A - Starting Lights

Learn how to use the Sparkle module by creating some starting lights for a race around the planet.

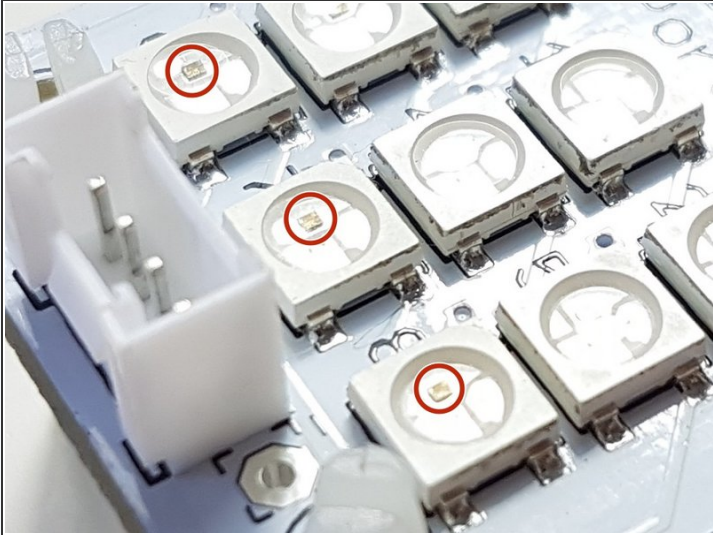This document was generated on 2022-01-01 09:46:08 PM (MST).

INTRODUCTION

Learn how to use the Sparkle module by creating some starting lights for a race around the planet.

What are Sparkles?

- Sparkles are very useful - they are **LEDs,** just like the red/green LED from before, but much cleverer!

- They have small chips inside them, which allow you to control many LEDs using **just one output.** If you look really closely you might be able to see them.

- They are also **three LEDs in one** - there is a **red**, **green** and **blue** LED in every sparkle.

- We can control these three internal LEDs **separately,** and mix them together to create **any colour!**

Step 2

Connect your Sparkle Module

- Build up your robot like the picture.

⚠ Sparkles must always be plugged into **output D** - this is very important as otherwise they won't work!
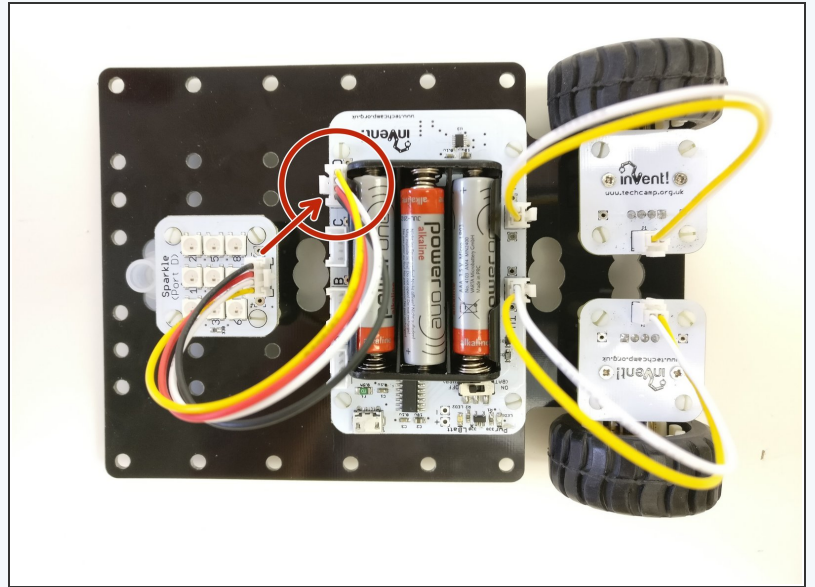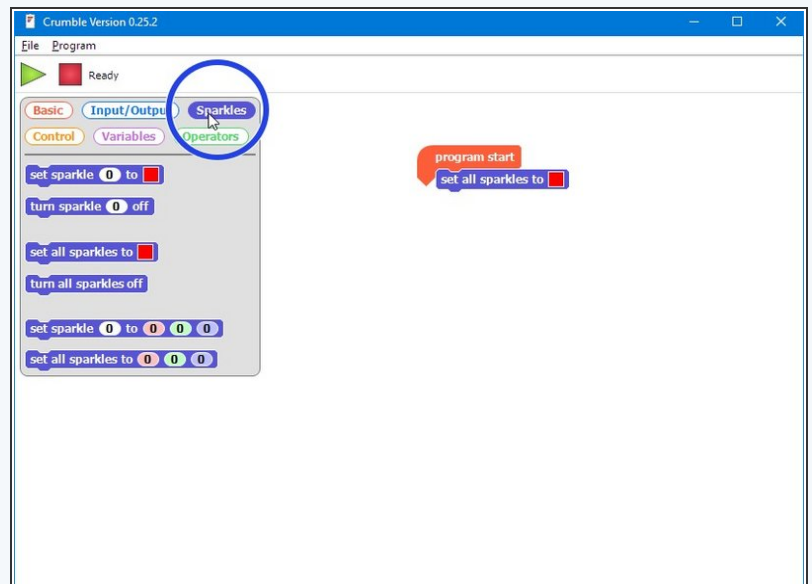

Step 3

Test Your Sparkles

- All the blocks we need for sparkles are in the **sparkles menu.** Click on it and have a look at all the **new blocks** you can use.

