

Colour: reading 1

Most British people associate the year 1666 with the Great Plague and the Great Fire of London. But it was also the year of one of the most famous scientific discoveries. Isaac Newton was a student at Cambridge University but like all the universities at the time it was closed down because of the plague. All students were sent home and Newton returned to Lincolnshire. But unlike many other students Newton continued to study and experiment with many areas of science for which he is now famous. One day he made a small hole in a dark room to allow the sun to shine through. He held up a prism to the narrow beam of light and saw many rays of colour, which he later described as a 'coloured image of the sun'. He knew this would happen because he understood how a rainbow was made. Looking carefully he decided to add two colours to the official rainbow colours making a total of seven: red, orange, yellow, green, blue, indigo and violet.



However, his genius lay in his decision to hold up a second prism and then he discovered that the rainbow colours disappeared and became white again. He was the first scientist to acknowledge that white light was made up of the rays of every colour of the rainbow. He demonstrated how light and colour worked: a leaf, for example, is green because it *absorbs* the red, blue and violet rays of white light, and *reflects* the green. Further studies showed that the colours bent at different angles: red bends the least and violet bends the most. Light is usually divided into three main colours: red, green and blue. If red is taken away we are left with cyan, a mixture of blue and green. Without blue there is yellow, and without green there is magenta, the combination of red and blue.

Why did Newton choose seven colours? Perhaps because at the time there were seven planets, seven days of the week and seven musical notes. For a scientist it was a scientific number.

But why indigo? Why not turquoise to separate blue from green? Why indigo which separates blue from violet? That remains a mystery, but it may have had something to do with the impression that indigo, which had recently been introduced from India, made as a dye in the 17th century.

How many basic colours are there considered to be now? Perhaps thirteen: red, orange, yellow, green, turquoise, blue, indigo, violet, pink, grey, white, black and brown. There are, however,

literally millions of colours. Computers will give us sixteen million and the human eye can see more than 7 million. But after the basic thirteen, we have to borrow words, such as avocado (but is that the flesh, or the skin?) and grape (is that deep purple or green?) to describe the myriad of shades, tones and tints.

So, what's *your* favourite colour?

Colour: reading 2

I'm a wild colour. I can be seen in the coat and the eyes of the Asian tiger, I'm the tall giraffe found in the African savannah and the orangutan as it sways through the Malaysian jungle. I'm the ginger cat hunting for mice at midnight.



I'm also a warm colour. I'm in the sun as it sets in the evening sky, and later on I'm in the glow of the embers as the fire dies. I'm a comforting bowl of pumpkin and carrot soup, maple syrup poured over hot pancakes and the fiery taste of whisky. I'm the morning marmalade spread on toast and the melting yolks of soft-boiled eggs. I'm the welcomed wake-me-up cup of tea and biscuits. I'm honey.

I'm the colour of the leaves falling in autumn. I am amber.

But above all I'm an exotic, tropical colour. I can be seen in Buddhist countries where monks wear long saffron robes and I can be seen in the floral necklaces made from Indian marigolds. I'm the sweet flavoured mango, the delicate peach and the citrus fruit trees which line the streets of Seville. I am the mandarin, the tangerine and the satsuma. I'm the colour of the Sahara desert where I can also be seen in the hennaed hair of Berber women. I'm Ayer's rock, the Grand Canyon and the tsunami floodwaters. I'm the endangered coral and the comical clown fish and the inside of seashells found in the Caribbean Sea.

I'm passionate, sensual and fun. What colour am I?