Subject: COMPUTER SCIENCE   Phase: UPPER SCHOOL (Year 10 and 11)

Welcome to the Computer Science Super Curriculum. Below you will find a whole host of exciting things to do to develop your understanding and boost your knowledge of Computer Science. We hope you enjoy doing this work. You might want to create a workbook, journal or presentation of the things you do. You will earn reward points if you can show your teacher.

READ

- Introduction into computational thinking:
  What is computational thinking? - Introduction to computational thinking - KS3 Computer Science Revision - BBC Bitesize
- An introduction into programming:
  What is programming? - Introduction to programming - KS3 Computer Science Revision - BBC Bitesize
- Boolean Logic:
  What is Boolean logic? - Boolean logic - KS3 Computer Science Revision - BBC Bitesize

WATCH

- Ted Talk from a 12 year old app developer:
  https://www.ted.com/talks/thomas_suarez_a_12_year_old_app_developer?referrer=playlist-ted_under_20&autoplay=true&subtitle=en
- What is an algorithm?
  KS3 / KS4 Computer Science: What is an algorithm? - BBC Teach
- Hackers & cyber-attacks:
  Hackers & Cyber Attacks: Crash Course Computer Science #32 (thecrashcourse.com)
- How AI works:
  Educational short videos | Code.org

LISTEN

- Solve It! Podcast:
  https://solveitsciencepodcastforkids.com/
- How the internet works:
  How does the internet work? | Brains On
- What is a computer virus?
  Going Viral: What is a Computer Virus? | Brains On
- How video games began?
  Video Games: A Tale of Two Pongs | Brains On

DO

- Learn to program in *Python*:
  Teach Python 3 and web design with 200+ exercises - Learn Python 3 - Snakify
- 3D game creation with *Kodu*:
  Kodu Game Lab | KoduGameLab
- Create stories, games and animations with Scratch:
  Scratch - Imagine, Program, Share (mit.edu)
- Learn to program with Khan Academy:
  Sign up | Khan Academy