

ing it of no importance at all, or of a very secondary importance at the best, to have the mind itself trained to reason, to investigation, to independent judgment. Why is not this, as if, in order to secure the physical growth and well-being of our children, we were to stuff them with the strongest food and compel them to be always eating? The only difference is that in the latter case disease and death come speedily, and in such form that the dullest observer must recognize them; in the former, mental disease and mental coma and death result as surely, but more slowly, and are only observable by such as have eyes to see. If the inherent love of investigation which prompts every child of ordinary intelligence to interrogate its nurse and its parents—to analyze its toys, and to put those endless questions which make children so troublesome to their elders—if this spirit of inquiry is to be cultivated, so that it shall keep the brain awake and active through the whole school-life and to old age, then we must give it employment in our boys and girls; we must furnish them with practice; we must do this systematically and constantly. Have you ever noted the difference in interest which different children take in working out enigmas, problems, rebuses, etc.? You can safely infer the mental activity of a boy by the amount of interest he takes in such matters, just as you can gauge his mind-culture by his success in obtaining correct solutions. Substitute for your enigmas such problems as shall have a practical value when solved, and you have the most important conditions to be fulfilled by an instrument for mental training. The study of the natural sciences furnishes the very thing wanted—that is, *the study by direct reference to and questioning of nature herself*. No text-book work here. A

laboratory is wanted, to be sure, but every roadside, every ditch, every day and night of the year furnish you a laboratory. It is better if you have a room conveniently furnished—but any ordinary school room is laboratory enough. If botany be the particular branch of science selected—and in my judgment, especially for junior classes and in country schools, it is to be preferred to any other—then every tree and shrub and herb furnishes you material. The observing eye, the skilful hand, the thinking brain, are all that are needed to make the study, under the guidance of a teacher himself in love with and conversant with his subject, a sure source of incalculable profit and intense delight. The teacher who describes a flower for his class makes a great mistake, and totally frustrates the whole end of the study, which is the cultivation of the powers of observation, memory, and comparison (judgment) on the part of the pupil, by inducing him to observe and compare for himself. Chemistry, natural history, any department of science, in short, will do instead of botany, should facilities offer; but the last named have the difficulty of requiring more elaborate arrangements for work than botany. Eclectic work may be preferred: now a problem from botany, now one from chemistry, now from physics of heat, light, etc. Very good so long as the work is done, and intelligently done—not by you, but by your class. All right. But you will ask where time is to be found for this work, with our already too crowded curriculum. Well, the answer is simply that until the curriculum be revised, time can't be found for it. But does not our Limit Table exact a great deal too much in many departments? It seems most ridiculous to me that, for instance, English grammar should be taught in our Public Schools for so many years in preparation for High School entrance, and in the High