

YEAR 7

Induction and Online Safety		
Autumn 1	• Know that passwords are the same for computers in school and Microsoft 365 • Know that files store data created using programs • Know that folders store files • Know the features of a good file/ folder name • Know the impacts of cyberbullying: isolation, anxiety, sadness, depression, withdrawn, impact on school work, relationships, • Know the reasons people cyberbully (to cause harm; for fun; they are being bullied themselves, they may not realise the harm they cause) • Know that content online is not always reliable • Know that content online can be biased • Know the features of formal and informal emails and when each is appropriate • Know that social media includes all apps and websites that all people to post messages, videos or images or to communicate with others • Know the dangers associated with using social media • Know the impact of viewing inappropriate content on young people • Know that good presentations adhere to the following conventions: Bullet points, short statements, large font, images to reinforce content, consistent background, contrasting font colour, suitable transitions and animations.	Key Vocabulary Reliable Bias Explicit Contrast File Folder Bystander Document Format Italics Underline Alignment Justify Bullet points URL Email Presentation Slide Transition Animation



Algorithms in Code.org

Autumn 2

- Know that a digital footprint is a trail of data left when using the internet and it can be impossible to remove
- Know the potential impact of a poor digital footprint
- Know that algorithms are a sequence of step-by-step instructions
- Know that executing mean running a piece of code
- Know that debugging is finding and fixing errors in algorithms
- Know that iteration is the repetition of steps in an algorithms
- Know that decomposition is breaking a complex problem into small parts so that they can be solved individually
- Know that abstraction is identifying the key elements of a problem

Key Vocabulary

Programming
Sequence
Algorithm
Execute
Debugging
Iteration
Decomposition
Abstraction
Repetition
Pattern
Decompose
Abstract



Programming in Scratch

Spring 1

- Know that a sprite is a programmable object in a project
- Know that the stage is the background to a project and is programmable
- Know that blocks are used to create algorithms to instruct sprites and backgrounds.
- Know that motion blocks control the movement of sprites
- Know that looks blocks control the costume of sprites
- Know that event blocks determine when a script is executed
- Know that selection means to program a computer to decide which code to execute based on a condition
- Know that control blocks are used for selection and iteration
- Know that sense blocks are used to detect factors in a project
- Know that variables are values that are stored in a program

Key Vocabulary

Co-ordinates
Costume
Condition
Sprite
Stage
Blocks
Selection
Variable, Operators

Programming in Scratch

Spring 2

- Know the features that make a successful game
- Know why it is important to plan digital projects
- Know why it is important to evaluate digital products

Key Vocabulary

Challenge
Gameplay



Modelling using spreadsheets

Summer 1

- Know that a spreadsheet is used for storing numerical data and performing calculations
- Know that formula are equations that use cell references to perform calculations
- Know that functions are pre-defined formulas
- Know that primary sources of data are collected first hand
- Know that secondary sources of data are collected by someone else earlier

Key Vocabulary

Spreadsheet
Operators
Axis
Column
Bar
Format
Datatypes
Conditional formatting

Computer Systems



Summer 2	Knowledge (know that) • Know that A computer is a machine which accepts inputs, processes them and outputs a result. • Know that an embedded system is designed for one or few specific purposes. • Know that a general purpose system can be used for a wide range of different tasks. • Know that Alan Turing developed a computer system to crack the enigma codes. • Know the function of a range of peripherals: Keyboard, Mouse, Monitor, Scanners (image, fingerprint, barcode), Sensors (temperature, movement, light), Graphic Tablets, Microphone, Controller, Headset, Touchscreen, Speaker, Headphones, Projector, Light, Camera • Know that application software are programs that have been created to allow users to complete tasks • Know that system software are programs that enable the computer system to operate or improve how it operates • Know that the operating system is system software that manages all key components of a computer system. • Know that secondary storage stores files and programs permanently • Know that there are different types of secondary storage (SSD, HDD) and the key differences (R/W Speed, Cost, Size, Weight) • Know that main memory stores files and programs temporarily when they are being used. • Know the units of storage • Know that purpose of the cpu is to execute commands • Know that a typical CPU can execute 1.8billion commands per second • Know the units of frequency	Key Vocabulary Keyboard Computer Mouse Scanner System Microphone Inputs Printer Outputs Controller General Application Purpose Software (Apps) System Operating Embedded System (OS) System Utility Software Encrypt/ Anti-malware Encryption Encryption Cipher Back-up Peripheral(s) Secondary Input Storage Devices Main Memory Output RAM Devices Bits Bytes Kilo Mega Giga Tera Hertz Kilo
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