<table>
<tr><td>Subject: Computing
COMPUTER SCIENCE</td><td>Year group: Year 4</td><td>Topic: COMPUTER SCIENCE
Algorithms</td><td rowspan="2">Initiation & activation activities:</td></tr>
<tr><td colspan="2">Prior knowledge required: To know what an algorithm is. Know that programs are made up of a sequence of codes. To be able use these codes or instructions to control devices or objects on screen.</td><td>Vocabulary:</td></tr>
<tr><td>Programme of Study: Year 3 & 4</td><td>Implementation:</td><td>Impact –lesson sequence:</td><td>Evaluations and assessments:</td></tr>
<tr><td>• Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems: solve problems by decomposing them into smaller parts.
• Use sequence, selection, and repetition in programs: work with variables and various forms of input and output.
• Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.</td><td>Code and Scratch – Animation
Scratch/J2Code
• Navigate the Scratch programming environment.
• Create a background and sprite for a game.
• Add inputs to control their sprite.
• Use conditional statements (if… then) within their game.

<u>Knowledge skills and understanding</u>
• Can they use special instructions to draw regular shapes on screen, using commands?
• Can they experiment with variables to control models?
• Can they make turns specifying the degrees?
• Can they give an on screen robot specific directional instruction that takes them from x to y?
• Can they make accurate predictions about the outcome of a program they have written?

<u>GD</u>

Kodu
• Navigate the Kodu macro environment using keyboard and mouse
• Create a 3D digital world for a game with land, water and scenery.
• Add a sprite to their world.
• Program their sprite to navigate their 3D world with an input.
• Create paths on which sprites will move.
Use conditional statements (‘if…then’) to give objects behaviours</td><td></td><td></td></tr>
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