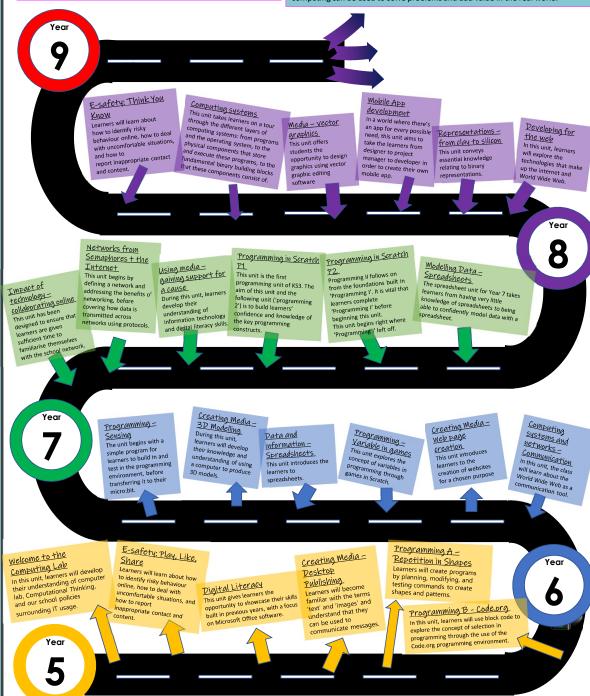


## Learning journey map Computing Studies 2023-24

## **KS3 Computing Studies**

The central intent of the Computing curriculum is for students to develop their computational thinking skills. By the end of Year 8, students should be able to use these skills to solve problems and design programs. In addition, they should be able to understand how computers work, and be aware of ethical issues surrounding computing. By developing these skills, students will be well-prepared to use computers in their future studies and careers.

By the end of Year 8, students would have developed their ability to think computationally. This involves decomposing problems into smaller parts, recognising patterns and generalisations, and using abstraction and modularisation to manage complexity. By the end of Year 8, students should be able to apply these concepts to design solutions to problems. They should also be able to evaluate existing digital solutions, and consider the ethical implications of computing. In addition, they should be familiar with a range of software tools and programming languages, and be able to use them to create working programs. Ultimately, the goal is for students to develop an understanding of how computing can be used to solve problems and add value in the real world.



## **KS2 Computing Studies**

The Computing curriculum is built for all children to be computational thinkers. This means they can flexibly apply the powerful ideas of computer science, which underpin all digital technologies, to solve complex problems. They can dissect problems into their component parts, identify patterns and relationships, generalise from what they already know to make deductions and develop innovative solutions. As children progress through KS2, they will deepen their understanding of these ideas and how to use them in increasingly sophisticated ways. By the end of Year 6, children will be confident in applying them across a range of other curricular areas to solve problems they encounter in their everyday lives.

The Computing curriculum Intent is that, by the end of year 6, pupils will be able to: Design and write programs that carry out specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts; use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs; understand computer networks including the internet, how they can supply multiple services such as email and the world wide web and the opportunities they offer for communication and collaboration; understand how instructions are stored and executed within a computer system; understand how data is represented and processed inside a computer; evaluate information systems, including whether they are fit for purpose, usable, reliable and secure; be responsible, competent, confident and creative users of information and communication technology.