How can machines be coded to help us out?

St. Peter's CE Primary Academy

Coding Y3

Key learning

- Follow steps to build and code a robot using instructions- build Milo.

- Code the motor block to work in different ways and at different speeds.

- Add different codes to the robot including colour changes and their own sounds.

Comput...

Empowered Learner:

- Use what I know to help when using new technology

Computational think...

- Begin... ...cific goal

- Detec... ...algori...

- Begin... ...s to

- Create... ...ction... ...ow

Innovative designer

- Use a...

- Suggest ideas to improve ...prototypes I have designed

Key vocabulary

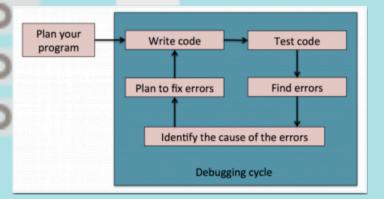|	
Motor block	A piece of technology which controls the movements of the robot.
Code	Commands or instructions which tell a robot what tasks to perform.
Motion	The process of moving or being moved.
Debugging	Finding and fixing problems in a computer program or algorithm.
Sensor	A device which detects physical objects or movements.
Tilt sensor	A device which measures which angle something is at.
Loop	A sequence of instructions which is repeated until told to stop.
Function	A chunk of code that is an instructions e.g. turn right might be made up of 3 lefts turns.
Adapt	Modify or make something suitable for a specific use.
Program	Provide a set of instructions (code) to complete a task.
Prototypes	A first design of a device that may be altered and changed after testing.

Coding - Our Learning Journey

Year 1/2
- Using simple commands to move and change direction
- Editing characters and backgrounds
- Using repeat functions
- Debugging simple programmes

Year 3/4
- Using different controls and conditionals - when and if commands
- Creating and editing functions
- Detecting and correct simple algorithm errors

Year 5/6
- Using a range of sequences and functions to accomplish specific goals in the most efficient way
- Using comparison and logical operators in a range of programmes
- Design, write and debug computer games

Plan your program → Write code → Test code

Plan to fix errors ← Find errors

Identify the cause of the errors

Debugging cycle