#### Computing

# Lesson 1: Connecting Crumbles

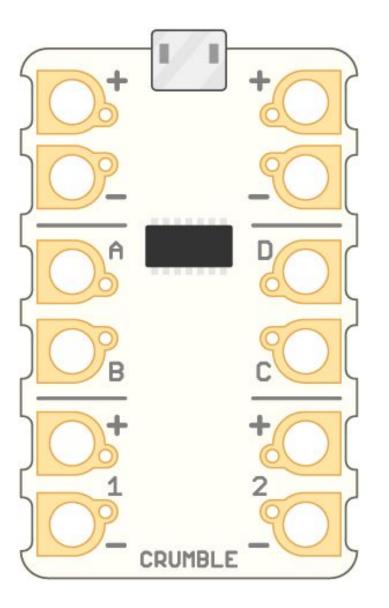
**Connecting Crumbles** 

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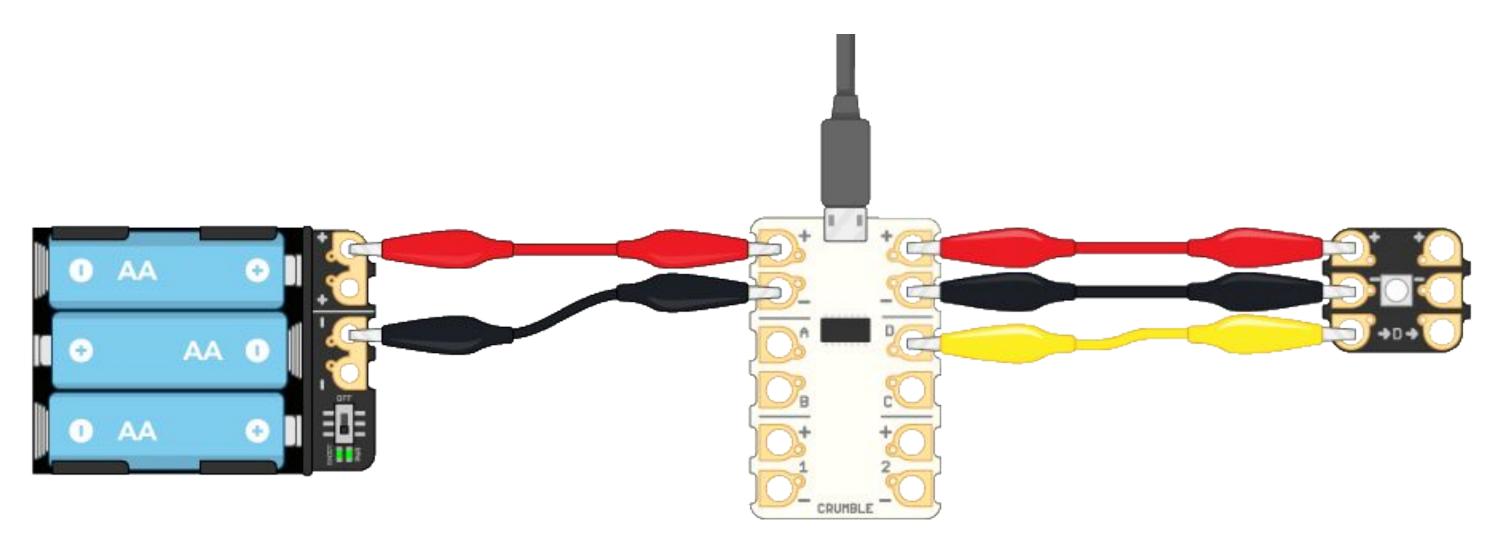
## Task 1 - Making observations

Look at the Crumble controller and note down any observations you make.





### Task 2 - Connect the battery pack and sparkle



Ensure the Crumble and Sparkle are the same way around as the picture above.



### Task 3 - A first program

Open the Crumble software.

Add the program shown.

Run it on the Crumble.

```
set sparkle ① to wait ①.5 seconds
turn sparkle ① off
wait ①.5 seconds
set sparkle ① to wait ②.5 seconds
turn sparkle ① off
wait ①.5 seconds
turn sparkle ① off
wait ①.5 seconds
set sparkle ① to wait ②.5 seconds
turn sparkle ② off
```



### Task 3 - A first program

After you've run the code and watched what happens think about how the program could be modified.

How do you think you would:

- Set the sparkle to a different colour.
- Wait for a different length of time.
- Flash a different number of times.

```
set sparkle ① to wait ①.5 seconds
turn sparkle ① off
wait ①.5 seconds
set sparkle ① to wait ②.5 seconds
turn sparkle ② off
wait ②.5 seconds
turn sparkle ② off
wait ②.5 seconds
set sparkle ② to wait ②.5 seconds
turn sparkle ② off
```



### Task 4 - Modify a program

Change the program to make the sparkle light a different colour.

#### Also:

- Try changing how long the wait is.
- Try making the sparkle flash a different number of times.

After each change run the program to see what happens.

```
set sparkle ① to wait 0.5 seconds
turn sparkle ① off
wait 0.5 seconds
set sparkle ① to wait 0.5 seconds
turn sparkle ① off
wait 0.5 seconds
turn sparkle ① off
wait 0.5 seconds
set sparkle ① to wait 0.5 seconds
turn sparkle ① to wait 0.5 seconds
```



#### Task 5 - Forever flashing

Modify the program so the sparkle flashes continuously.

The command block needed can be found in basic menu.

```
Input/Output
  program start
set A HI
motor 1 FORWARD at 75 %
A is HI
set sparkle 0 to
turn sparkle 0 off
set all sparkles to
wait (1.0) seconds
```

