

**THE CHILD AND NATURE, OR,  
GEOGRAPHY TEACHING WITH  
SAND MODELLING; AMERICAN  
PEDAGOGICAL SERIES, VOLUME  
I**

Published @ 2017 Trieste Publishing Pty Ltd

ISBN 9780649528073

The Child and Nature, or, Geography Teaching with Sand Modelling; American Pedagogical Series, Volume I by Alex E. Frye

Except for use in any review, the reproduction or utilisation of this work in whole or in part in any form by any electronic, mechanical or other means, now known or hereafter invented, including xerography, photocopying and recording, or in any information storage or retrieval system, is forbidden without the permission of the publisher, Trieste Publishing Pty Ltd, PO Box 1576 Collingwood, Victoria 3066 Australia.

All rights reserved.

Edited by Trieste Publishing Pty Ltd.  
Cover @ 2017

This book is sold subject to the condition that it shall not, by way of trade or otherwise, be lent, re-sold, hired out, or otherwise circulated without the publisher's prior consent in any form or binding or cover other than that in which it is published and without a similar condition including this condition being imposed on the subsequent purchaser.

[www.triestepublishing.com](http://www.triestepublishing.com)

**ALEX E. FRYE**

**THE CHILD AND NATURE, OR,  
GEOGRAPHY TEACHING WITH  
SAND MODELLING; AMERICAN  
PEDAGOGICAL  
SERIES, VOLUME I**





# THE CHILD AND NATURE

OR

*Geography Teaching with Sand Modelling*

BY

ALEX. E. FRYE

FORMERLY PRINCIPAL OF THE QUINCY SCHOOL, QUINCY, MASS., AND  
TRAINING TEACHER IN THE COOK COUNTY (ILL.)  
NORMAL SCHOOL

AMERICAN PEDAGOGICAL SERIES

VOLUME I.

PUBLISHED BY THE  
BAY STATE PUBLISHING COMPANY  
HYDE PARK, MASS.

1890

## PREFACE.

---

GEOGRAPHY spans a lifetime; but as a common-school study, it consists of a natural sequence of subjects beginning in the primary grades and unfolding along the entire course. Every branch in the advanced work springs from a root in the elementary, and it is this unity of growth which alone merits the name of science.

The series of relations which link man to the mother earth can be properly traced only by considering the land masses, not as mere areas, but as solid forms, possessing not only length and breadth, but also the very important dimension of *height*. By this term is meant, not the mere location of plateaus and mountain ranges, but the varying elevation of the whole land surface above the sea-level, resulting in continental slopes. Is it not the threefold extension, or rather the relation of elevation to area, which conditions the distribution of life? and is it not the dimension of height alone, which divides the surface into the great slopes that form the river-basins, determine rainfall and drainage, distribute soil as food for plants, and thus prepare the earth to become the home of man? Any system of

geography, therefore, which omits the study of the great slopes of the earth, lacks a very essential element.

The aim of this work is, —

1. To grade and apportion the subject-matter of natural geography to the successive stages of development of the child's mind, and rid the study of its myriads of worthless details.

2. To direct attention to the laws of mind-growth which condition methods of teaching, and to suggest devices for stimulating and directing mental energy.

3. To review the literature of geography, and indicate lines of study for teachers.

It is sincerely hoped that what is here given will prove suggestive of something far better, and that the seal of individuality will be stamped on every teacher's own work. Let no man's ideal be slavishly followed, lest it become an idol; but use only what seems best fitted to stimulate a growing ideal.

In preparing this subject, much important geographical information was obtained from the excellent works of Ritter, Guyot, Humboldt, Wallace, Johnston, Huxley, Maury, and others; and grateful acknowledgment is now made them.

This book is sent out with the hope that it may lighten the work of teachers, and make the school-days of childhood happier and more profitable.

ALEX. E. FRYE.

CAMBRIDGE, MASS., JAN. 1, 1888.



