

make pride and sentiment motives for loyalty rather than disloyalty; how to utilize the sympathies of the school.

The mental growth and development of the child require radically different methods and motives in disciplining children under eight from those between eight and fourteen, while these vary greatly from those above fourteen. We have not the space to enlarge upon these differences, which would require a chapter

by themselves. In a word, to succeed in discipline the teacher needs to study the general characteristics of the child mind, the peculiar circumstances of the specially disobedient, and apply remedies heroic in desperate cases, but as mild and developing as circumstances will allow. One must succeed at all hazards, but never by the use of a word or deed that can echo unnecessary harshness. — *Am. Teacher.*

NOTES FOR TEACHERS.

STELLAR STATISTICS.—The number of stars visible to the unassisted vision on a clear night is about 3,000. The opposite hemisphere, containing as many more, makes the number that can be seen without a glass about 6,000. These are divided according to their apparent brightness into six classes, called, respectively, first, second, third, fourth, fifth and sixth magnitude. Stars so remote as to be invisible to the naked eye are called telescopic stars. These are classified as high as the fourteenth, or higher, magnitude. An arbitrary division has been agreed upon for the convenience of astronomers. Twenty are classed as first magnitude stars, 65 as second magnitude, 200 as third, 450 as fourth, 1,100 as fifth and about 4,000 as sixth. The number of telescopic stars is much larger, being reckoned by some authorities as high as 20,000,000.

PERMANENCE OF THE OCEAN BEDS.—Although geologists are accustomed to deal with considerable alterations of level as one of the causes operating to bring about profound changes in the topography of many regions, it has always seemed difficult to conceive that the vast depressions in the face of the earth now occupied by the

oceans could ever have been subject to such tremendous changes as would be necessary to convert them into land. Many geologists, appreciating this difficulty, are inclined to believe in the general permanence during all time of the great oceanic beds, and of the continental areas. To account for the origin of the oceanic basins, Mr. Fisher, in the *Geological Magazine*, proceeding from the theory of Prof. Darwin, that the moon broke away from the earth more than fifty million years ago, he thinks the ocean basins may be the scar left by the breaking off of the moon's mass, and that the basement rocks of the continents are fragments of the crust which had already solidified, and which were left behind.

THE instruction in the great English schools was nearly all Latin until 1530, when Greek was introduced, and until 1785 the only further change was the addition of a little more Greek. It was not until 1829 that modern and ancient history, geometry, and arithmetic were introduced into the highest classes. In 1851 modern languages were introduced into the Harrow school curriculum. In 1822 it is said that in this school it was "absolute heresy for a master to