



Providing Excellence in Science Education

IPC Irwin Colour Mixing Kit

Part Number OPCM400

Additional Information & Experiments



Primary Colours.

The primary colours are Red, Green and Blue and when all three colours are mixed they will produce white. If you project all three colours onto a white surface and arrange the pattern so that the three colour discs partially overlap you can produce the standard colour mixing pattern with white in the middle, the three secondary colours are Yellow, Magenta and Cyan.

Secondary Colours.

Project the Red colour onto a white screen or wall, then cast a shadow using an opaque ruler and note the shadow colour. Draw a ray diagram to explain why the shadow is formed (remember light travels in straight lines).

Now bring up the Green colour and ensure that the two colour discs overlap, then using the ruler again cast a shadow. What are the differences between two colours and a single colour? You may see different colour shadows – not just black. These are called secondary colours, once again draw a ray diagram to explain what is happening.

Finally, introduce the Blue colour and once again draw a ray diagram (this is quite difficult). You should now be able to fill in the table below with the secondary colours.

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Red + Green =

Red + Blue =

Green + Blue =

Complimentary Colours.

Complimentary colours are two colours, which add to make white. Complimentary colours are one primary and one secondary. Can you write down three sets of complimentary colours?

Colour Filters.

Collect together some clear sweet wrappers or similar transparent coloured sheets and try looking at the coloured LEDs through them. If you can get hold of red, green and blue, so much the better. Try to explain what you see, say with the Blue LED through a Red wrapper compared with viewing the Blue LED through the same wrapper. If you have access to proper colour filters then try using these as well.

Please Note: This Equipment is for Education, Training, or research Purposes Only.

Thank you for choosing this IPC Irwin product, which has specifically been designed for education and we know it will bring you good service long into the future. This is just one product of a wide range of UK designed and manufactured products to enhance a STEM education, please see www.ipcirwin.com website for more details on the products and service we provide to support teaching and learning in science and technology.



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