# CONTENTS.

---

## INTRODUCTION.

| CHAPTER I.                                     | PAGE |
|--|------|
| SHORT HISTORY OF GEOGRAPHY . . . . .           | 1    |
| CHAPTER II.                                    |      |
| VALUE OF STUDYING CONTINENTAL SLOPES . . . . . | 11   |

## PART I.

### *HOME GEOGRAPHY.*

| CHAPTER III.                                     | PAGE |
|--|------|
| SAND MODELLING IN ELEMENTARY GEOGRAPHY . . . . . | 26   |
| CHAPTER IV.                                      |      |
| PRIMARY LESSONS.—FIRST TWO YEARS . . . . .       | 34   |
| CHAPTER V.                                       |      |
| DISTRICT RELIEF . . . . .                        | 44   |
| FORMS OF LAND AND WATER . . . . .                | 48   |
| ILLUSTRATIVE LESSONS . . . . .                   | 52   |
| MAPPING THE DISTRICT . . . . .                   | 70   |

| CHAPTER VI.                                    |  | PAGE |
|--|--|------|
| FORCES . . . . .                               |  | 80   |
| WATER . . . . .                                |  | 82   |
| SOIL-MAKING . . . . .                          |  | 87   |
| AIR . . . . .                                  |  | 89   |
| FORM, SIZE, AND MOTIONS OF THE EARTH . . . . . |  | 94   |
| CLIMATE . . . . .                              |  | 102  |

## CHAPTER VII.

|                   |     |
|-------------------|-----|
| LIFE . . . . .    | 106 |
| PLANTS . . . . .  | 106 |
| ANIMALS . . . . . | 112 |

## CHAPTER VIII.

|                       |     |
|-----------------------|-----|
| MAN . . . . .         | 117 |
| OCCUPATIONS . . . . . | 117 |
| COMMERCE . . . . .    | 118 |
| RACES . . . . .       | 118 |
| RELIGIONS . . . . .   | 120 |
| GOVERNMENTS . . . . . | 121 |

## PART II.

## FOREIGN GEOGRAPHY.

## CHAPTER IX.

|  |     |
|--|-----|
| GLOBE OR CONTINENT.—WHICH FIRST? . . . . . | 123 |
|--|-----|

## CHAPTER X.

|   |     |
|---|-----|
| SAND MODELLING IN FOREIGN GEOGRAPHY . . . . . | 131 |
|---|-----|

## CHAPTER XI.

|                               |     |
|-------------------------------|-----|
| RELIEF OF THE GLOBE . . . . . | 137 |
| THE CONTINENTS . . . . .      | 140 |
| Modelling . . . . .           | 145 |
| Coast-Line Drawing . . . . .  | 151 |

CONTENTS.

vii

| CHAPTER XII.                   |  | PAGE |
|--------------------------------|--|------|
| FORCES . . . . .               |  | 165  |
| MOTIONS OF THE EARTH . . . . . |  | 165  |
| WINDS . . . . .                |  | 170  |
| OCEAN-CURRENTS . . . . .       |  | 174  |
| RAINFALL . . . . .             |  | 176  |
| CLIMATE . . . . .              |  | 178  |
| SOIL . . . . .                 |  | 181  |

| CHAPTER XIII.     |  |     |
|-------------------|--|-----|
| LIFE . . . . .    |  | 183 |
| PLANTS . . . . .  |  | 183 |
| ANIMALS . . . . . |  | 186 |

| CHAPTER XIV.          |  |     |
|-----------------------|--|-----|
| MAN . . . . .         |  | 192 |
| RACES . . . . .       |  | 193 |
| RELIGIONS . . . . .   |  | 194 |
| GOVERNMENTS . . . . . |  | 195 |
| OCCUPATIONS . . . . . |  | 196 |
| COMMERCE . . . . .    |  | 198 |
| CONCLUSION . . . . .  |  | 199 |

| APPENDIX.                                    |  |     |
|--|--|-----|
| GRADED COURSE OF STUDY . . . . .             |  | 201 |
| TEACHERS' LIBRARY OF GEOGRAPHY . . . . .     |  | 206 |
| SUPPLEMENTARY READERS FOR CHILDREN . . . . . |  | 209 |
| LIBRARY OF TRAVEL . . . . .                  |  | 211 |