

# **HOW TO TEACH NATURAL SCIENCE IN PUBLIC SCHOOLS**

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How to teach natural science in public schools by Wm. T. Harris

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**WM. T. HARRIS**

**HOW TO TEACH  
NATURAL SCIENCE  
IN PUBLIC SCHOOLS**



HOW TO TEACH  
**NATURAL SCIENCE**

IN

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**PUBLIC SCHOOLS**

BY

WM. T. HARRIS, LL. D.

COMMISSIONER OF EDUCATION

Second Edition, from New Plates



SYRACUSE, N. Y.

C. W. BARDEEN, PUBLISHER

1895

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## NOTE BY THE PUBLISHER

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This plan of study was first issued by Dr. Harris in 1871. It appeared in his Report for that year (pp. 173-181, and xlviii-lvii), and also as a Syllabus of Lessons for the teachers, document No. 34. It appeared next in the annual Report for 1877 of Superintendent Philbrick, of Boston (pp. 94-102), where he speaks of this syllabus as the characteristic of the St. Louis course, "so interesting and important that I quote it in full." It was again reprinted in the St. Louis report for 1879, and finally has been made the basis of the report of the Committee on Physics-Teaching, presented at the meeting of the National Educational Association, Chicago, 1887.

It is by request of Charles K. Wead, chairman of this Committee, that the syllabus is now reprinted in form accessible to all; and since it has been accepted for sixteen years as the best presentation of the subject, it unquestionably belongs among "School-Room Classics".

It is published by consent of Dr. Harris, and in form according with his suggestions.

SYRACUSE, *June, 1887.*

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NOTE TO THE SECOND EDITION

New plates being required, a larger and more open page has been given to this little manual, which has proved of such service all over the country.

SYRACUSE, *Nov. 10, 1894.*

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## How to Teach Natural Science in Public Schools

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In former reports I have discussed at length the significance of the common branches of study and have endeavored to show that even the rudiments, such as reading, writing, arithmetic and geography, are of inestimable importance. Their acquirement works a more potent change in the individual than any subsequent step in his culture. That these rudiments can almost be said to add faculties to the child's mind ; that they are so general—so wide reaching in their application—as to lie at the basis of further progress in education ; that their claims surpass in every respect those of other special branches that have been urged for admission to the district school course of study on the ground that they are “ more practical ” : these and other positions have been stated and supported by argument. It remains in this report to present the scheme by which the claims of these special branches have been recognized in our course of study without

compromising the thoroughness of the regular instruction in the conventional rudiments above named.

It was clearly seen that the problem demanded an introduction of a popular course of instruction in natural science in such a way as to react beneficially not only upon the pupil's progress in the regular course, but also upon the teacher's methods and practical skill in imparting information.

NATURAL SCIENCE AS AN INSTRUMENT OF  
MODERN CIVILIZATION

Granting the importance of natural science as furnishing the theoretical basis of productive industry and the consequent elevation of the masses of all the people by means of wealth created thereby, the first question in making a course of study was to bring before the mind the entire field in classified form. The obvious division into Physics and Natural History—the former including the department that deals with elements in their mathematical relations, and the latter including the descriptive treatment of the world as it exists in multiplicity and variety of special existences—suggests at once two compendious treatises long in

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