



What have I previously learned?

- I can design with purpose by identifying opportunities to design.
- I can program a crumble kit.
- I can write code to control products.
- I can create circuits using electronic kits.
- I can improve upon existing designs, giving reasons for choices.

Sticky Knowledge

Crumble controllers

A Crumble is a very low-cost electronics controller that connects to a computer using a USB cable. You can attach components like LEDs, buttons, and motors to the Crumble using crocodile leads, and you can program your Crumble using free software.

Vocabulary - Goldilocks words

Word	Definition
prototype	A first or preliminary version of a device or vehicle from which other forms are developed.
combine	Join or merge to form a single substance.
program	A series of coded software instructions to control the operation of a computer or other machine.
modify	Make changes to something to improve it.
product	An article or substance that is manufactured for sale.
evaluate	To make a judgement about something's worth, success or value.

Prompts to help me in my learning.

```

program start
let x = -1
let angle = 85
do forever
do 20 times
servo C angle degrees
wait 60 milliseconds
let angle = angle + x
loop
let x = x x -1
loop

when program is run
set sparkle 0 to yellow
loop forever
set sparkle 1 to green
set sparkle 2 to red
set sparkle 3 to green
set sparkle 4 to red
wait 2.0 seconds
set sparkle 1 to red
set sparkle 2 to green
set sparkle 3 to red
set sparkle 4 to green
wait 2.0 seconds
next
  
```

Useful links- Here are some examples of other light up Crumble projects.
[More Christmas Crumbling](#) | [Redfern Electronics](#)