



# COMPUTER KS3 Intent - Long Term Plan/Overview

The aim of the KS3 **Computing** curriculum at Queensbridge is to **engage pupils** with the different concepts which build Computer Science .

By the end of KS3, pupils should have ...

- Developed a computational approach to thinking
- Developed understanding on programming constructs
- Developed understanding on Computer Systems

The KS3 curriculum has been designed to specifically prepare students for their practical and theoretical areas in KS4 Computer Science.



## Year 7: Year Overview

### Methodology:

Each week within the Cycle pupils are provided with a new focus. This allows students to get a real feel for the vast variety of topics that are covered within Computer Science and allow them to apply Computational Thinking methods to very different scenarios strengthening their knowledge and ability to use each Computational Thinking method.

### KS4 Skills:

Development of Computational Thinking.  
In preparation for KS4, year 7 is dedicated to developing the basic skills required for Computer Science. Year 7 spend their cycle developing understanding on how Computing works and developing a computational approach to thinking.

### Content:

Impact of technology – Collaborating online respectfully •  
Networks from semaphores to the Internet  
Using media – Gaining support for a cause  
Programming essentials in Scratch – part I  
Modelling data – Spreadsheets

## Year 8: Year Overview

### Methodology:

Students will identify issues/problems in existing technologies and are encouraged to form imaginative solutions to problems using both high-level and low-level programming languages.

### KS4 Skills:

Development of Programming Constructs  
In preparation for KS4, year 8 is dedicated to developing students' ability to program basic application and describe the purpose of the different programming constructs.

### Content:

Vector Graphics  
Computing Systems Representations Clay to Silicon  
Mobile App Development  
Introduction to Programming  
Web Design

## Year 9: Year Overview

### Methodology:

Students will understand several key algorithms that reflect computational thinking and use logical reasoning to compare the utility of alternative algorithms for the same problem. They will undertake creative projects formed in a high-level programming language.

### KS4 Skills:

Development of Computer Systems Theory  
In preparation for KS4, year 9 is dedicated to developing students understanding on Computer Systems.

### Content:

Python Programming with Sequences  
Data Science  
Representations Going Audiovisual  
Animations  
Week 9: Cybersecurity