**SUBJECT-SPECIFIC ENRICHMENT OPPORTUNITIES**

**SUBJECT: Computer Science**

**THE SCHOOL**

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| 1 | Recommended books: |
| 2 | Documentaries/ films/podcasts:   * The Imitation Game (film – PG 13) * Social Network (film – 12A) * Silicon Cowboys (film) * Print the Legend (film) * Lots more on Netflix… |
| 3 | Activities:   * Programming * Build a computer * Micro:bits * Raspberry Pi’s |
| 4 | Places to visit:   * Bletchley Park * Science Museum * Computing Live Event |
| 5 | Competitions:   * Bebras Contest * Cyber First Girls Competition * PA Consulting Annual Raspberry Pi Competition * More at - <https://community.computingatschool.org.uk/resources/43/single> |

**JUNIOR COLLEGE**

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| 1 | Recommended books:   * 21 Lessons of the 21st Century - Yuval Noah Harari * The Soul of a New Machine – Tracy Kidder |
| 2 | Documentaries/ films/podcasts:   * The Imitation Game (film – PG 13) * Social Network (film – 12A) * Silicon Cowboys (film) * Print the Legend (film) * Terms and Conditions May Apply (film) * We Are Legion: The Story of Hacktivists (documentary) * Lots more on Netflix… |
| 3 | Activities:   * Programming * Robotics * Build a computer * Raspberry Pi’s * Work experience |
| 4 | Places to visit:   * Bletchley Park * Silicon Valley * Work experience |
| 5 | Competitions:   * (international) Informatics Olympiad * PA Consulting Annual Raspberry Pi Competition * Technovation Challenege * More at - <https://community.computingatschool.org.uk/resources/43/single> |
| 6 | Courses:   * Programming courses online * The Young Computer Scientist Programme * Internships |
| 7 | Online talks:   * View upcoming talks online |

**SENIOR COLLEGE**

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| 1 | Recommended books:   * 21 Lessons of the 21st Century - Yuval Noah Harari * The Soul of a New Machine – Tracy Kidder * The Innovators: How a Group of Hackers, Geniuses, and Geeks Created the Digital Revolution – Walter Isaacson |
| 2 | Articles to read:   * Many on - <https://www.sciencedaily.com/news/computers_math/computer_science/> |
| 3 | Documentaries/ films/podcasts:   * Silicon Cowboys (film) * Print the Legend (film) * Terms and Conditions May Apply (film) * We Are Legion: The Story of Hacktivists (documentary) * Lots more on Netflix… |
| 4 | Activities:   * Programming * Robotics * Build a computer * Work experience * University visits |
| 5 | Places to visit:   * Universities * Silicon Valley |
| 6 | Competitions:   * (international) Informatics Olympiad * PA Consulting Annual Raspberry Pi Competition |
| 7 | Courses:   * Programming courses online * The Young Computer Scientist Programme * Internships |
| 8 | Online talks:   * View upcoming talks online |
| 9 | Essay titles:   * “Biotechnology, Medicine, and Computer Science” * “Neuron Networks and Machine Learning” * “Big Data Analysis” * “Virtual Reality and its Connection to Human Perception” * “The Success of Computer-assisted Learning * <https://www.aresearchguide.com/30-computer-science-research-paper-topics.html> * <https://www.ukessays.com/essays/computer-science/> |