



Year 3 Knowledge Organiser

Computing – Programming

What I should already know.

National Curriculum KS1 Aims:

- understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
- create and debug simple programs
- use logical reasoning to predict the behaviour of simple programs
- use technology purposefully to create, organise, store, manipulate and retrieve digital content
- recognise common uses of information technology beyond school
- use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.

What will I know by the end of the unit?

- Solve open ended problems with a floor robot, screen turtle and other programmable devices.
- Design, write and run executable programs using a programming language e.g. that used for a floor robot, Scratch, Kodu, Espresso Coding.
- Be able to debug an algorithm (set of instructions) and correct any errors.
- Use repetition in programs to make them more efficient. E.g. Rpt4[FD5 RT90] to draw a square with Roamer.
- Be able to explore the effect of changing variables. Use them to make and test predictions.
- Use 'selection' in a programming sequence i.e. use 'if... then... else...' type actions or statements e.g. if a character is touching a wall then bounce back, else move forward.

Key Vocabulary

Debug

Algorithm

Repetition

Variable

If/then

Sequence

Key Knowledge

- Apply and test sequencing skills in a variety of contexts and talk about their experiences.
- Know that there are many computer languages to write programs with.
- Use logical reasoning to explain how simple algorithms work.
- Understand the need to be precise when framing and sequencing instructions.
- Know and understand the technical language used in programming.

Online Safety

**Be E-safe
and enjoy!**



Software

