EASY LESSONS IN MENTAL ARITHMETIC: UPON THE INDUCTIVE METHOD, ADAPTED TO THE BEST MODE OF INSTRUCTION IN PRIMARY SCHOOLS

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Easy Lessons in Mental Arithmetic: Upon the Inductive Method, Adapted to the Best Mode of Instruction in Primary Schools by James S. Eaton

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JAMES S. EATON

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EASY LESSONS

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MENTAL ARITHMETIC,

UPON THE

INDUCTIVE METHOD;

ADAPTED TO THE

BEST MODE OF INSTRUCTION IN PRIMARY SCHOOLS.

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JAMES S. EATON, M.A.

INSTRUCTOR IN PHILLIPS AGADENT, ANDOVER, AND ATTROC OF A TREATISM ON WALLESS ARTUMETIC.



BOSTON: THOMPSON, BROWN, & CO. 1875. K311372

BOSTON, Jan. 10, 1865.

By a vote of the School Committee, Sept. 13, 1864, Eston's Primary Arithmetic became the only Arithmetic to be used in the Primary Schools in this city.

Attest;

BARNARD CAPEN, Secretary.

Entered according to Act of Congress, in the year 1800, by JAMES S. EATON,

In the Clerk's Office of the District Court of the District of Massachusetts,



PRINTED ST GRO. C. RAND & AVERT.

PREFACE.

The author has prepared this little book both in compliance with the solicitation of Teachers and others interested in his larger work, and with the desire to present the first principles of the science in a form to interest the youngest members of our Primary Schools.

Definitions and extended explanations, being generally unintelligible, and therefore uninteresting and unprofitable, to young children, have been carefully avoided, and the simplest operations in numbers have been presented in the most familiar manner, separately or in combination, as seemed most likely to interest and benefit the pupil.

No effort has been spared to make the book simple in language, varied in expression, progressive in style, and attractive in illustration; and thus, it is hoped, the little learner will form accurate habits, and unconsciously become familiar with such simple calculations as shall prepare him to enter with pleasure upon the more vigorous thinking required in the Author's Intellactual Artherno.

In the preparation of these Lessons, the author has received valuable aid from Teachers, eminent in their profession, and familiar with the best modes of instruction in Primary Schools.

PHILLIPS ACADEMY, ANDOVER, June 9, 1960.

SUGGESTIONS TO TEACHERS.

A knowledge of numerical calculation is not the only, perhaps not the most important, object to be attained in the study of a work like this. The child is to be interested; his attention secured; the power of abstraction created; his mind disciplined, in preparation for other and higher pursuits.

The benefits derived in any study, preëminently in an elementary study, depend, in great measure, upon the methods employed in teaching it. These pages are designed only as specimen lessons. A large share of the instruction in Primary Arithmetic should be oral; and certainly no Teacher in this department would ever think of following, literally, the lessons of any book, however perfect the book may be.

The skillful Teacher will vary the manner of presenting an idea to meet the ever-varying wants of the day, the lesson and the pupil. The golden mean between too little and too much explanation should be selected. Most teachers, especially the inexperienced, pass over first principles too rapidly. The groundwork must be carefully and thoroughly prepared, or real progress is impossible.

Let the pupil repeat, and repeat again, and vary the expression, until he is perfect master of the thought. Incorporate in his very being the idea that 3 and 4 is the same as 4 and 3; that 5 times 6 is the same as 6 times 5; that 8 and 8 is identical with twice 8, etc., etc.; and his subsequent progress will be sure, and rapid, and pleasant.

PRIMARY ARITHMETIC.

LESSON I.

JOHN has one apple in his right hand, and

one apple in his left hand; how many apples has he in both hands?

One apple and one apple are

how many apples?

How many hands has John?

One hand and one hand are how many hands?

Has John two feet? Count

them. One, two.

How many, eyes has John?

One eye and one eye are how

many eyes?

John had two apples in his left hand, but he has taken one of them in his right hand; how many has he in his left hand now?

One apple taken from two apples leaves how

many apples?

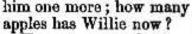
Point to John's right hand. Point to his left

hand.

One and one are how many? One from two leaves how many?

LESSON II.

WILLIE had two apples, and Mary has given



How many apples has Willie in his right hand?

How many has he in his left hand? How many in both hands?

Two apples and one apple are how many apples?

One apple and two apples are how many apples?

How many more apples has Willie in his right

hand than in his left?

How many less in his left hand than in his right?

Two and one more are how many? One and two more are how many?

Which is the greater number, two and one more, or one and two more?

Answer. - Neither; they are the same.

Two are how many more than one?

One is how many less than two?

Both of Mary's eyes, and one of Willie's, are in sight; how many eyes can you see in the picture?

Which of Willie's eyes is in sight?

Willie has two feet, and Mary has two feet; bow many feet have Willie and Mary together? How many apples are there in Mary's basket?

LESSON III.

How many can you count? You may count the blocks in each of these rows.

One, two,
One, two, three,
One, two, three, etc.,
One Two
Three
One, two, three, etc.,
One Three
One, two, three
One, t

Which is the left side of this page? Which the right?

You may count the blocks in each of these rows, beginning at the left side of the page, and counting from the bottom to the top.

One block and two blocks are how many blocks?