Bomere and the XI Towns Federation Knowledge Organiser - Computing

Topic: Programming A - Moving a robot	Class/Year Groups: Rabbits	Term: Spring

What you already know?

As this is a Year 1 unit, no prior knowledge is assumed.

This unit progresses learners' knowledge and understanding of giving and following instructions. It moves from giving instructions to each other to giving instructions to a robot by programming it.

What you will learn:

Learners will be introduced to early programming concepts. Learners will explore using individual commands, both with other learners and as part of a computer program. They will identify what each command for the floor robot does, and use that knowledge to start predicting the outcome of programs. The unit is paced to ensure time is spent on all aspects of programming, and builds knowledge in a structured manner. Learners are also introduced to the early stages of program design through the introduction of algorithms.

- Introduction to floor robots
- Develop language used to give directions and how precise it needs to be.
- Programming the floor robot to move forwards and backwards.
- Use 'left turn' and 'right turn' commands along with 'forwards' and 'backwards' commands.
- Create a program and test it on a robot

Vocabulary:

Commands - a single instruction that can be used in a program to control a computer

Algorithm - A precise set of ordered steps that can be followed by a human or a computer to achieve a task

Programme - A set of ordered commands that can be run by a computer to complete a task

National Curriculum Objectives:

- 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
- Recognise common uses of information technology beyond school