Computing Learning Journey
Year 5 Autumn 1st ½

5.1 We are game developers

Developing an interactive game

Write game instructions and publish their games

Test and improve their game

Debug the game script

Create a prototype of a Scratch game

Create and source assets

Analyse games and plan their own

Key Vocabulary

Algorithm: a sequence of precise instructions or steps (sometimes a set of rules) to achieve an objective
Background: scenery and other unchanging elements in a game
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 computer program or algorithm
Iterative development: a trial and improvement approach in which each successive version builds on the previous one by the fixing of mistakes or the adding of features
Logical reasoning: a systematic approach to solving problems or deducing information using a set of universally applicable and totally reliable rules
Program: an automated solution to a problem
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: Scratch (alternatives: Snap! or Kodu)
Hardware: Laptop/desktop/Chromebook computers or tablets, microphones (optional)

Online safety:
We respect licence conditions and other people's work when using images and sound effects from the internet.
If pupils register for their own scratch accounts they will need their parents' email and parents' permission and supervision

Switched on Online Safety Unit:
Developing online safety guidelines
Unit 5.1 – We are Year 5 rule writers Reviewing and editing our online safety rules

Unit overview:
The children will learn to:
- create original artwork and sound for a game
- design and create a computer program for a computer game, which uses sequence, selection, repetition and variables
- detect and correct errors in their games
- use iterative development techniques.

In Key Stage 1:
- In **Unit 1.1: We are treasure hunters** pupils programmed physical objects.
- In **Unit 1.5: We are rhythmic** and **Unit 2.1: We are astronauts** pupils programmed in ScratchJr.
- In **Unit 2.2: We are games testers** pupils were introduced to some Scratch games.

In Key Stage 2:
- Pupils developed their Scratch programming skills in **Unit 3.1: We are programmers** and **Unit 4.1: We are software developers.**
- They will develop their Scratch programming and problem solving in **Unit 6.2: We are computational thinkers.**