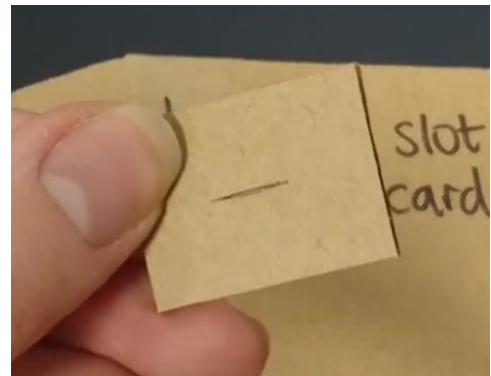# Make a RGB colour mixing board

You will learn: how to make a little board you can control with a microbit or a Raspberry Pi to mix colours of light.

You will need: Thick cardboard (an old box will do), scissors, a marker pen, a pencil and some blu-tack, one RGB common cathode LED.
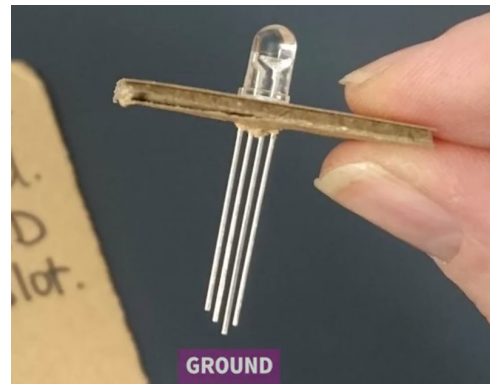
Prepare the cardboard

Cut a piece of cardboard approximately 3cm square. Make a hole in the middle with a pencil pushed through, or using a craft knife on a cutting board.

Add the LED

Push the LED through the hole or slot, making sure the longest leg (the cathode, or Ground) is the third on from the left. The pins left to right in this photo are Blue, Green, Ground, Red.

Bend the legs out

Starting from the right (Red leg) and working counter-clockwise, bend the legs out towards the corners of the card, and fold the tips over. Avoid pushing on the ends of the wire as it could injure you.

Label each leg

You can label the legs now, or when you're testing them. Using a 3V supply (eg micro:bit), connect a Ground pin to Gnd, and a 3V pin to any of the colours to see the LED light up that colour.

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