

# **St Joseph's Catholic Primary School**



## **Computing Rationale**

At St. Joseph's the children are taught Computing on a two year rolling programme after EYFS. In accordance with the National Curriculum (2013), topics come under three strands: computer science, digital literacy and information technology. As such, by the end of each key stage, children would have completed all skills in the two year groups. This rationale will explain the progression through the strands across both years in both cycle A and B.

St Joseph's uses the Google for Education platform and our children use Chromebooks. Children each have their own school email account which allows them not only to keep their own documents safe, but children can collaborate on work in class and older children can continue work at home if they wish. Children also have access at 1:1 iPads in computing lessons as well as being able to use devices in wider areas of the curriculum.

### **Online Safety**

At St Joseph's we understand the importance of ensuring our children know and understand how they can keep themselves safe. In every key stage, the topic 'My Online Life' falls during Spring 1. The topic has been developed to improve children's knowledge of the risks of their online lives and to develop skills when using online services. It takes a holistic approach to each of the different elements of their online lives. Safer Internet Day also falls during this topic and each year, the whole school focuses on activities to improve awareness of staying safe online.

### **KS1 (Years 1 and 2)**

#### **Digital Literacy**

Across KS1, children will navigate the rules of online safety and communication: they will be able to recognise that technology can be used in different ways in the classroom, at home and in the community. They will also make animations based on an online situation they may encounter (Modern Tales, My Online Life). Children will also explore what friendship means online and the do's and don'ts that come with this (Online Buddies).

#### **Computer Science**

Children will be able to learn about and use different parts of a computer and iPad. They will use and apply new skills and tips. They will also learn about the

inner workings of a computer (What is a Computer?). Children will also explore computational thinking and problem solving using a variety of unplugged activities and online coding games, including Beebot and Lightbot (My Friend the Robot), as well as using Scratch Jr to learn the basics of coding with blocks (Making Games). Children will also be able to use visual coding to create a story using repeat loops and debugging (Code a Story).

### **Information Technology**

Children will be introduced to presentations through Google Slides and will develop their keyboard skills from EYFS (Presentations and Typing). In Mini-beasts, children use technologies to classify mini-beasts. They will gather and present information in different ways. Children will also learn about simple video editing and be able to produce a nature documentary and a news report using green screen (Mini-beasts, News Reporter). Children will also be introduced to audiobooks and create their own (Story Land).

### **LKS2 (Years 3 and 4)**

#### **Digital Literacy**

Building on their KS1 knowledge of Online Safety, children will explore advanced internet searching and be taught to distinguish between real and fake news (My Online Life, Real or Fake, Online Detectives).

#### **Computer Science**

Building on from their programming skills in KS1, children will be introduced to more advanced coding and programming. They will revisit the use blocks in Scratch Jr (Dancing Robot) and in Hour of Code, some children may also be introduced to more advanced programming languages, such as Python. Children may also have the opportunity to take part in global coding events. In Programming with Robots, children will explore the history of robots and then use their programming skills to move a robot around a complex maze.

### **Information Technology**

Through LKS2, children will continue to revisit core skills and expand their skills learned in Presentations and Typing. Children will be able to use word processing, spreadsheet and presentation apps (Be Digitally Awesome) as well as practise their touch typing skills (Keyboard Adventures). Children will explore the use of VR (Virtual Reality) and from this, use AR (Augmented Reality) to create learning games for younger children (Rainforests). Children will build on their video creating skills and learn about different filming techniques and storytelling skills, as well as researching topics to create their own informative piece of film (Dinosaurs, Endangered Animals).

### **UKS2 (Years 5 and 6)**

#### **Digital Literacy**

As our children get older and they become more independent with their use of devices and online platforms, children are given the opportunity to create content and are taught how to do this safely (Youtuber). They will also be taught how to cope with a variety of different online dilemmas and taught how to manage this as well as being taught how to report issues to adults (Online Safety Dilemmas, My Online Life)

### **Computer Science**

In STEAM Challenge, teams of children will work together on a variety of challenges involving coding, maths, art, DT and problem solving. Children will also be given the opportunity to design and publish a website using Google Sites, as well as learning about the history of the web (Web Designer).

Building on from their programming skills in LKS2, all children will be introduced to text based programming and learn how apps are built, as well as exploring programmable toys and drones (Coding Playground).

### **Information Technology**

In UKS2, children will be introduced to binary code and will challenge each other to problem solve using binary code (Binary Messages). Furthering their AR work in LKS2, children will design and create their own game that uses AR (Making AR Games). Building further on their video creating skills, Children will create and edit videos and animations to show how to solve different problems (Solve IT Club).