

when introduced by a skillful and judicious teacher, will not only operate powerfully in arousing the energies and in securing the attention of the pupils to the business in hand, but it will alter the whole tone and character of the school for the time being, diffusing a gravity and sobriety where nought but sportiveness and frivolity prevailed,—spreading a calmness and a serenity where all was one scene of perturbation and confusion,—and establishing good order and obedience where nought but confusion and misrule obtained. Surely an instrument so powerful in the management of a school cannot be too frequently called into requisition, or have too much time and pains given to it so as to render it still more efficient, still more extensively useful. And what does all this imply? It implies, in the first place, the diligent culture of music on the part of the teacher, and, in the second place, the constituting of music a distinct branch of study in a Common School education. And all this we plead for not merely because it is a high and refined accomplishment, not merely because it is a becoming thing to be able to sing Jehovah's praises in melodious strains; but mainly because of the power it possesses, not only in the management and government of a school, but in the securing of a far larger amount of intellectual labour and a far closer application to study. Every teacher, then, ought to devote at least half an hour every day to the teaching of music; and we feel satisfied that no time would be better spent whether we regard his own personal comfort and happiness, or the profit of the scholars.

SENSE OF SEEING.

The senses generally serve as interpreters between the material universe without and the spirit within. But it is more especially by the sense of sight that we are enabled to hold converse with the external world. Without it we should not only be deprived of a large portion of the pleasures of life, but even of the means of maintaining our existence. It is through the sense of vision that the wisdom, power and benevolence of the Deity are chiefly manifested.

The eye, which is the organ of this sense, is an optical instrument of the most perfect construction. It is surrounded by coats, which contain refracting mediums, called *humours*.—There are three coats, called the *sclerotic*, the *choroid*, and the *retina*; and three humours, called the *aqueous*, the *crystalline*, and the *vitreous*. These three humours have been compared to the glasses of a telescope, and the coats to the tube which keeps them in their places,—thereby rendering the eye a perfect optical instrument infinitely surpassing all specimens of human skill. This is true, view it in what light we may. It not only possesses the power of so adjusting its parts, as to adapt it to the examination of objects at different distances and in light of different degrees of intensity, but we are enabled to direct it at will to objects above, beneath or around us.

But we have no intention of discussing the anatomy of this sense. It is more to our purpose that we consider the means of preserving and improving it, and of rendering it subservient to the promotion of our intellectual and moral culture. And how, it may now be asked, is this sense to be preserved and improved? Here, as elsewhere, exercise is the grand specific, and this exercise administered in such a way as that action shall alternate with rest. Whenever the eye is fixed for any length of time upon an object which it distinguishes with difficulty, it experiences a painful sensation, which is a sure indication that it has been overtaxed. The sight is also impaired when the eye is too little used, or when its natural stimulus is shut out, as is

strikingly illustrated in the case of persons confined to dungeons. It is clear then that the strength of the light should be regulated according to the powers of the eye. This is a general, though a very important rule. Both the amount and the distribution of light should be such as to produce no unpleasant sensations. The eye possesses a certain degree of adaptation to light, according as it is intense or feeble. Some eyes require a stronger light than others, but all eyes are injured by being used in light that is too intense or too feeble. Reading by a strong sunlight, and by moon or star-light may be adduced as illustrations which are alike painful and injurious. For this end rooms should be well and evenly lighted, and the use of side lights as well as all oblique positions of the eye avoided.—Such are a few plain principles essential for the preservation of the health and vigour of this organ;—and now it may be asked, What is to be done for its improvement?

1. We should accustom the eye to view objects at different distances. Persons become near or long sighted as the objects to which they are accustomed to direct the eye are near or remote. This is illustrated in the case of students, watchmakers and engravers, who are accustomed to examine minute objects near the eye, and as a consequence become near-sighted; and of surveyors, hunters and sailors, who, being accustomed to view objects at a distance, become long sighted. By a proper discipline of the eye, persons may attain and retain the power of viewing objects near by and at a distance.

2. No who would secure clear and distinct vision, must observe all those rules which are necessary to keep the body in health. The sympathy of the eyes with all the other organs of the body is wonderful and intimate. There is no other organ whose strength depends so much on the general vigour of the system. Strict temperance in eating and drinking may be regarded as an indispensable requisite for the preservation of healthy eyes. To this may be attributed the clear heads of the ancient philosophers, who, unlike most students of the present day, exercised their bodies and limbs as well as their minds.—They studied and thought and exercised both body and mind in the open air, and thus observed the laws of health.

3. For the farther improvement of this sense every means should be employed for the purpose of imparting an idea of distance; and for this end every school should be furnished with appropriate apparatus, with a set of linear measurements. The following account is given by Mayhew of the plan to which he resorted:—"For the benefit of the primary department connected with a seminary of learning that was formerly for several years under my supervision, I constructed a set of rules for linear measurement. Their breadth and thickness were uniform, each being an inch wide and half an inch thick. The set consisted of nine rules, whose lengths were as follows: four were each one foot long; one a foot and a half long; two, two feet; one, two and a half feet; and one, three feet. Every rule had a small hole bored through each end. I had also a number of small pins turned just the right size to fit these holes. I first tried the experiment ten years ago, with a class of about twenty children from four to seven years of age. Several of these could not read, and some of them had not learned the Alphabet. The children were first led to observe carefully the length of these several rules, until they could determine at sight the length of each. For several of the first lessons some of them would misjudge. They would, for instance, call a two foot rule one and a half or two and a half feet long. In such cases their judgments were immediately corrected by the application of