Curriculum Intent for Computer Science at St Joseph's College

Big Question: ***What are computers?***

Our curriculum is designed the answer the following big question, ***what are computers?*** To do this each unit is designed to address this question and focus in on a different aspect of Computer Science. We aim to deliver a balance of theoretical and practical experiences to fully explore the big question. We revisit and build upon prior knowledge every year, building both the practical programming ability of the students and the theoretical understanding of how computers work.

In the practical aspects of computer science, we will start in Scratch which is an environment many will have experienced in KS2 but to look to develop the key understanding around the 3 programming constructs (sequence selection and iteration) early on in KS3. We then follow up with VB.NET, revisiting the programming constructs and adding development of the thinking skills of the students and developing their confidence to solve problems independently using their programming. Practically we will also look at HTML, CSS, work with Adobe Photoshop and Microsoft Office in order to provide an ambitious and wide range of practical computer science experiences.

With the computer science theory we look at how computers work, starting with binary, input/output and computer hardware and developing that over key stage 3. We revisit these ideas on several occasions and in different contexts such as networking, logic circuits, images, sound and text in binary and many more. We also look at the internet considering how exactly the internet works and e-safety, ensuring that students know how to recognise the dangers they may face when online. Our ambition is to give the students a well-rounded curriculum regarding the theoretical concepts of computer science.