with a new programming language or taking your Python skills further, or maybe even building your own PC. Alternatively you may take an interest in a more theoretical or historical aspect of Computer Science and do some research around this. What you do is up to you – the only requirement is that I’d like you to prepare a 10-minute presentation on it to share with the class in September. The list of resources below may help you, but you are by no means restricted to these! There is absolutely no need to spend money on this if you don’t want to – the majority of the resources listed below are freely available online. Good luck, and have fun!

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| Books | Computational Fairy Tales – Jeremy Kubica  Brown Dogs and Barbers: What's Computer Science All About? – Karl Beecher  Hacking Secret Ciphers with Python – Al Sweigart But How Do It Know? - The Basic Principles of Computers for Everyone – J Clark Scott GitHub (free programming ebooks)  <https://github.com/EbookFoundation/free-programming-books/blob/master/free-programming-books.md#javascript> |
| Magazines and Journals | Computer - <https://www.computer.org/computer-magazine/>  CS4FN - <http://www.cs4fn.org/lastonein/lastonein.php>  magPi - <https://www.raspberrypi.org/magpi/> |
| Places of Interest to visit | The National Museum of Computing - <http://www.tnmoc.org/>  Bletchley Park - <https://bletchleypark.org.uk/>  The UK Computer Museum, Cambridge <http://www.computinghistory.org.uk/> |
| Websites | Brilliant - <https://brilliant.org/computer-science/computer-science/>  Think Like a Computer Scientist -  [http://www.openbookproject.net/thinkcs/python/english2e/index.html#](http://www.openbookproject.net/thinkcs/python/english2e/index.html)  Using Python -  <http://usingpython.com/python-introduction/>  Program Arcade Games -  <http://programarcadegames.com/>  CodeAcademy <https://www.codecademy.com/learn> |
| YouTube Channels | Craig & Dave - [https://www.youtube.com/channel/UC0HzEBLlJxlrwBAHJ5S9JQg/pla ylists?shelf\_id=10&sort=dd&view=50](https://www.youtube.com/channel/UC0HzEBLlJxlrwBAHJ5S9JQg/playlists?shelf_id=10&sort=dd&view=50)  Computerphile - [https://www.youtube.com/user/Computerphile/videos?view=0&sort =dd&flow=grid](https://www.youtube.com/user/Computerphile/videos?view=0&sort=dd&flow=grid)  Introduction to Computer Science I", Harvard OpenCourseWare - <https://www.youtube.com/watch?v=z-OxzIC6pic&list=PLvJoKWRPIu8G6Si7LlvmBPA5rOJ9BA29R> |
| MOOCs | Introduction to Computer Science  <https://www.edx.org/course/introduction-computer-science-harvardx-cs50x>  Intro to Computer Science & Programming Using Python  <https://www.edx.org/course/introduction-computer-science-mitx-6-00-1x-10> |
| News Articles | BBC Click - <http://www.bbc.co.uk/programmes/n13xtmd5>  MIT News - <http://news.mit.edu/topic/computers>  Phys.org - <https://phys.org/technology-news/computer-sciences/> |
| Podcasts/Radio | Wired - <http://www.wired.co.uk/series/wired-podcast>  BBC Tech Tent - <http://www.bbc.co.uk/programmes/p01plr2p/episodes/downloads>  BBC – Computing Britain  <http://www.bbc.co.uk/programmes/b06bq6j1/episodes/downloads> |
| TED Talks | 20 Must See TED Talks for Computer Scientists -  <https://www.youtube.com/watch?v=EF692dBzWAs&list=PLF7032F8EB1A4F9E2> |

If there are any questions, please email Mr. O’Neill on:

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