- For now, let's **test the sparkles** by building the simple program in the picture - hopefully they **all turn red** when you **program your robot!**
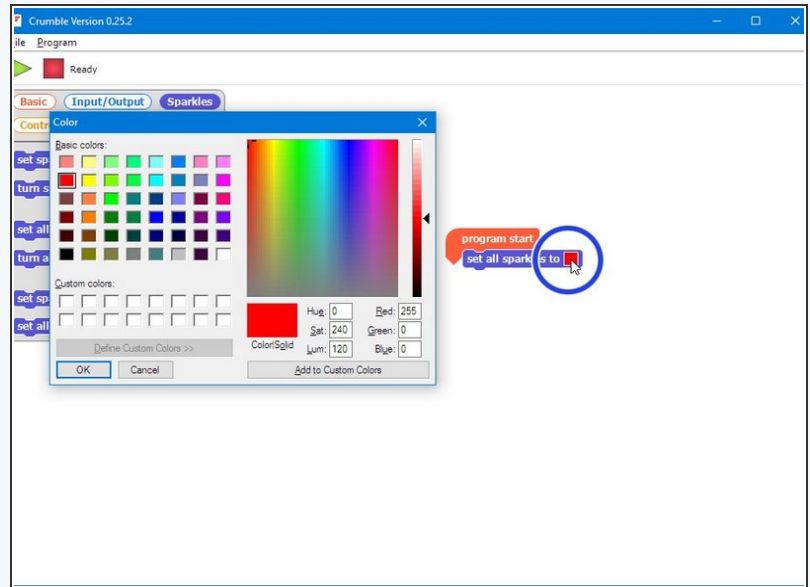
⚠ Don't stare at the sparkle board for too long - it's very bright!
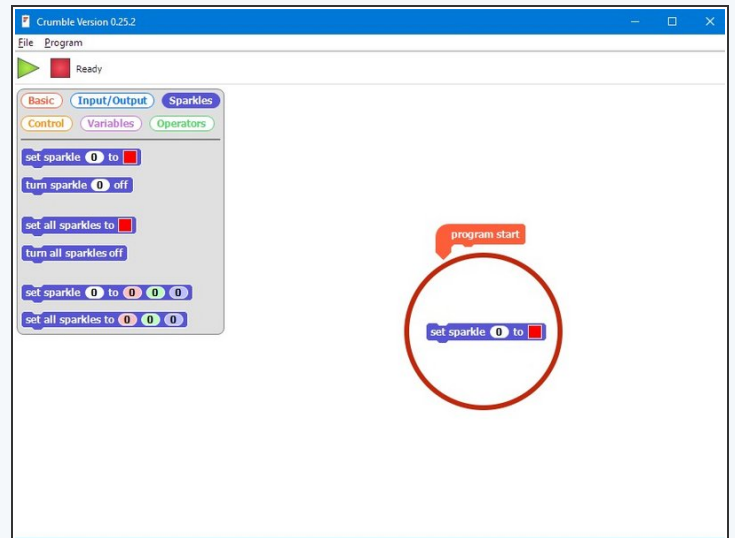
Different Colours

- It's really easy to control the red, green and blue LEDs **separately** to make **any colour we like.**

- **Click** on the red square to bring up the colour picker - **try a few different ones** and see how they look!

⚠️ Switch off your junior main board between programs to save battery life!

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Different Sparkles,
Different Colours

- Remember, we can also control each sparkle **individually!**

- We can use the <u>**set sparkle 0**</u> block to change just one sparkle's colour

- **In programming numbers start from 0,** not 1 - so for three sparkles, the first is 0, the second is 1 and the last is sparkle 2.

- Use **three** of the individual sparkle set blocks to **set each of your three sparkles to a different colour.**

Step 6

Extension Challenge - Starting Lights

- Let's make a set of **starting lights** for a race across the planet surface.

- Check out the F1 starting lights in the video - can you put together a program using **sparkle** and **wait** blocks to **make your own?**

- The lights should **turn red 1 at a time,** then **all go green** at the same time.