

LESSONS IN NATURE STUDY

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Lessons in nature study by Oliver P. Jenkins & Vernon L. Kellogg

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OLIVER P. JENKINS & VERNON L. KELLOGG

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Univ. of
California

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IN
NATURE STUDY

BY
OLIVER P. JENKINS
AND
VERNON L. KELLOGG



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PREFACE.

At a time when so many books are appearing in Nature Study, some sort of apology is due for proposing to add another to the list. There is some extenuation in the fact that the book was not premeditated as such. What is here presented began as a series of oral lessons by one of the authors given to classes of children. These lessons were afterwards put into manuscript form for the use of the Oakland (Cal.) schools, later they were used as leaflets printed by the Oakland School Department, and finally were included in the report of Supt. J. W. McClymonds. Finally, answering an apparent demand for a wider use of the lessons, both the authors revised and extended the lessons and had them illustrated by competent artists, and a part of the papers under the new form were published in the *Western Journal of Education*. Since the publication of the series in the *Journal* began, there has seemed to be a demand for the lessons that justified gathering them together in this more convenient form.

The selection of the particular topics here included is not to be interpreted as an opinion of the authors that they are the essential topics, or that they are the most important, since it is evident that a number of lists of equally important or interesting objects could be made. They have been selected as the result of long continued experimenting with children in different grades of the public schools. If merit attaches to this list, it is that the topics in it have been used as here treated with success, repeatedly, in the

actual work of the school. One of the authors has personally presented most of these lessons to classes of children in the schools; and has observed the whole of this course as given by many teachers. At a time when there is so little of precedent in the way of nature study and so much that is still only in the form of proposal, anything which comes from actual experience must be of value from that very fact.

The authors are under the greatest obligation to Miss E. B. McFadden, Principal of Nature Study in the Oakland schools, who has for some years enthusiastically given and supervised giving these lessons in the various school grades. It is very largely thru the actual work of experimenting by the teachers of Oakland under the direction of Miss McFadden that the authors feel confident that the topics as given here can be used with success. The provisional course of study given in the Appendix is based on the Oakland experience.

No attempt has been made to outline actual lessons, nor, except as suggested in an appendix, to point out the portions to be assigned to the different grades, but rather to give only a simple treatment of the subject for the teacher's use with some suggestion as to methods. The lessons must be considered as simply suggestive and by no means as comprehensive. The Appendix already referred to suggests the allotment to the different grades.

The fragmentary treatment of the subjects and the lack of system in their arrangement is designedly carried out to illustrate the method which experience with children points out as the best method in which to proceed. Even at the risk of being monotonous it is stated now, and will be more than once repeated, that,

with the earlier grades at least, the lessons must be fragmentary, on one simple phenomenon at a time, without care for its relations, and the lessons should not be successive on one topic, but interspersed with those on different topics. Convenience of treatment for the teacher's use in the following lessons has led to a continuous account in some cases. In the school work, this should be broken up as suggested. It hardly need be added that the book is designed as an aid to teachers and parents or others directing Nature Study work and not as a Nature Study reader.

The chapters under the titles: The Mosquito, Rearing Insects in the School Room, Some Water Insects, How to make a Collection of Insects, About Spiders, How Insects Breathe, and Birds were written by Professor Kellogg, and Professor Jenkins is responsible for the remainder of the book.

The drawings, with the few exceptions noted at the proper places, were drawn from nature by Mr. W. S. Atkinson and Miss Mary Wellman.

TABLE OF CONTENTS.

	Page
Introduction	1
Making a Beginning	5
The Dandelion	7
The Mosquito	12
Seeds	22
How to Make a Collection of Insects	30
Fungi	35
Rearing Insects in the Schoolroom	45
The Bee and the Lupine	51
Some Water Insects	60
Heat	79
Currents in Air and Water	87
Solution and Crystallization	95
About Spiders	103
Plants without Flowers	120
Flowering Plants	128
Parasitic Plants	135
Eggs of Frogs, Toads and Salamanders	137
Snails and Slugs	139
Earthworms	140
Covering of Animals	141
Marine Life	145
Ants' Nests	147
Gases	149
Magnetism	158
The Pendulum	161

TABLE OF CONTENTS—Continued.

	Page
Soap Bubbles	162
Metals and Minerals	166
The Moon	168
Pressure of Air and Liquids	171
How Insects Breathe	174
Birds	177

APPENDIX.

A Provisional Nature Study Course Arranged by Grades	183
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