Computer Science – KS 4

Summer 1 & 2

Gaps would be filled based on the updates on learners plc's.

Learners will revise towards their final exams, , practise exams techniques

Final Exams

PLC

Revision

Learners will consolidate knowledge and understanding of data representation in computer systems

Spring 1 & 2

Learners will consolidate knowledge and understanding, by recapping on system and application software. Understand the need for , and functions of operating systems and utility programs.

Data representation

Computer Systems

Learners will deepen understanding by recapping on computational constructs, methods and programming techniques.

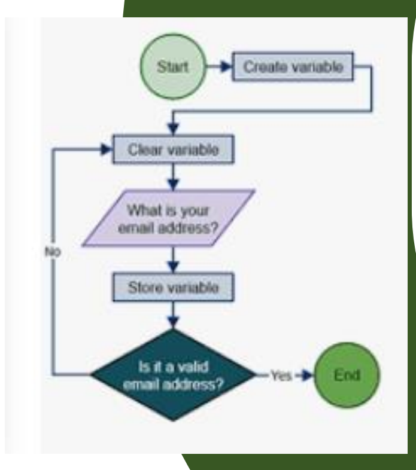
Year 11

Autumn 1 & 2

Learners will develop understanding of programming techniques such as sequence, iteration, arrays, records and files

Fundamentals of Algorithms

Programming



Learners will develop understanding of subroutines, simple data validation and authentication routines in programming

Summer 1 & 2

Learners will develop knowledge and understanding of the current ethical, legal and environmental impacts and risks of digital technology on society.

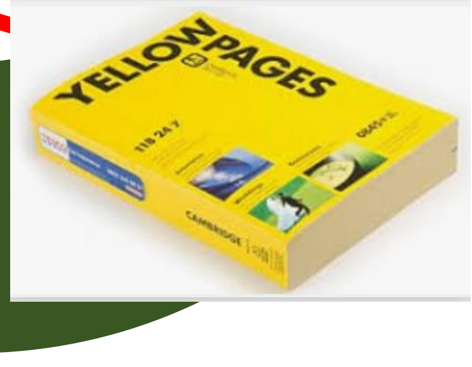
Structured Programming

Ethical, Legal & Environment Issues

Learners will develop knowledge and understanding of the main purposes of cyber security, threats, methods of detection and prevention

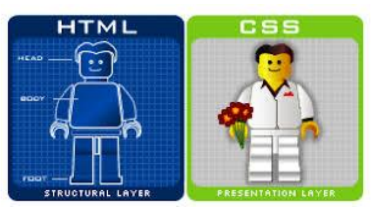
Spring 1 & 2

Learners will develop knowledge and understanding of the concept of entity, attribute, identifier in the implementation of database models



Fundamentals of Cyber security

Databases & SQL



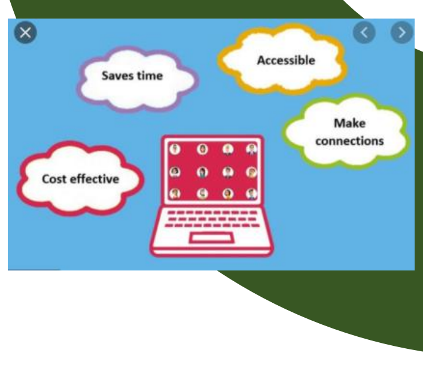
Learners will develop knowledge and understanding of encryption, hashing, networks and web technologies

Autumn 1 & 2

Year 10

Learners will develop knowledge and understanding the Von Neumann architecture, systems application and software, functions of operating systems and Boolean logic

Summer 1 & 2

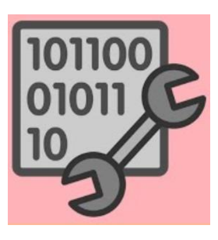


Fundamentals of networking

Computer Systems

Spring 1 & 2

Learners will develop understanding of how data is represented in computers. Binary, decimal and hexadecimal conversions



Learners will develop understanding of how data is represented in computers. Focus on digital media such as images, sounds, and discover the binary digits that lie beneath these media.

Data representation (Binary, hexadecimals)

Data representation (Images & sounds)

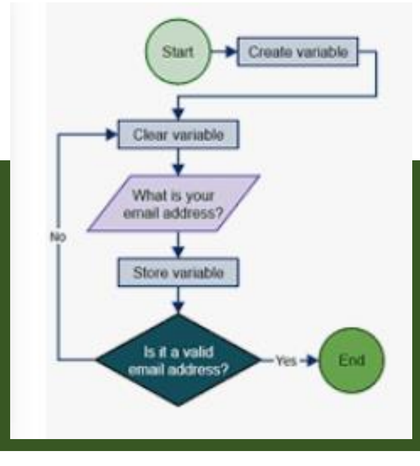
Learners will develop understanding of programming techniques such as sequence, iteration, arrays, records and files

Learners will develop understanding of computational constructs, methods and programming techniques

Autumn 1 & 2

Year 9

Programming



Fundamentals of Algorithms