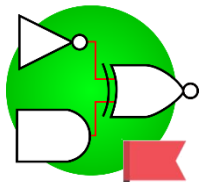


Year 10 Computer Science



On to Year 11!

I can explain why data is represented in binary form.

I interpret truth tables and logic diagrams using AND, OR and NOT gates.

I can calculate the outputs from all possible inputs when logic gates are paired.

I understand and can apply a range of computing-related Mathematics.

TOPIC 6: COMPUTATIONAL LOGIC

I am able to debug programs by identifying syntax and logic errors.

I am able to take steps to improve the maintainability of programs.

I am able to use a range of defensive design strategies when programming.

I can interpret, correct and accurately complete existing algorithms for a range of problems.

I can select and use suitable test data to verify programs work as intended.

I can explain the features, pros and cons of open source and proprietary software.

I can name and explain the UK laws with are relevant to Computer Science.

TOPIC 5: ROBUST PROGRAMS

I can produce algorithms using both pseudocode and flow diagrams.

I can discuss the environmental impacts (+ and -) of Computer Science on the environment).

I can apply the standard sorting and searching algorithms to a set of data.

TOPIC 4: COMPUTATIONAL THINKING

I have an understanding of some of the ethical and social issues within Computer Science.

I can explain the key approaches to computational thinking (abstraction, decomposition, etc.).

TOPIC 3: AREAS OF CONCERN

I can explain the features, pros and cons of full and incremental backups.

I can give examples of the use and role of utility system software.

I can explain the purpose and functionality of a range of aspects of operating systems.

TOPIC 2: SYSTEMS SOFTWARE

I can explain a range of approaches to reducing vulnerabilities to network security.

TOPIC 1: NETWORK SECURITY

I can explain the importance of network and data security in an organisation.

I can identify common internal threats to data from within an organisation.

I can identify a range of external threats to network and data security.

