

IELTS PRACTICE TASK

The history of colour

How the invention of synthetic colour changed our world

Today, in the urban centres of the 21st century, we are surrounded by a vast spectrum of colours that once only occurred within the natural world. We now take it for granted that the products that we buy and the packaging they are presented in will be available in our preferred shade or tone.

Colourful man-made objects have become so ubiquitous that it requires a stretch of the imagination to conceive of a time when such a range did not exist, but until the mid-19th century, this was indeed the case.

It was the ancient civilizations of China, Rome, Persia, India and Egypt where the craft of dyeing fabric was developed; an often complicated and labour-intensive process. Dyes that were derived from vegetables were usually cheaper and more easily obtainable than ones derived from animals. The roots of a plant called madder were used to create a strong red colour, and the leaves of the indigo shrub produced a colour between blue and violet. Saffron and turmeric plants, now used to colour and flavour food, once created yellow and orange hues for cloth. Because of the scarcity of certain sources or the complexity of production, some colours were only worn by very wealthy people or royalty, for example, purple which originated in the Mediterranean and was a dye created from the secretions of sea snails; and black, coming from oak or chestnut wood, which indicated high status in 14th century Europe. In the 15th century, South America began exporting large quantities of a dye called carmine to Europe; this deep crimson-red colour was derived from the crushed bodies and eggs of the cochineal beetle. Carmine remains a major component of food colouring and cosmetics even now.

Although dyeing methods had evolved over the millennia, the use of natural sources would always be impractical; there was no guarantee that the colour of dyed material would be consistent or that the material, when exposed to the sun, would not suffer from fading over a period of time. Furthermore, it would often take months to produce a relatively small quantity of fabric, an insufficient supply for growing populations. In the 19th century, the expanding European textile industry created a need for larger quantities of cheaper and more adaptable dyes. It was a young English chemist, William Henry Perkin, who responded to this need, quite by accident. In 1856, he was experimenting in his laboratory, with the aim of synthesising the drug quinine, used to help people suffering from malaria. One of the chemical compounds he was testing was aniline. From this, he obtained a black solid, and then isolated a dye that could colour silk purple. The dyed silk did not fade in the sun and did not wash out. Perkin had thus created the first synthetic dye. He built a factory to manufacture the dye on an industrial scale, and developed a technique to apply the dye to cotton materials that could be made into dresses and accessories.

TASK TYPE 9 Summary Completion (1)

The new colour, which Perkins named 'Aniline Purple', quickly became fashionable and much in demand, both in Britain and overseas. Due to its growing reputation in France, Perkins made a sensible marketing decision and changed the name to 'mauve', after the French word for the purple mallow flower. Perkin's discovery not only inspired other scientists and researchers to experiment with synthetic colours, but also demonstrated to manufacturers that colour novelty could be used to attract customers. Now, when it comes to establishing a brand, it is often the use of colour or a colour combination that speaks to potential buyers, and it is colour which often determines consumer choice.

Questions 1–8

Complete the summary below.

Choose **ONE WORD ONLY** from the passage for each answer.

Write your answers **1–8** below.

Summary

The craft of dyeing has been practised since ancient times. Early civilizations found it was more difficult to get dyes from **1** than from plants, and so it was plants that they tended to rely on, sometimes using roots but also the **2**, depending on the species, and whether they wanted red, blue, yellow or orange dye. Some colours were traditionally worn only by **3** or the very rich, such as purple and black. By the 15th century, a crimson-red dye, which is still used in **4** and to add colour to food products, was imported by Europe from South America. However, there were various problems with using natural sources; it was never certain that the exact same colour would appear in dyed material; gradual **5** was likely to occur, and quantities of the dyed material were never enough to meet demand. Fortunately, in 1856, while chemist William Henry Perkin was attempting to find a way of treating **6**, he accidentally discovered that a purple dye can be obtained from the chemical aniline. His purple-dyed fabrics made of **7** quickly became popular, and he ended up calling his synthesized colour 'mauve'. Companies now rely heavily on colour to make their **8** known to people, and to persuade them to buy.