EASY SCIENCE

Colourful Kyle

By Helene Share

Hallo everyone, my name is Kyle. I am 14 years old and my hobbies are reading, listening to music and just hanging out with my friends. I also like Tuesdays, Wednesdays and Fridays. Why? Because they are "science at school" days! I love science! How can you not like science? EVERYTHING around us can be explained by science. I mean, could you imagine a world without colour? Think about it – if everything around us would be only in black and white. How boring would that be? The other day I started thinking about colour and wondered why the sky is blue, leaves green and bananas yellow...

Waves of Light

I found out that we see colours because of visible light. Light travels as waves and, just like some people are really tall and others really short, you get long waves and short waves. The length of the wave determines the colour we see and all the colours together make white light. When white light from the sun moves through the atmosphere it breaks up into the Colour Spectrum: red, orange, yellow, green, blue, indigo and violet. Red has the longest wavelength and violet the shortest. Also, when light hits an object, some colours are absorbed and others are reflected. We can only see the colours that are reflected. For example, as the sun sets on the horizon, light passes through more air causing the particles in the air to scatter (break up) the blue light, so much that we cannot see it at all, making the sun and sky look an orangey-red.

Rainbows appear in nature when the sunlight passes through falling raindrops. The raindrops bend the light and split it into the colours of the spectrum. You can see a colour spectrum by holding a CD or DVD in sunlight.

Bananas contain a pigment called carotene. Pigments are substances that absorb some colours and reflect others. Carotene absorbs all the colours except orange and yellow, which it reflects, and that's why bananas look yellow.

Plants contain chlorophyll, a pigment that reflects green light. In autumn, when the temperature changes, chlorophyll breaks down and other pigments in the plants can be seen, reflecting red, orange and yellow.

Purple is the colour you get when you mix red and blue pigments.

Blue sky is created by the air particles splitting the white light from the sun into the colours of the rainbow. Due to the shorter wavelength, the blue colours of the spectrum are scattered the most, which is the reason we see a blue sky.

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