

MANUAL OF COLOUR.

We publish below the Manual of Colour prepared for the use of students in the Department of Science and Art, by R. RENDRAVE, R. A. The annexed diagram illustrates the harmonious relations of colour, presenting at one view the exact surface quantities in which colours harmonize with each other. The centre of each lozenge contains a primary hue,—namely, yellow as three, red as five, and blue as eight, of surface measurement. Each primary is surrounded by its harmonizing secondary,—namely, purple as thirteen to three yellow, green as eleven to five red, and orange as eight to eight blue. These secondaries are again surrounded by their harmonizing tertiaries; thus citrine as nineteen to thirteen purple, russet as twenty-one to eleven green, and olive as twenty-four to eight orange. The relative quantity of each hue which should be present in any ornamental arrangement is thus placed before the eye, which is assisted in its judgment, not only as to full hues of colour, but as to hues when diluted into tints or darkened into shades.

There are few subjects so attractive to pupils as that of colour. It holds no unimportant place in every well ordered primary school,—where it should be treated simply as a property of bodies. To teach the pupil to recognize, discriminate, and name the more common colours, and to accustom his eye to their harmonious combinations, are the two points to be aimed at in lessons in the primary classes. In the more advanced classes, colour should be treated as a science and an art. No subject yields a more attractive series of oral lessons.

Sight is the most nearly perfect of all our senses. Its conceptions of whatever properties of objects can be seen are more vivid and complete than when ideas of the same properties are conveyed to the mind by any one of the other senses. Horace understood the importance of this sense when he sang :

Sounds which address the ear are lost, and die
In one short hour; but that which strikes the eye
Lives long upon the mind; the faithful sight
Engraves the knowledge with a beam of light.

Colour is emphatically a subject for the sense of sight. To teach it, the colours themselves must be shewn. No descriptions will convey any idea of them to one who has never seen the colours. It is well-known that individuals possess very different degrees of distinguishing not only tints and shades of the same colour, but the colours most strikingly opposed to each other. Indeed, the same colour will be called by entirely different names by different individuals. Comparatively few persons can distinguish a scarlet from a vermillion, or a crimson from a carmine. Many confound a blue with a green. By the investigations of Brewster and Wilson, it has been discovered that a deficiency in the power to discern colour is more prevalent than was supposed. From calculations based on various examinations made in England and Scotland, it appears that one person out of every fifteen is unable to distinguish all of the ordinary colours; one in fifty-five confounds red with green; one in sixty brown with green; one in forty-six blue with green. Of the three primary colours, red appears to be the most difficult to be distinguished; it is the distracting colour of the three. Some persons can not see it at all as a colour, for it appears to them as black, but most commonly it is mistaken for green. Yellow is the colour which less frequently escapes perception. There are but a very few persons, even among those who are called colour-blind, that do not see yellow perfectly. A pure blue is in the next degree least likely to be mistaken, and with some it is the most vivid colour of the