

### Year 7 Targets

Understand what algorithms are

Create simple programs

Debug simple programs

Use logical reasoning to predict the behaviour of simple programs

Write programs that accomplish specific goals

Use sequence in programs

Work with various forms of input & output

Design and create programs

Use repetition in programs

Control or simulate physical systems

Solve problems by decomposing them into smaller parts

Use selection in programs

Work with variables

Understand simple Boolean logic

Understand how numbers can be represented in Binary and Hexadecimal

### Year 8 Targets

Understand that algorithms are implemented as programs on digital devices

Use logical reasoning to detect and correct errors in programs

Use logical reasoning to explain how some simple algorithms work

Use a programming language to solve computational problems

Understand that programs execute by following precise and unambiguous instructions

Debug programs that accomplish specific goals

Understand the hardware components that make up computer systems

Understand how computer networks can provide multiple services, such as the world wide web

Appreciate how search results are selected

Understand how pictures can be represented digitally in the form of binary digits

Use logical reasoning to detect and correct errors in algorithms

Understand computer networks including the internet

Use computational abstractions

Model state of real world problems

Understand uses of Boolean logic in programming

Understand the software components that make up computer systems

Understand how text can be represented digitally in the form of binary digits

### Year 9 Targets

Evaluate computational abstractions

Understand several key algorithms that reflect computational thinking

Use at least one additional programming language to solve real world problems
Make use of appropriate data structures
Design modular programs that use procedures or functions
Be able to carry out simple operations on binary numbers
Understand how instructions are stored by computer systems
Understand how text can be manipulated digitally in the form of binary digits
Understand how sounds can be represented digitally in the form of binary digits
Understand how pictures can be manipulated digitally in the form of binary digits
Design computational abstractions
Develop modular programs that use procedures or functions
Understand uses of Boolean logic in circuits
Understand how computer systems components communicate with one another
Understand how computer systems communicate with other systems
Understand how instructions are executed by computer systems
Understand how sounds can be manipulated digitally in the form of binary digits