seed oil and of rosin oil. If desirable, the oil from some mixed paint may also be examined. For this purpose allow the paint to settle in a narrow, tall vessel and drain or siphon off some of the supernatant clear oil. If the paint will not settle readily, dilute some of the oil with carbon tetrachlorid, and after separating the clear liquid from the solid, remove the carbon tetrachlorid by distillation (save it).

Take the specific gravity of these oil samples, and determine their Maumené numbers. By means of this data, decide whether or not the oils are pure.

WHY CHEMISTRY SHOULD BE TAUGHT IN HIGH SCHOOLS.

Today our home life, our commerce and the practice of our trades and professions involve chemical operations so frequently and require so much knowledge of the composition and properties of substances that the acquisition of such knowledge by young people is really a prime necessity. A course in chemistry can give such information. Of course, *training* is the first object of all school work, but in the study of chemistry training can be given while information of practical value is given. General facts and principles can be illustrated with materials met in daily life as well as, if not better than, with substances rarely met with. A course in chemistry can include more information of practical value than probably any other high school course, and if properly conducted the chemistry course will serve to train young minds just as well as any course primarily designed for this purpose. The study of chemistry gives young people much that is essential in all walks of life, and it is an absolute necessity for the great number who deal directly with materials, such as painters, builders, merchants, farmers, housekeepers and many others.

TWO DEVICES TO ADD INTEREST TO REVIEW WORK IN ELEMENTARY CHEMISTRY.

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Though chemistry should not be taught simply as a memory study, still the facts once learned must be remembered in order to be used in subsequent lessons. No one learns a thing once for all, and most teachers will agree that occasional drill and frequent reviews are very necessary in elementary chemistry. How to conduct such work so as not to bore the best students and to compel the attention of those below the average is quite an important problem. Two devices which have been of some assistance in my own work may help others.

One is an adaptation of the old game of question and answer. The instructor tells the class he has in mind some substance that they have used in the laboratory, and they begin to ask questions to discover its identity. She answers only questions that can be answered by "Yes" or "No"—that is, "Has it color?" "Is it a gas?"—but refuses to answer any such as "Is it carbon dioxide?" The latter question should have been, "Is limewater a test for it?" The student naming the substance correctly may then be allowed to choose the next one to be guessed by the class. This method, by its appeal to puzzle-loving instinct of boys and girls of high school age, interests them individually, and brings to the attention of the class many characteristic properties of substances that would otherwise be forgotten almost as soon as the experiments with them are finished.

The other scheme involves more work on the part of the instructor, but

has also proved serviceable in review work. A set of questions is made out, each on a separate card, and these are given around the class, the same number to each student. The cards, question side downward, are laid on the desk until the student's turn arrives. He then reads aloud the question on the top card and answers it if he can. If his reply is correct, he keeps the card, and the next takes his turn. If, however, the answer is not right, the student calls upon some member of the class. If the one called upon gives the correct reply, he receives the card. If the student called upon fails to give the correct response, volunteers may be called for. If the right answer is not obtained from some member of the class, the interrogator retains the card. The student holding the greatest number of cards at the end of the period is the winner. Should each of two pupils answer only part of a question, the card can be forfeited to the instructor, or each can be given a card. The success of the game depends upon the speed with which it is played and upon the kind of question. The latter must be such as require definite short answers. On acids, bases and salts, questions like the following are suitable: "What is muriatic acid?" "What is the formula for sulphuric acid?" "What are chlorides?" "Name two chlorides." By means of this device one can review rapidly from sixty to eighty questions in a single period. It not only holds the interest of every pupil during the entire period, but also helps him to find out what he really knows.

A good set of general questions could also be used from time to time. Questions such as, "What are the two liquid elements?" "Name two gases that are acids." "Name two solids that are acids."

WHAT NEW YORK IS DOING FOR VISUAL INSTRUCTION.

One of the most interesting of instructive methods that has recently come into vogue is that of visual instruction, both by the older type of stereopticon slide and later by the motion picture view. This is something in which the pupil is always interested, and when his interest can be secured, he is being instructed.

The New York educational department is making a special feature in lending to schools, and to other educational institutions of the state, lantern slides and matter of that nature, with the distinct understanding that these will be used for strictly free instruction if no charge is made for their use. This plan is meeting with universal success, and it would be well for other cities to institute schemes of this sort.

This is on the order of the N. W. Harris Foundation of the Columbian Field Museum of Chicago, in which matter belonging to the Museum is lent to the various schools of the city, being delivered and called for by the Museum authorities, the expense being borne by the Foundation.

Superintendent L. E. Amidon of Iron Mountain, Michigan, has just tendered his resignation to the Board of Education of that town, the resignation to take effect at the close of the present school year.

He has administered the schools in this place for nearly twenty years. During his management a splendid new High School building has been erected. He has also instituted a scheme in Iron Mountain which permits his pupils to attend school for half a day, while the rest of the day is devoted to some occupation by means of which the pupil can earn money.

Mr. Amidon will take charge of the Rivers Teachers' Agency in the Auditorium Building, Chicago, after the middle of June.