

along from day to day that they were studying without knowing it, learning many things of importance, forming habits of observation and inquiry, and having the eye and hand trained by a method which seemed to them amusement, but which was really a careful discipline. On the evening of December 22, 1890, a review of the work done during the past seven months was held, and a large number gathered, drawn by interest or curiosity, and it was soon evident that curiosity gave place to satisfaction, and that interest deepened into approval. The exercises of the evening would not, perhaps, to an unpractised eye reveal the full significance of the teacher's labors, but they certainly created an impression very favorable to Kindergarten work in general. The children performed their parts with an ease and self-possession which, if they had acquired nothing else, would speak in praise of the system. The specimens of work done during the term showed great neatness, and though the exercises of the evening were not in the nature of an examination yet enough could be plainly seen to make it evident that the past seven months had been well spent.

At the close of the exercises addresses were made by H. H. Chute, Esq., M. P. P., and by Messrs. Willard Clarke and Alpheus Marshall, in which they expressed in clear and forcible terms approval of the work already done, and a hope that it would be continued, and that the time was not far distant when the Kindergarten would be incorporated in the system of public instruction.

Since holidays the school has resumed work as a Kindergarten primary. REV. W. C. BROWN.

#### Physical Geography in the Public Schools.

By EDWARD MANNING, M. A.

It is strange that with all our progress in school methods, the teaching of geography is still complained of, and its results unsatisfactory. On the continent of Europe, indeed, they manage these things better. The study ranks equal to the classics in the German realschulen and the French academies. Among reasons for the complaint are, the common faults of inferior teaching — to be referred to later — the dryness of many text-books, the want of sequence in the subjects, and the omission to connect geography with physics and history.

In fact the study of geography will always be dry, unless physical geography is the basis of its treatment. But if this be rightly done, all is changed. It is recognized as related to all the natural sciences. As Geikie says: "It ever looks for a connection between scattered facts, tries to ascertain the relations which subsist between the different parts of the globe, their reactions on each other, and the function of each in the general economy of the whole." It "studies the distribution of vegetable and animal life over the earth's surface, with the action and reaction between it and the surround-

ing world. It traces how man, alike unconsciously and knowingly, has changed the face of nature, and how on the other hand, the conditions of his geographical environments have moulded his own progress. With these broad aims, geography comes frankly for assistance to many different branches of science. It does not, however, claim in any measure to occupy their domain. It brings to the consideration of their problems a central human interest, in which these sciences are sometimes apt to be deficient; for it demands first of all to know how the problems to be solved bear upon the position and history of man, and of this marvellously ordered world, wherein he finds himself undisputed lord. It borrows freely from all the natural sciences; but the debt is not all on one side. Save for the impetus derived from geographical research, many of these sciences would not be in their present advanced condition. They gain in vast augmentations of facts, and may cheerfully lend their aid in correlating these for geographical requirements."

With geology the connection is so intimate that the narrow view of its definition which will be chiefly adopted in this paper, reckons it a department of this science. As for chemistry — the earth is the great storehouse and laboratory of its elements and compounds, and the great theatre of its forces. Mathematical geography — a division of physical, is for all of us the chief and for many of us the only chapter of astronomy. Then again the ocean, air, clouds, form the studies of the meteorologist; as the plants, animals, and human races are of the botanist, zoologist, ethnologist, and biologist.

And the science is not only the bond of union of the natural sciences, but the bond of union between these and the human, mental, and historical sciences, as well as the basis of the latter class. As old Hakluyt has said: "Geography and chronology are the sun and moon, the right and left eye of history." Think how naturally the sterility and central position of Arabia's deserts, ere the sea had become a highway instead of a barrier, led her swarthy sons to the caravan trade; how the want of *land* marks led to the search for *sky* marks, and thus to infant astronomy, just as the floods of the Nile, obliterating landmarks, originated geometry, that is, land surveying; how the narrow Mediterranean, with far reaching promontories and island stepping stones, proved the nurse of infant trade; how trade's timorous groping from cape to cape led to the coasting of Gallic, Britannic and Baltic waters, till it spread its white wings for further flight, and finally lighted on the New World. Think again, how, when Asia Minor and the friendly Cyclades had pointed the way to Greece and Italy, the tender germ of Aryan progress there was sheltered by Balkan and Alp from northern blasts and northern marauders lest it should be untimely blighted in the bud. And when too genial climes had enervated the races thus favored, and the rough races of the forests beyond at last broke through; how, as Hughes says: "From the contact of the north with the south — the latter represented by a people who had grown up amid the most advantageous circumstances of nature under a bright and glowing sky, and in a genial climate — the former by tribes who had attained their maturity under the more bracing influences of a colder temperature and a less attractive aspect of nature — sprang the mingled strength which exhibited itself in such various forms of intelligence and activity, and which, through the storms and darkness of the early portion of the middle ages, prepared the way for the triumphs of genius effected at a later time. The result of these combined influences is exhibited in