Computing Learning Journey
Year 2 Autumn 1st ½

2.1 We are astronauts

Programming on screen in ScratchJr

Create new 'costumes' for their sprites

Introduce repetition

Introduce message passing and input

Introduce output and use multiple sprites

Introduce ScratchJr and program sprite movement

Take part in playground activities, planning movement between 'planets'

Key Vocabulary

- **Abstraction**: computational thinking approach to managing complexity by simplifying things through identifying what is important, and what detail can be hidden
- **Algorithm**: a sequence of precise instructions or steps (sometimes a set of rules) to achieve an objective
- **Bug**: an error or mistake in a program or algorithm, causing the computer or robot to behave in a manner that was not originally intended
- **Code:** instructions (or sometimes rules) that can be understood by a computer
- **Debug**: correct mistakes in a program or algorithm
- **Event:** something that happens within a computer program to cause some particular code to be run, such as an internal message being received or a sprite being tapped by the user
- **Input**: data supplied to a computer, in this case, tapping on the screen of a tablet
- **Output**: information produced by a computer – in this case, moving sprites on a screen, text and audio
- **Parallel processing**: when programs run (or appear to run) simultaneously
- **Program**: sequence of instructions (or sometimes a set of rules) that can be followed by a computer
- **Repetition:** programming construct which allows a group of instructions to be repeated a number of times, or until a certain condition is met
- **Scratch**: simple, block-based programming language in which programs for characters are built by snapping together code blocks
- **Sprite**: a graphical character in a program that can be given its own sequence of instructions

Software: ScratchJr (alternative: Scratch)
Hardware: iPads (alternatives: Android tablets, laptop/desktop/Chromebook computers, Bee-Bots, Blue-Bots)

Online safety:
ScratchJr is an offline programming environment and therefore has few online safety risks associated with it. Internet (web browser) use will be monitored
Pupils can be encouraged to experiment with ScratchJr independently if they have compatible devices at home. Remind parents/carers about their responsibility to monitor their children's use of technology, and advise them to set sensible limits on the amount of screen time pupils have.

Switched on Online Safety Unit:
Developing online safety guidelines
Unit 2.1 – We are Year 2 rule writers
Reviewing and editing our online safety guidelines

Unit overview:
The children will learn to:

- plan a sequence of instructions to move sprites in ScratchJr
- create, test and debug programs for sprites in ScratchJr
- work with input and output in ScratchJr
- use repetition in their programs
- design costumes for sprites.

In Key Stage 1:
Pupils programmed Blue-Bots in **Unit 1.1: We are treasure** hunters and programmed on-screen in ScratchJr in **Unit 1.5: We are rhythmic.**
● Pupils will be introduced to Scratch in **Unit 2.2: We are games testers** as they explore some pre-built games and work out the rules

In Key Stage 2:
Unit 3.1: We are programmers continues pupils' programming development as they make a scripted animation in Scratch