

the history of the calendar, the author has gone into a little more detail. To these "Notes" have been subsequently added some useful "Notes on Algebra." For the object aimed at the book is very fairly adapted. Some few further notes which will readily occur to the majority of teachers can be easily furnished to pupils using the "Notes" for insertion, in addition to the printed ones.

We have not tested the accuracy of the solutions given in the works we have here examined.

OUR BOOK SHELF

Official Guide-book to the Brighton Aquarium. By W. Saville Kent, F.L.S., F.Z.S. (Brighton, 1873, price 6d.)

THE Brighton Aquarium is without doubt the largest and most extensive of the buildings which have been erected of late years for the exhibition of aquatic animals. It also possesses the advantages of being at the seaside, and at the same time conveniently placed for access to the multitude of sight-seers. Though a large sum of money was spent upon its construction, we have been informed that good dividends are paid to the shareholders, and it would seem that the institution shows every symptom of favourable progress. In our eyes the issue of the present guide-book is a very welcome proof that Science will not be entirely neglected in the endeavours to attain material prosperity. Mr. Saville Kent's guide-book is drawn up with a strictly scientific method, but at the same time a large amount of popular information is given in it, and it is well adapted for the purpose for which it is intended.

The higher vertebrata of the Brighton Aquarium are at present but few in number, consisting only of porpoises, representing the order *Cetacea*, and the common seal, exemplifying the marine section of the *Carnivora*, and it is not likely that the representatives of these orders will be much increased in number. But the class of fishes is, on the other hand, very well represented, the Brighton Institution containing the best living series of these animals that has ever yet been brought together, and one that, as our weekly record of its progress shows, is continually increasing both in number and in variety. Mr. Kent's guide-book furnishes the visitor with a short account of the principal facts that are known concerning the life-history of each of these fishes, and cannot fail to add greatly to the instruction to be derived from a visit to the Aquarium. After the fishes, which certainly form the leading feature in the Brighton establishment, and consequently the principal topic in the guide-book, Mr. Kent turns to the Invertebrate division of the animal kingdom, and gives a general sketch of the five groups into which it is now usually separated, and of their principal representatives in the Aquarium. This portion of the guide-book, we think, requires further development, and will doubtless receive it in a future edition. We also beg leave to suggest that a few illustrations in the way of woodcuts would be a valuable addition to the handbook, and would, moreover, be likely to assist very materially in extending its sale. The only illustration in the edition now before us is the ground-plan of the building, given as a frontispiece to the work, and showing the arrangements of the different tanks and rooms. Figures of some of the more remarkable inhabitants of the tanks would, in our opinion, render Mr. Kent's book more attractive to the general visitors, and more useful to the scientific student.

Chemistry for Schools. By C. Haughton Gill. With 100 illustrations. Second edition. (London: Edward Stanford, 6 and 7, Charing Cross, 1873.)

MR. GILL'S little manual is intended either for private study or for class-teaching, and has special reference to the requirements of those who have to learn the small modicum of chemistry required for the matriculation examination of the University of London. He has indicated

the chapters necessary for the latter by a †, an act which we cannot at all approve. Surely, if even so light an examination as the one in question has to be undertaken in what may be to some a distasteful study, it is better to know too much than too little, and Mr. Gill's little book is not such a very dreadful treatise that one need be afraid of reading it through. If the examinations are to mean nothing more than the "getting up" of a set of special chapters written for the purpose, they had better by far be abandoned at once. With this exception we have little fault to find. Great care has been taken in arranging and systematising the work, though this has been pushed rather far—the word "acid," for instance, being almost banished. The great merit of the book is, however, to be found in the very admirably-selected questions placed at the end of each chapter: we feel sure that any one conscientiously endeavouring to understand and work these out would learn more, and that more thoroughly, than he would by a vast amount of desultory reading and rambling through of larger works. We would say to any candidate for the London matriculation, "Let him neglect Mr. Gill's advice about the marked chapters, and work conscientiously through the book."

Report of the Rugby School Natural History Society for the Year 1872. (Rugby: Billington, 1873.)

WE are sorry that the first words of this Report are words of complaint at the small number of real workers among the numerous members of this society; some of the Sections we regret very much to be told, are either deserted or inactive. We hope no such complaint will be called for next year, and that the new regulation as to membership may be of service as a stimulus to work among the younger associates; by this new rule the number of members is henceforward limited to 15, for the purpose of making election to membership a real distinction. To judge from the number and value of the papers in the Report, there are, after all, not a few really good workers among the members. Of the various selected papers and reports one-half are by members who were actual pupils of the school at the time they were written. B. R. Wise's paper "On the Earliness of the Season" (1872), shows the possession of a power of observation which, if carefully cultivated, ought to produce good results. The same may be said of A. G. Burchardt's paper on "The Work of the Anatomical Section," which contains an account of some of the animals found in the Rugby district, and some very useful directions on the preservation of specimens. E. J. Taylor's account of "A Visit to Norway" is interesting, and shows the author can make use of his eyes. L. Maxwell's essay on "Spectrum Analysis," well deserves the Society's Prize, which was awarded to it: the author shows that he possesses a clear idea of the nature of Spectrum Analysis, the principles on which it is based, and the many valuable purposes it is calculated to serve. It is accompanied by some rough but intelligible drawings of various absorption spectra. The second prize was awarded to an intelligent paper by H. N. Hutchinson on "Motive Power," in which the author describes and illustrates various substitutes for coal as generators of motive power, including an ingenious flux motor, or tidal engine. Among other interesting papers we would mention the valuable observations on *Hippocampus brevirostris*, by the Rev. T. N. Hutchinson; and some very curious facts as to protective mimicry in spiders, communicated by the Rev. C. W. Penny. From the Astronomical Report, by Mr. Wilson, we learn that a large amount of good work is being done, especially in solar observation. Appended to the report are Messrs. Lockyer and Seabroke's paper "On a New Method of Viewing the Chromosphere;" and a report on the November Meteors, by L. Maxwell. The Meteorological Observations seem to have been regularly and carefully taken, though we hope there will be more to report in the