

Goonhavern Primary School- Computing

TOPIC: What Problems will Technology Solve in the Next Five Years?

YEAR: 4

STRAND: Computer Science

What should I know already?

- How to code using hit events, which allow us to set conditions for the code inside it.
- How to program sequences to create simple animations and simulations.
- That a timer can also be used to control the sequence in which part of their code is executed.
- That objects can be programmed to react if certain conditions are met. In this case, they will use a hit event (or a hit test) to check when objects hit (or collide with) a particular background colour.
- How to create a game where conditional events are used to check whether objects have collided.

What will I know by the end of the unit?

- The value of a variable can change as a result of an input or event, or in response to a condition being met.
- Code can contain several different variables, and how to set the value of a variable to a specific amount, rather than change it.
- How to use variables which change by positive and negative values, and how to set the score variable back to zero.
- The concepts of 'repeat' and 'loop' in coding.
- How to use nested loops to write even more efficient code.
- Code using 'always' and 'every...seconds' blocks and new nested 'if statement' blocks to control what happens in the program

School Values



Five Ways to Wellbeing



Vocabulary

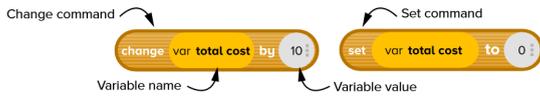
Variable	An object used to store a simple piece of information, such as a score or the time taken.
Change	To adjust a variable by a specific amount.
Set	To specify a particular value for a variable.
Loop	A set of instructions which is repeated.
Nesting	Putting a loop inside another loop.
Infinite	Something which goes on for ever.
Repeat	To perform the same action more than once.

Image/diagram that helps me to articulate my

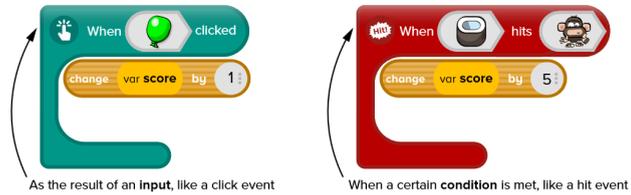
Possible ideas

knowledge/understanding

You can **change** and **set** different values using variables.



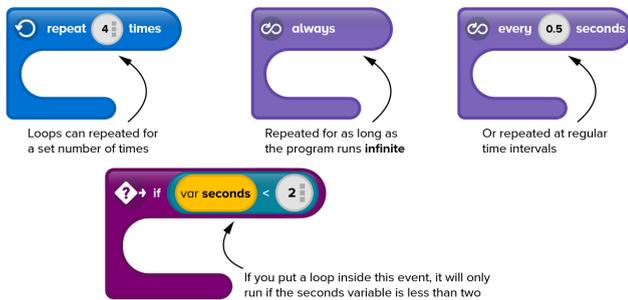
You will write code to say **when** to set or change the variable. This could happen:



As the result of an **input**, like a click event

When a certain **condition** is met, like a hit event

Repeat blocks are placed inside event blocks.



You can use variables to build games:



Let the player earn points by popping balloons or catching coconuts.



Earn points or lose points by choosing different foods.



Count items and add up totals in a shopping game.



Make a pirate treasure-hunt game where you can earn points, lose points and have your entire score wiped out.

You can use repetition and loops to:



Use a loop to program the movements of garden bugs.



Use nested loops to drive a car around a track.



Use infinite and conditional loops to make a rocket orbit the moon.



Combine different types of loops to create a pattern in the sky.

For Micro:Bit planning and ideas, see [planning](#) documents on Google Drive.

