

# YEAR 3

## 3.3 - Prediction & Debugging

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| <b>Computing Area</b>              | Computer Science   |
| <b>National Curriculum Strands</b> | <ul style="list-style-type: none"><li>• Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</li><li>• Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</li><li>• Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</li></ul>   |
| <b>Skills Progression Points</b>   | <ul style="list-style-type: none"><li>• Understand how an algorithm is implemented using a sequence of precise instructions.</li><li>• Can predict the outcome of a sequence of precise instructions.</li><li>• Repeatedly test a program and recognise when they need to debug it.</li><li>• Detect a problem in an algorithm, which could result in a different outcome to the one intended.</li><li>• Designs, writes, executes and debugs programs of increasing complexity that accomplish a specific goal.</li><li>• Use logical reasoning to predict and debug more complex programs.</li></ul> |
| <b>Hardware</b>                    | Laptops/Desktop PC/ iPads  |
| <b>Software/App</b>                | Scratch, Micro:bit, RapidRouter, Code.org  |
| <b>Unit Objective</b>              | To predict and test the outcome of written programs. To test and debug written programs.   |
| <b>Unit Vocabulary</b>             | Computational Thinking, Algorithm, Programming, Sequence, Debugging, Sprite, Prediction, Decomposition, Input, Output.   |