TEACHING OF PHYSICS IN SECONDARY SCHOOLS

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THE TEACHING OF PHYSICS IN SECONDARY SCHOOLS

JOHN F. WOODHULL

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY IN THE FACULTY OF PURE SCIENCE, COLUMBIA UNIVERSITY

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9. Systematic Work in Nature Study. Regents' Bulletin, No. 36, 1896.
10. The Proper Use of Laboratory, Library, and Lecture in Teaching Physical Science in Secondary Schools. Regents' Bulletin, No. 42, 1897.
11. Physics. New York Teachers' Monograph, 1898.
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CONTENTS.

I. INTRODUCTION.

SINCE the Committee of Ten of the National Educational Association issued its report in 1892 upon the studies in secondary schools, it has been very much the fashion to discuss courses of study. It would appear, however, that while teachers of other subjects have organized and discussed and, in a great measure, agreed and prepared definite plans and carried them into execution, the teacher of science has been contented to do his work as an individual, heroically, it may be, but alone. Hence there is no settled practice as to the sequence of the various subjects in science and little or no attempt at relating them either to one another or to other subjects in the curriculum—no uniformity in opinions as to what a course in physics should really constitute, or what its aim should be.

It has seemed to me that here was a proper field for research, and that a dissertation might well be prepared on the teaching of physics in secondary schools in which an attempt should be made to determine the proper place of the subjects in the course, what should be its chief aim, and what its contents.

II. THE PLACE OF PHYSICS IN THE HIGH-SCHOOL CURRICULUM.

In discussing this question I shall give more weight to the needs of the pupil than the individual preference of teachers or the logical arrangement of the subject. Let us, however, ask whether these considerations are antagonistic to one another.

In logical sequence, I believe the physical sciences come