

three. Green is frequently mistaken for red, and often for blue. Those who can not distinguish red regard purple as blue, and orange as yellow. Red and green are the two colours which are most commonly not distinguished, yet it so happens that these are the two colours used as signals on rail-roads and ships. Persons appointed as railroad signalmen should be carefully tested as to their powers of distinguishing between the colours of red and green, before they enter upon duty.

No doubt, many teachers will be slow to credit some of the foregoing statements. They have only to institute a careful test of their own pupils, and their doubts will be removed.

It is now generally believed that defect in distinguishing colours can be remedied by early training and careful education of the eye. There is no good reason why any pupil should leave our schools without such a knowledge of colour as will not only sharpen his observing powers and give him a wide command of pictorial language, but also give him most valuable hints in the development of industrial ornament and in the cultivation of a correct taste.

Teachers of primary classes will find some good hints for oral lessons on colour in Sheldon's *Elementary Instruction*. Teachers of advanced classes require a fuller and deeper knowledge of the subject. Few, however, can readily possess themselves of the works of Field, Chevreul, and Jones. The following Manual is published for such, and is chiefly compiled from these standard writers on Colour. Of course, no teacher will think of using the matter in the form here given. He must make himself familiar with the subject, and present it in oral lessons adapted to the capacity of his scholars.

SECTION I.

Colour gives to the world of *form* beauty and ornament, and seems superadded to the necessity of creation: but it has its use also; it assists us to distinguish form; it aids us in determining distance and space, and enables the eye more readily to separate objects, and parts of objects, from each other.

1. The source of colour is Light;
2. It is lost and destroyed by Darkness.
3. Light is represented by White;
4. Darkness by Black;
5. And the many intermediate colourless tints between light and darkness, by the mixture of Black and White in various proportions: these tints are called Grey.
6. Formerly light was considered to be a primary element, but experiment has shown that white light is divisible into three separate rays, which are severally Yellow, Red, and Blue,—
7. These rays cannot be further decomposed or divided; and as being the primary elements of light, and unattainable by any mixture, they are called *Primary Colours*.
8. By mixing these primary colours in varied proportions, all *Hues* of colour are obtained;
9. By diluting these hues with White, all *Tints* of colour;
10. Or by toning the hues with Black, all *Shades* of colour, are produced.
11. Colour has been divided into Inherent colour and Transient colour.
12. Inherent colours being all material or coloured substances, as those of the dyer, or the pigments used by the painter, &c.
13. Transient colours are those formed by the decomposition of light, such as the hues of the rainbow, the prism, or the ocular spectrum.
14. It is necessary to remember that pigments, such as those used by the dyer or painter, are but the representatives of colours; and that they but very imperfectly represent the primaries: there is no Yellow pigment, for instance, of which it can be safely averred that it is free from any mixture either of Red or