

FOURTH STAGE.*

OBSERVATION and comparison are the dominant feature in this as in the preceding stages; but more new facts are introduced and useful information is imparted about some of the common necessities of life. In the "first lessons on manufactures" only such subjects are taken as can be illustrated without difficulty.

It is probable that by the time this stage is reached the children will have learned to read, and the chief points of the lesson should be written on the black-board as they are brought out.

The subjects dealt with are—

- (1.) Colour: shades and tints of colours.
- (2.) Form: the circle, sphere, and cylinder.
- (3.) Measures for dry goods.
- (4.) Properties of bodies: malleable, tenacious, ductile.
- (5.) Common objects: common salt, soda, alum, camphor, sulphur, snow and ice, wool and cotton, and pins and needles.
- (6.) Manufactures: bread, butter, cheese, starch, paste, &c.

LESSON I.

COLOUR.—SHADES AND TINTS.—I.

THE children should be provided with cards, or paper, or threads of wool of the following colours: carmine, yellow, blue, crimson, scarlet, pink, rose, and flesh colour.

The children at this stage are supposed to be able to distinguish all the primary and secondary colours, and to tell

* Suitable for children of from about 5½ to 6½ years of age.

how the latter are produced from the former. They have learned, moreover, that colours may be light or dark.

The teacher may now proceed to show the composition, and to give the names of some of these light and dark colours. But as the varying "shades" and "hues" and "tints"* are innumerable, while the names given them are very limited in number, and not very exact, it will be best for her to confine her attention to a few of the more common.

The general effect of mixing darker or lighter colours with any particular colour must first be shown by experiment. The resulting colours are seen to be darker or lighter.†

Teacher, holding up the standard red [*carmine*] asks:—

"What colour is this card?" *Red colour.*

"Here is another red. Is it darker or lighter?" *Darker.*

"Which is the darker colour, blue or red?" *Blue colour.*

"If I mix a little blue with the bright red it makes this darker colour, which we call *crimson*.

"Show me your red card. Now the crimson.

"How is crimson made?" *By mixing a little blue with bright red.*

"Show me your yellow card. Which is the darker colour, yellow or red?" *Red colour.*

"If I mix a very little yellow with bright red it makes this new colour, which we call *scarlet*.

"How do I say scarlet is formed?" *By mixing a little yellow with bright red.*

"Now place the three red cards in a row, the darkest first, then the bright red, then the lightest.

* A *shade* is sometimes understood to be a colour made darker by the addition of another and darker colour, while a *tint* is a colour made much lighter by the addition of another and lighter colour. When a slight colour is seen in addition to the principal colour it is called a *tinge* or a *hue*. But in practice these terms are used indiscriminately.

† The production of the particular shades and tints required will be found somewhat difficult, and paper or card patterns, or threads of wool, may be used instead of paints.

“What is the name of the lightest?” *Scarlet.*

“And of the darkest?” *Crimson.*

“Now if I take a little crimson and make it very light by mixing white with it we get another very pretty colour. Here it is; we call it *pink.*”

“In the same way if I mix white with a little bright red we get *rose* colour, and if I mix white with a little scarlet we get *flesh* colour.

“How can we make a pink colour?” *By mixing white with a little crimson.*

“How can we make a rose colour?” *By mixing white with a little bright red.*

“How can we make a flesh colour?” *By mixing white with a little scarlet.*

“Show me your scarlet card. Now the colour which we make from scarlet by mixing plenty of white with it.

“Now the bright red colour and the light colour we make from it. And now the crimson card and the light colour we make from it.”

The teacher must continue to exercise the children in “matching” and selecting these colours until satisfactory results are achieved.

LESSON II.

COLOUR.—SHADES AND TINTS—2.

THE time of this, and probably one other lesson, may be occupied with distinguishing and naming the more common shades and tints of yellow, blue, and green. The extent, however, to which this subject is pursued must depend very

much on the intelligence and previous training of the scholars. The method to be followed will be similar to that of the last lesson, and cards, paper, or threads of wool must be provided according to the colours brought under notice.

The following are among the more common shades of yellow, blue, orange, green, and purple:—

YELLOW, a primary colour.

Chrome, a rich bright pure yellow.

Saffron, the colour of the saffron flower, a deep yellow with a tinge of red.

Sulphur, the colour of sulphur, a yellow with a bluish tinge.

Canary, the colour of the canary bird, a light chrome.

Lemon, the colour of the lemon, a yellow with a blue tinge.

Straw, the colour of straw, a pure light yellow.

Primrose, the colour of the primrose flower, a very light yellow.

Flaxen, the colour of flax, a pale tint of yellow.

BLUE, a primary colour.

Ultramarine, a fine rich deep blue.

Indigo, a deep blue with a tinge of red.

Prussian blue, a deep blue with a tinge of green.

Violet, the blue of the rainbow or spectrum.

Sky-blue, a light blue, the colour of the cloudless sky.

ORANGE, a secondary colour, a mixture of yellow and red, the colour of a ripe orange.

Auburn, a dark red orange.

Buff, a light yellowish orange.

Salmon, the colour of the flesh of the salmon, a light orange with a golden tinge.