

**SCIENCE WORLD**

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**BACKGROUND SCIENCE:**

A natural rainbow is a weather effect caused by reflection, refraction and dispersion/scattering of light in water droplets resulting in a spectrum/band of light appearing in the sky. The range of wavelengths of light that the human eye can see in this band is called "the visible spectrum". This includes the colours of the rainbow. ROYGBIV- Red, Orange, Yellow, Green Blue, Indigo, Violet. Indigo and violet are often described as "Purple".

Each colour can be explained as a ray of light that is transmitted at a particular level of energy (with a particular wavelength). The shorter wavelength corresponds with greater energy.

FUN FACT: Bees can't see the colour red but they can see UV light.

**MATERIALS:**

- Somewhere to explore (backyard, neighbourhood, room in house, etc.)
- Something to record your findings (map, journal, scrap paper, etc.)
- Rainbow colour list reminder - ROYGBP
- Pencil
- Coloured pencils, markers, or crayons
- Camera or phone (optional)

**WHAT TO DO:**

Take your rainbow colour list, paper, and pencils to your exploration location. While exploring, record as many items as you can observe from each colour of the rainbow, and where you observed them. Try and find at least one item of every colour of the rainbow! You can also take photos of the items you find.

When you're done exploring, choose a way to organize and display your findings. This can be done in many ways, for example:

- Draw a map of the area you explored. Colour the map according to where you found the coloured items or label a map of the area you explored with coloured words representing the items you found.
- Draw an empty rainbow and fill in the rows with drawings of the items you found in the correct colour band.
- Organize the photos you took into a rainbow display digitally or in print.

**WONDERINGS:**

- What colours did you find the most of?
- What colours were harder to find? Why do you think that?
- Are there common colour combinations that you observed? Are there any colours that you don't often see together? Why might that be?