

Blowpipe-analysis Class.

The work of this class for the past year has been better than usual. The improvement was caused by the adoption of printed notes in place of manuscript ones. My former practice was to write notes on the blackboard and have them copied into exercise-books. This part of the work took up a good deal of time, and when done was not very satisfactory. To avoid this difficulty a much condensed set of notes was drawn up and printed in such a way as to appeal more directly to the eye than the manuscript notes did. The result has been eminently satisfactory; time has been saved, and better work done.

The scope of the work has been much the same as in past years, attention being chiefly given to ores of commercial importance. Thirty-three boys have belonged to the class during the year, and most of them have attended regularly and worked well. The class was divided into two sections, an upper and a lower. The chief work of the lower class was the acquirement of manipulative skill, while the upper class went through a systematic course of tests. The substances tested by this class were antimony, arsenic, tin, zinc, bismuth, lead, copper, chrome, iron, nickel, cobalt, manganese, gold, silver, platinum, sodium, potassium, strontium, barium, lime, sulphur, and titanium.

The boys in the upper division were examined on the 24th March. Nine boys were present at the examination, and all of them succeeded sufficiently well to qualify for a first-grade certificate, which was duly presented to each. Bernard Harris, who named correctly all the test-substances given, was awarded a blowpipe cabinet.

Some difficulty is experienced in getting test-substances for this class. We are badly in want of ores of tin, lead, antimony, arsenic, zinc, bismuth, nickel, cobalt, and manganese. Some heavy spar would also be acceptable.

Assaying.

During the year thirty-eight assays were made for the public, being an increase of eleven on the number for last year. Several samples of gold were refined and assayed, upwards of 150 oz. being treated. The greater part of this gold was from Taitapu. One parcel of silver, weighing 33 oz., was refined for a local jeweller. The smallness of the laboratory in which the assaying is done is still a great inconvenience.

Agricultural Chemistry.

A class for the study of agricultural chemistry was started early in the year. Only three young men joined, but they were such earnest students, and kept up their enthusiasm so well, that there was no lack of interest in the work. All three were school-teachers. Two of them, by the knowledge gained in this class, have already passed the agricultural-science section of the teachers' examination; the other did not sit for examination, but was equally well prepared. As these young men will, in all probability, become teachers of country schools, the knowledge they have gained will be passed on to hundreds. The work undertaken in this class comprised the chemistry of the elements found in plants, soils, and manures; the partial analysis of plant-substances; the microscopic examination of starches; the analysing of soils; the analysing of manures; and the manufacture of superphosphate.

Lectures.

Two gratuitous public lectures in connection with young men's institutes were given in the winter months. These lectures were well attended and highly appreciated. Oxygen, its preparation and properties, formed the subject of one of these lectures, hydrogen being similarly treated for the other lecture.

Conclusion.

The foregoing is a brief outline of the work that is being done here. Much more might be done if one had more time and a suitable building for carrying on class-work with young men. There would not be much difficulty in starting two or three classes for young men, but the extra work it would entail would interfere with the rightful discharge of my ordinary vocation. Having carried on this work for some years, it would be gratifying to know what are its permanent results. In Nelson this information is very difficult to obtain. Most of the young men leave here for distant parts of the colony, and are lost sight of. There are, however, at least four of my former students engaged in mining—three of them in New Zealand, and one in South Africa. Several of my blowpipe-class pupils have become teachers, and are teaching science to their scholars in a more practical way than they would otherwise have done. Other members of my classes have found, and gratefully acknowledged, that the work done with me has helped them in their study of science at college. Apart from these more or less tangible results, there has been brought about by the teaching of science a mental awakening in scores of boys the results of which cannot be traced. There are many imperfections in the work that is being done, but each year some slight improvement is made; and steady, uninterrupted progress has characterized the work from the first.

KUAOTUNU SCHOOL.

Mr. Thomas M. Cahill, honorary secretary of the Kuaotunu School of Mines, reports as follows:—

I have the honour to report on the progress of the Kuaotunu School of Mines during the year ending March, 1899, as follows:—

During the first part of the year a good number of students attended, but the difficulty lay in getting efficient instructors. At a meeting held in the School of Mines on the 3rd May, 1898, I was instructed to open up correspondence with the Coromandel School of Mines, with a view of getting Mr. McLaren to instruct our school, say, one week in the month. They replied that, as Mr.