



SECONDARY COMPUTER SCIENCE LEARNING JOURNEY

YEAR 11

RELATIONAL DATABASE AND SQL

ETHICAL, LEGAL AND ENVIRONMENT

REVISION AND COMMUNICATION

USING SQL TO SEARCH DATABASES

COLUMNS AND KEYS

ETHICAL CONSIDERATIONS OF DIGITAL TECHNOLOGY

SOLVING ALGORITHMIC PROBLEMS

RELATIONAL DATABASES

STRUCTURE DATA INTO TABLES

COMPUTERS AND THE LAW

ENVIRONMENTAL IMPACTS

HANDLING LONG ANSWER QUESTIONS

DEFINING AND DESCRIBING KEY TERMS

NETWORKING AND THE INTERNET

LANs, WANs AND THE INTERNET

PROCEDURES AND FUNCTIONS

HARDWARE AND SOFTWARE

FLOWCHARTS AND PSEUDO CODE

ALGORITHMIC THINKING

DATA REPRESENTATION

CYBER SECURITY

PROCEDURAL PROGRAMMING

COMPUTER SYSTEMS

COMPUTATIONAL THINKING

SECURITY

NETWORK SOFTWARE AND PROTOCOLS

COMPRESSION OF DATA

BINARY AND HEXADECIMAL

DETECTION AND PREVENTION

DATA HANDLING

ARITHMETIC AND RELATIONAL OPERATORS

HARDWARE AND SOFTWARE

FLOWCHARTS AND PSEUDO CODE

ALGORITHMIC THINKING

REPRESENTING TEXT, IMAGES AND SOUND

BINARY ARITHMETIC

MALWARE AND SOCIAL ENGINEERING

PROGRAMMING CONCEPTS

ROBUST PROGRAMMING

BOOLEAN OPERATORS AND LOGIC

BOOLEAN LOGIC

SYSTEMS ARCHITECTURE

STANDARD ALGORITHMS

DECOMPOSITION AND ABSTRACTION

YEAR 10

PROGRAMMING WITH PYTHON

NETWORKS AND THE INTERNET

DATA HANDLING-DATABASES

DATA REPRESENTATION

ITERATION AND SELECTION

VARIABLES AND LITERALS

LAN AND WAN

LAN TOPOLOGY

SEARCHING DATABASES

INTRODUCTION TO PYTHON

HOW THE INTERNET WORKS

HARDWARE

WHAT IS A DATABASE

ORGANISING DATA

DIGITAL REPRESENTATION OF IMAGES /SOUND

E-SAFETY

CREATING WEBSITES

DATA REPRESENTATION

PROGRAMMING WITH BLOCKS

COMPUTATIONAL THINKING

ONLINE SAFETY

CYBER-BULLYING

SOCIAL MEDIA

CREATING A WEBPAGE

CHARACTER ENCODING AND REPRESENTING TEXT

DEBUGGING AND TESTING

INTRODUCTION TO SUBROUTINES

ALGORITHMIC THINKING

DECOMPOSITION OF PROBLEMS

HTML AND CSS

SITEMAPS AND NAVIGATION

BINARY NUMBERS

MEMORY AND UNITS

STRUCTURED PROGRAMMING CONCEPTS

READING FLOWCHARTS

ABSTRACTION

YEAR 8

COMPUTER SYSTEMS

HANDLING DATA

PERSONAL E-SAFETY

INTRODUCTION TO ALGORITHMS

INTRODUCTION TO PROGRAMMING

WHAT IS DATA

USING SPREADSHEETS TO ORGANISE DATA

PRESENTING DATA

VIRUSES AND MALWARE

INTRODUCTION TO PROGRAMMING USING SCRATCH

USING VARIABLES

COMPUTER HARDWARE

DIFFERENT TYPES OF DATA

SAFE USE OF THE INTERNET

SOLVING PROBLEMS AND DOCUMENTING SOLUTIONS

TESTING AND PEER REVIEW

FUNDAMENTALS OF PROGRAMMING

WHAT IS SOFTWARE

WHAT IS A COMPUTER

YEAR 7

Schemes of learning are designed to ensure students progress based on their security of understanding and readiness for the next stage. STRETCH and CHALLENGE is at the heart of our curriculum

Students will become confident users of DIGITAL technology and able to apply it to real-life scenarios

Students will be able to TRANSLATE problems into ALGORITHMIC and DIGITAL SOLUTIONS



Topic tests and termly assessments are designed to accurately assess knowledge and maximise progression.

THE scheme is designed with INTERLEAVING as a key element



Use Manipulatives will be used within a CPA approach to develop CONCRETE, PICTORIAL and ABSTRACT understanding



understand a range of ways to use technology safely and securely, protect their online identity and privacy; recognise inappropriate content, and know how to report concerns