

NATURE STUDY—No. X.

MINERALOGY AND GEOLOGY IN SCHOOLS.

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All earnest teachers will agree that Mineralogy and Geology should be taught in schools, but many feel their incompetence to teach it. To my fellow-teachers, however, I can say that ignorance of the subject need not hinder their attempting it. If you study a few rocks, and then teach what you have learned, the hearty co-operation of your pupils will aid you to surmount all difficulties. I hope to give you a few suggestions without giving material that can be found in any common text book. Supply yourself with an elementary text book, learn the general principles of geology, and start your class by giving oral lessons on what you have learned. Do not give them book facts. Take them to the brook or the beach where the bed-rock crops out in ledges or cliffs. Is it stratified or unstratified? Study its texture, hardness, durability, color, position—in fact everything you or your class can notice about it. How did it get into the position in which you now find it? What is its dip? When you learn these facts from your text book or from some friend, give them to your children, both by questioning and telling, and then request them to study some other ledge themselves and report their discoveries.

Besides the outdoor work in geology, study hand specimens of rocks and minerals in the schoolroom. After the first lesson, you will have no difficulty in securing specimens, for every pupil will bring in stones and pebbles to be named. If you cannot name them, you can study them and watch for a chance to learn the name later on.

I should begin this study with granite, both because it is common nearly everywhere, and because the origin of other rocks can be traced back to it. Give each child pieces of granite of different colors, and pieces of quartz, feldspar and mica. On studying the lustre, fracture, cleavage, hardness, etc., of these specimens, the pupils will discover that the granite consists of different minerals, each resembling one of the other pieces given—quartz, feldspar and mica. Are all three of these present in