

Goonhavern Primary School- Computing

TOPIC: Computing

YEAR: 5

STRAND: Computer Science

What should I know already?	What will I know by the end of the unit?
<ul style="list-style-type: none"> 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 	How to set values in code to program the speed of an object.
	How to use variables to control the direction and speed of an object within a game.
	Write code that uses a value to make an object move at the start and change heading and angle when keys are pressed
	Use an iPad to practise setting values and using coordinates in their code to control the movements and location of an object
	Write code that uses a value to make the speed of a car increase or decrease when different keys are pressed
How to design and make an app and assign values in code to control the movement of objects.	

School Values



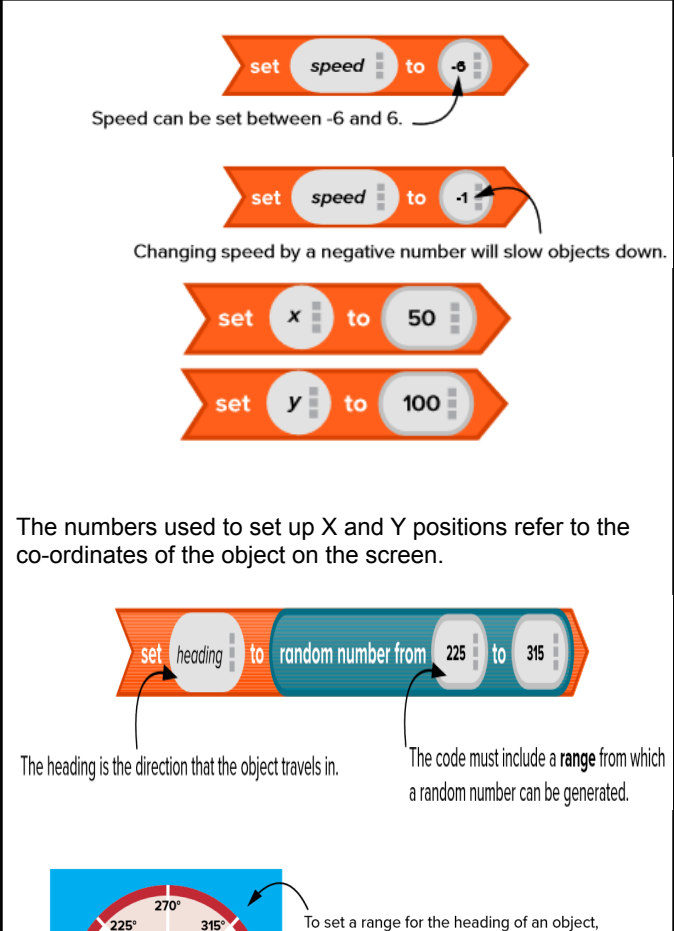








Five Ways to Wellbeing



Vocabulary

Acceleration	The change in speed or velocity of an object over a certain time.
Deceleration	The reduction in speed or velocity of an object over a certain time.
Speed	A measure of how fast an object is travelling.
Angle	The space between two intersecting lines, that is measured by degrees.
Iteratively	The process of repeating steps in an algorithm. It is often referred to as 'looping'.
Heading	The direction which an object is moving towards.
Co-ordinates	A pair of numbers which describe the position of an object on the screen.
Y-Axis	The vertical position of an object on the screen.

X-Axis	The horizontal position of an object on the screen.
Negative number	A number that is less than zero.
Condition	A condition is a situation that is checked every time instructions are repeated.
Input	Information going into the Chromebook. It can include moving or clicking the mouse and using the keyboard.
Friction	The resistance of motion when one object rubs against another
Rotate	To turn an object around a centre point
Variable	A named area in computer memory, which has a value. The program can change this variable value.
Range	A set of numbers to choose from when assigning a random value.
Random	Something that happens by chance.
Simulation	A computer program which models something from real life.

Image/diagram that helps me to articulate my knowledge/understanding	Possible ideas
 <p>Speed can be set between -6 and 6.</p> <p>Changing speed by a negative number will slow objects down.</p> <p>The numbers used to set up X and Y positions refer to the co-ordinates of the object on the screen.</p> <p>The heading is the direction that the object travels in.</p> <p>The code must include a range from which a random number can be generated.</p> <p>To set a range for the heading of an object, you use degrees of turn on the stage.</p> <p>random x position random y position</p>	<ul style="list-style-type: none">  Use buttons to set or change the speed of a car.  Use key press events to control the speed and direction of a car.  Sail a ship safely to shore, avoiding obstacles that affect its position.  Combine conditional events with object properties to make a fun parachuting game.  Generate random numbers to control the speed in a racing game.  Make a caterpillar move in random directions and appear in random places.  Try to get a tortoise to cross the road safely with traffic moving at random.  Set random directions within a specific range

to stimulate a ball bouncing.

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