

Design and Technology Knowledge Organiser

Southwold Primary School



Topic: Why should we care about the rainforest?

Year LKS2

Strand: Design and Programming– Crumble

What should I already know?

- That to program a Bee-Bot, I press one instruction at a time, using the arrow buttons.
- I must press on the cross first, to delete (remove) the past algorithm. I know that I can press on the cross to delete (remove) an algorithm I make a mistake.
- When I have finished pressing the buttons, I then press the green 'go' button.
- If the Bee-Bot doesn't do what I want it to, I am able to work out what went wrong and this is called debugging.
- I have to write instructions down for other people to follow.
- How to evaluate and improve my sequence (debug) Y2
- How to design, create and test a mat (track) for Beebot to travel on.

What will I know by the end of this unit?

- How to connect a crumble controller.
- How to program a simple computer.
- How to use a simple computer to solve a problem.

Design

Existing Products



Vocabulary

algorithm	A process or set of rules to be followed.
crumble board	A control board which enables you to attach input & output devices to it make digital creations.
input	Something that goes into a digital device performed by a user.
output	Something that comes out of a digital device performed by the device.
crocodile clips/cross leads	Wires with connections to attach to inputs & outputs.
sparkles	A device programmed to display a range of colours.
LDR Light dependent resistor	A sensor that allows the light to come on and off depending on the light around it.
circuit	The way electrical parts are put together in a device.
hardware	The physical components of a machine/device.
software	The programs & algorithms used to make a machine /device function.

Design Technology: Skills and Enquiry

- Use an LDR to control a nightlight.
- Design & make a themed night light (Rainforest)
- Connect input and output components to a microcontroller
- Use a count-controlled loop to control outputs
- Design sequences that use count-controlled loops
- Create my own algorithm.

What will I be able to do by the end of this unit?

- Use an input and selection to control an output.
- Describe the needs/wants of a product.
- Create an algorithm for a product.
- Record an algorithm and make changes where necessary.
- Connect a crumble controller and output devices.
- Suggest other uses of the program created.

Crumble Components

