

Computing Road Map

Understand and use basic algorithms to code a toy robot

Year 1

Explore websites with support and develop basic editing skills to enhance photos and videos

* Develop keyboard skills
* Discuss how to maintain a healthy relationship with technology

Year 2

Explore how technology has changed over time

* Predict the outcomes of simple algorithms
* Begin to explore and create publications

Navigate a keyboard and find relevant information using a menu

Year 3

Explain how simple algorithms work and correct errors

* Explain how the internet works
* Take screenshots, copy and paste
* Understand how to report concerns online

Year 4

* Introduce variable and repeat commands in algorithms
* Debug programs
* Explore broadcast media

Year 6

* Independently create and amend errors within algorithms
* Modify and alter appearance of graphics
* Explore film editing
* Use specific vocabulary when discussing ideas

* Continue to explore film editing
* Use basic spreadsheets and database programs

Design, write and refine programs

Year 5

Understand what online context is age appropriate

* Explore basic film editing
* Begin sending messages online and understand its positive and negative effects

Year 7

Understand how to stay safe online and report concerns

* Small basic modelling (Lunar lander)

* Using computers safely and effectively
* Introducing Computing

* Block programming (Games design)
* Spreadsheet modelling (Vending Machine)

* Python programming (Turtle graphics)
* Web design (Dangerous Animal Zoo)

Year 8

* How computers work
* Small Basic Modelling (Lemonade stand)

Year 9

* Block programming (Mobile App)
* Python programming (Cryptography)

* Web design (Big Drinks Ltd)
* Spreadsheet modelling (Bob's Budget)

* Block programming (Mobile App)
* Python programming (Dice games)

Year 10

* Spreadsheet modelling (Booking System)
* Web design (Escapades Adventure Park)

2.1.1 Computational thinking
1.2.4 Data storage
2.2.1 Programming fundamentals
2.2.2 Data types
1.2.5 Compression
1.1.3 Embedded systems

1.1.1 Architecture of the CPU
1.1.2 CPU performance
1.2.1 Primary storage (Memory)
1.2.2 Secondary storage
1.3.1 Networks and topologies
1.3.2 Wired and wireless networks, protocols and layers
2.1.2 Designing, creating and refining algorithms

Key
Primary Curriculum
Temperance Term
Justice Term
Courage Term

Year 11

1.6.1 Ethical, legal, cultural and environmental impact
2.1.3 Searching and sorting algorithms

1.4.1 Threats to computer systems and networks
2.2.3 Additional programming techniques
1.4.2 Identifying and preventing vulnerabilities
1.5.1 Operating systems
1.5.2 Utility software

2.3.1 Defensive design
2.5.2 The Integrated Development Environment (IDE)

2.4.1 Boolean logic
2.3.2 Testing
2.5.1 Languages
Revision

