Year 13 A – Level Computer Science

LEARNING JOURNEY

Work Experience

Be constructive over the summer holiday

MOOC
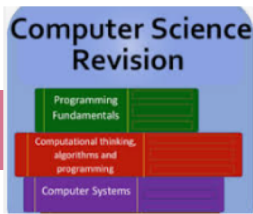massive open online courses
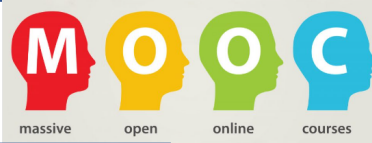
Read and research about the course you will study

End of Year 13

Summer

EXAM

Revision

Computer Science Revision
- Programming Fundamentals
- Computational thinking, algorithms and programming
- Computer Systems

Project testing

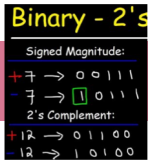| Test Number	Test Type	Test Data	Reason
1	Valid	Email = a@b.c	Enter a valid email to check if it says Valid

Boolean Algebra

Data types

Spring

Optimisation Algorithms
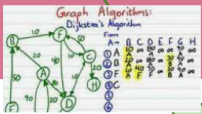
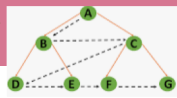| Distributive law | A + BC = (A + B)(A + C) | A(B + C) = AB + AC |
| Absorption law | A(A + B) = A | A + AB = A |
| De Morgan's law | $\overline{AB} = \overline{A} + \overline{B}$ | $\overline{A + B} = \overline{A}\overline{B}$ |

Binary - 2's
Signed Magnitude:
2's Complement:

Web technologies

Graph Traversal

Project implementation

Login with SQLite and Python Tkinter
SQLite in Python

WEB DEVELOPMENT

Autumn

Project analysis and Design

System Analysis And Design

Start of Year 13
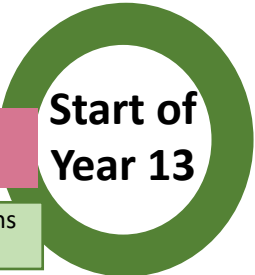
Networks
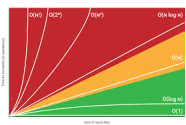
Algorithms and time efficiency

Applications General

Summary:
The course develops more advanced topics and gives some time to develop the NEA project
The expectations are that you steadily program throughout the year to such an extent that you can design and complete your NEA application yourself (20% of your marks)
Theory is gradually introduced along with the responsibilities that computer scientists have to come to terms with with – the Law, Morals and Ethics.