

Computing 22-23

Year 6 – Programming (Interactive Fairground)

Remember when: beebots, scratch, logo, sphero, drones	Key vocabulary
By the end of the unit children must be able to: - make a motor spin and stop -make the motor stop -make the traffic lights turn on and off -make the traffic lights go from green, amber, red, amber then green -debug any programming errors	Rotate Light up Spin Buzz Program Rotate Connect Wire circuit

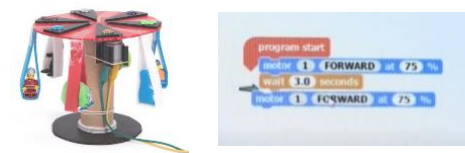
In Year 1:	In Year 2:	In Year 3:	In Year 4:	In Year 5:
- move the beebot forwards, backwards and turn. - be able to move a beebot to a given area.	- to create a new character. - to move the character. - make the character bigger /smaller. - make the character talk. - create a link of 3 algorithms.	- change the colour of the pen. - draw at least 4 shapes or letters using algorithms. - complete level 1.	- change the speed of the sphero ball. - change the direction of the sphero ball. - direct a sphero ball through a maze. - debug coding errors.	- send the drone to fly in the air and hover. - move the drone safely around the room. - land the drone carefully on a landing point. - debug errors in coding.

National curriculum:

- design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.
- use sequence, selection and repetition in programs; work with variables and various forms of input and output.
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.

Software / Hardware

Crumble class kit



Title / Focus	Lesson outline
Lesson 1- Setting up the crumble controller LO- To understand the crumble controller. SK- To make the lights turn on and off	https://www.tts-international.com/on/demandware.static/-/Sites-TTSGroupE-commerceMaster/default/dw2c3eab6e/images/document/Crumble%20blog%201%20-%20set%20up%20the%20%20controller.pdf Step 1-13 on the planner Setting up the crumble controller with a light, battery and an LED bulb
Lesson 2- Make a coloured spinner LO- To use a motor SK- To make a motor spin and stop Make the motor stop	https://www.tts-international.com/on/demandware.static/-/Sites-TTSGroupE-commerceMaster/default/dw4ff91f48/images/document/Crumble%20blog%202%20-%20make%20a%20coloured%20spinner.pdf Step 1-7 Making a coloured spinner, crocodile clips and motor
Lesson 3- Make a set of traffic lights LO- To use LEDs to make a traffic light SK-make the traffic lights turn on and off -make the traffic lights go from green, amber, red, amber then green	https://www.tts-international.com/on/demandware.static/-/Sites-TTSGroupE-commerceMaster/default/dw9d888bfb/images/document/Crumble%20blog%203%20-%20make%20a%20set%20of%20traffic%20lights.pdf Step 1-7 Making a traffic light stand and using the battery and crocodile clips to make a working traffic light.
Lesson 4& 5 Final products LO- To make a final product SK- Make a motor spin and stop - Make the traffic lights turn on and off -Debug any programming errors	Children are to use the information and skills from the previous 3 lessons to make their final rides, traffic lights or lighthouses. Final assessment grids to be used to assess their final product.

Working towards

End of Unit Assessment
 Working at Age related expectations

Working at a greater depth

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