

**EXPERIMENTAL  
PHYSIOLOGY  
AND ANATOMY  
FOR HIGH SCHOOLS**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649113897

Experimental physiology and anatomy for high schools by Walter Hollis Eddy

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**WALTER HOLLIS EDDY**

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# EXPERIMENTAL PHYSIOLOGY AND ANATOMY

FOR  
HIGH SCHOOLS

BY  
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NEW YORK ··· CINCINNATI ··· CHICAGO  
AMERICAN BOOK COMPANY

## PREFACE

THOUGH the importance of Physiology in secondary schools is everywhere recognized, little attempt has been made to place the subject on an experimental basis. This book has been prepared in an effort to call attention to the great field which this subject presents for laboratory study.

The starred topics in the following table of contents constitute a brief course covering that which is essential; and the optional exercises make it possible to extend the work at the discretion of the teacher.<sup>1</sup> The ingenuity of the teacher will readily suggest substitutes for the material suggested when the laboratory facilities of the school are inadequate.

Some of the exercises may be made demonstrations, and time in school may also be saved by assigning some of the simpler exercises as part of the home work of the pupil.

I wish to acknowledge the many helpful suggestions given me by my colleagues of the High School of Commerce and by members of the Columbia University faculty. I have also found many useful suggestions in the works of Messrs. Foster and Langley, J. E. Peabody, M. L. Macy, H. Newell Martin, Hammarsten, Verworn, Wilson, and Schäfer.

I wish also to express my great indebtedness to Dr. E. A. Darling of Harvard College and to Mr. Frank O. Payne of the High School of Commerce for their critical review of the manuscript and for the aid they have given me in its preparation; and to my wife for great assistance in the many details of grammatical arrangement and mechanical labor involved in the work.

W. H. E.

THE HIGH SCHOOL OF COMMERCE,  
NEW YORK CITY.

<sup>1</sup>The book in its starred topics meets the requirements of the New York State Syllabus, and as a whole has been accepted by the Harvard College authorities as meeting the entrance requirements of that institution.

## METHOD OF EXPERIMENT

It has been the purpose of the author so to state each of the following exercises as to admit of its performance by the pupil with a minimum amount of direction from the teacher. Most of the exercises should be thus performed by each pupil individually, or by two pupils together; but of course the teacher may select as many as desired for performance as demonstrations before the class.

It is essential that each pupil make a suitable record of all exercises performed, in a carefully prepared notebook. It is recommended that a separate-leaf notebook be used for this purpose, as this makes possible the inspection of one set of exercises without handling the entire books, and permits the rewriting of unsatisfactory work without disturbing the arrangement of the book.

It is generally agreed, too, that the book should consist of original reports made at the time of experiment, and not of matter copied from original rough drafts.

Frequent examination of all laboratory notes by the teacher is also essential to good work, and the proper status of the notebook work can be secured only by giving it a definite proportion in the marking of the pupil's work. A rubber stamp with the word "Approved" and the instructor's name may be obtained of any stationer at small expense and will facilitate the work of correction greatly. Neatness as well as accuracy and adequacy of report



should receive proper weight in the marking of notebook work.

When the work is completed the student should prepare an index of drawings, records of experiments, and descriptions of demonstrations contained in the notebook. It is well to indicate in this index, after each title, whether the work was done by the pupil or observed and recorded by him, and whether in the laboratory or as home work.

The following directions may prove of value as indicating a satisfactory method of arrangement of a notebook record:

- A. Record the number and date of the exercise.
- B. Make drawings of the apparatus used, when necessary, and label them properly.
- C. State as briefly as possible:
  - (1) What was done.
  - (2) What happened as the results.
  - (3) What meaning these results have, and the purpose of the exercise.
- D. Answer all questions in the text and try to condense your statements into as concise and brief form as possible.

The exercises as a rule should precede the text study and serve as a basis for such study.

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