

# Computing Road Map

Understand and use basic algorithms to code a toy robot

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

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

Navigate a keyboard and find relevant information using a menu

**Year 1**

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

**Year 2**

Explore how technology has changed over time

**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

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

**Year 6**

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

Design, write and refine programs

**Year 5**

Understand what online content is age appropriate

**Year 4**

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

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

**Year 7**

- Using computers safely and effectively
  - Computing hardware
  - Data Representation - Binary

Spreadsheets and Computational thinking

**Year 8**

Block Based Coding (Physical Computing)

- Python Programming (Part 1)
- Inside the Computer

Understand how to stay safe online and report concerns

Ethical/Unethical Use  
Viruses and Malware  
Hackers

**Year 9**

- Encryption
- Ciphers
- History of Computing

Python Programming (Part 2)

- Environmental Impact of computers
- Website design – Introducing the Software Development Cycle

Big Data and how it is used

- Introducing Logic and Data Representation – Images & Logic Gates
- Networks and Threats to networks

- Data Representation
- Cybersecurity

Data Representation - ASCII & Unicode

**Year 10**

- The impact of Technology & AI
- Internet of Things & 3D Design

1. 11 - Professional Standards  
1.1 - Hardware  
1.2 - Logical Operators  
1.3 - Networking and Cybersecurity

1.5. - Data Organisation  
1.8 - Algorithms and Constructs  
2 - Implementation

1.8 - Algorithms and Constructs  
Component 2 - Consolidation of Learning outcomes  
1.11. - Impacts of digital technology on wider society

**Year 11**

1.8 - Algorithms and Constructs  
2 - Investigation & Design  
2 - Testing  
2 - Refinement

1.4 - Data Representation  
1.8 - Algorithms and Constructs  
2 - Implementation

1.8 - Algorithms and Constructs  
2 - Implementation

1.9 - Software Development  
1.10 - Program Construction

1.8 - Algorithms and Constructs  
2 - Investigation & Design  
2 - Testing  
2 - Refinement

Exam preparation

**Key**  
Primary Curriculum  
Temperance Term  
Justice Term  
Courage Term

