



**The John Roan School
Sixth Form**

The best in everyone™
Part of United Learning

Year 11 Bridging Work for Computer Science (A Level)



Watch Computational Thinking

Watch the short video below at least twice. It gives an overview of key terms, types of knowledge and the basic concepts of computational thinking.

Link: [What is Computational Thinking?](#)
Time: 7 minutes (watch twice)



Read Types of programming language

The instructions that tell a computer what to do are written in machine code. Machine code is a series of numbers written in binary. Each number represents a different instruction. Read the short BBC Bitesize article linked below and then test yourself with the questions given. Then write your own definitions of: High level languages, Low Level languages, Assembly languages, Machine language, and Translators

Link: [BBC Bitesize](#)
Time: 30 minutes



Watch Python for beginners

Watch the introductory tutorial for learning Python. It will help you understand and learn the python programming language and features. This is one of the most widely adopted programming language in the industry. Some of you are likely to have come across it before, but it not it is worth playing around with it before the course begins.

Link: [What is Python?](#)
Time: 10 minutes



Watch Trinket: Getting Started

Watch the video linked below which includes a lot of information about Trinket. It takes you through the steps to create an account and complete 'Python Challenges'.

Link: [Trinket – Getting Started](#)
Time: 6 minutes



Complete Python Challenges

Complete the 'Python Challenges' as described in the Trinklet YouTube video. Follow the instructions on the 'Read' column to achieve the objective in the 'Outcome' column.

Link 1: [Trinket – Getting Started](#)
Link 2: [Trinklet](#)
Time: Limitless!



Read Computer Science is changing the world

Computer science is a critical and growing field of study. In 1992, only 10 websites existed globally. Thirty years later our lives are heavily influenced by advanced computational systems. Read the article below which highlights four ways in which computer science shapes and will continue to change our world, and why it's worth pursuing as a field of study.

Link: [Northumbria CompSci](#)
Time: 20 minutes



Listen The AI Revolution

Artificial intelligence is going to change all our lives. There are seemingly limitless opportunities. But as computers get ever more powerful how cautious do we need to be? Listen to the 30 minute podcast below to develop your own answers to the question of how cautious we need to be.

Link: [The AI Revolution](#)
Time: 30 minutes