

**A MANUAL FOR TEACHERS
TO ACCOMPANY THE
SOUTHWORTH-STONE
ARITHMETICS**

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A Manual for Teachers to Accompany the Southworth-Stone Arithmetics by Gordon A. Southworth & John C. Stone

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TO ACCOMPANY

THE SOUTHWORTH-STONE ARITHMETICS

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THE
SOUTHWORTH-STONE ARITHMETIC

THREE-VOLUME EDITION

- Book I. Primary
- Book II. Intermediate
- Book III. Advanced

TWO-VOLUME EDITION

- Book I. For Lower Grades
- Book II. For Higher Grades

WITH OR WITHOUT ANSWERS

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PREFACE

THIS "Manual for Teachers" has been prepared by the authors of "The Southworth-Stone Arithmetics" as an aid to those teachers who use the books.

It contains an eight-year "Course of Arithmetic Study" in outline, preceded by a few pages of General Suggestions on the teaching of arithmetic. In the arrangement of this "Course" the order of subjects as given in the Arithmetics has been followed. In this order as well as in the distribution of work among the grades it is in harmony with the Courses of Study as planned by experts for cities and towns that lead in the character of their schools. The suggestions that accompany it are based both on pedagogical principles and successful experience.

The "Manual" also gives helpful suggestions on the use of the books of the Southworth-Stone Series by way of methods and model solutions. The solutions of many of the more difficult problems are presented, and for the convenience of teachers the answers to all exercises in the books have been added.

The authors invite correspondence on any points that may arise in the use of the books, and will be glad to furnish further suggestion and assistance if in their power.



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A COURSE OF ARITHMETIC STUDY

FOR ELEMENTARY SCHOOLS

To accompany "The Southworth-Stone Arithmetics"

GENERAL SUGGESTIONS TO TEACHERS

1. This Course of Study presupposes teachers who are fully equipped for their work, who understand the true object of education, the fundamental principles of teaching, and the best methods, and who realize the fact that they alone can vitalize and make effective the directions given in the following pages. No harm, however, can come from a restatement of certain *underlying principles* that must constantly be borne in mind.

(a) The ability and needs of the learner must control the matter and method of all teaching.

(b) The powers of the mind should be exercised in a natural order. Observation precedes reasoning; the concrete comes before the abstract; facts before principles or definitions; processes before rules; from the particular we proceed to the general; from the simple to the complex; from the known to the unknown.

(c) The mind acquires knowledge only by its own activity. The degree in which this activity is awakened is a measure of the teacher's success.

(d) Primary ideas in every branch of knowledge must be presented objectively in all grades.

(e) Mental power is a more valuable result of teaching than mere knowledge. Hence the process of acquiring becomes