Trinity Primary School - Computing

Topic: Sensing Movement	Year: 6	Strand: Programming

In this unit...

In this unit, you will be learning about the micro: bit and will draw on programming aspects from previous units, such as: variables, selection and repetition. You will use familiar tools to move and utilise a physical device. You will use a simple program to build in and test a new programming environment, before transferring it to the micro: bit. Design is a large part of this unit, where you will be responsible for creating code from a given design. By the end of this unit, you will apply all knowledge of programming tools to create your own micro: bit step counter.

	Key Vocabulary
variable	Something that is changeable.
programming	The process or activity of writing computer programs.
Micro:bit	A tiny computer that you can write programs for.
Emulator	A simulation of a physical micro: bit where you can test out your code.
algorithm	A set of rules that apply in programming
repetition	Repeated sequences and variables when
selection	When only a selection of code runs if a condition is met.
Accelerometer	A device that measures the motion speed or vibrations of an object
Debug	Fixing code when bugs cause disruption in the flow.

Skills explored in this unit...

In programming, there are four levels that can help describe a project. These are:

Task — what is needed, Design — what it should do, Code — how it is done, Running the code — what it does

We will spend time on the 'task' and 'design' levels before engaging in creating and running the code.

Lesson 3 - pupils work at the 'code' and 'running the code' levels from a given design

Lesson 4 - pupils move from 'design' to 'code', to 'running the code' with some scaffolding

Lesson 5 - pupils work at the 'design' level with increasing independence

Lesson 6 - pupils work at the 'code' and 'running the code'

Retrieval Quiz

1) What type of cable can connect a micro: bit to a computer?
2) What can you use to test code that is made in a micro:bit.?
3) What three words can programming decisions be written starting with?
4) What is the name of the part of a micro:bit that can measure the speed of motion?
5) What is a set of rules in coding known as?
6) Name two inputs that a micro:bit includes.
7) What should variable names be?
8) List three bits of information that is personal to someone and should be private online.
9) What should passwords be to be secure?
10) What should you do before sharing information online?

Useful Websites

https://teachcomputing.org/

https://www.raspberrypi.org/