THE NORTH AMERICAN ARITHMETIC: PART FIRST, FOR YOUNG LEARNERS

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The North American Arithmetic: part first, for young learners by Frederick Emerson

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FREDERICK EMERSON

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Emerson's First Part.

THE

NORTH AMERICAN

ARITHMETIC.

PART FIRST,

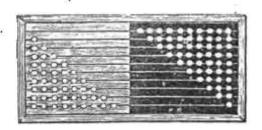
FOR

YOUNG LEARNERS.

BY FREDERICK EMERSON,

LATE PRINCIPAL IN THE DEPARTMENT OF ARITHMETIC,

BOYLSTON SCHOOL, BOSTON.



BOSTON: KIDDER & CHEEVER.

1852

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PREFACE!

In a systematic course of general education, Arithmetic claims a place among the primary objects. Its elementary exercises, when rationally conducted, are adapted to the capacities of children at a very early age. Its influence on the character of children, in developing the reasoning faculties, and habituating the mind to investigation, is highly conducive to progress in every other branch of knowledge. Notwithstanding the obvious truth of this remark, the practice of postponing arithmetic till children arrive at the age of nine or ten years, still prevails in many of our schools, and calls for the attention of those whose influence may correct the error.

The purpose of this manual is, to facilitate the instruction of the younger classes. It contains the first part of a Course of Exercises in Arithmetic, which is published in three books severally denominated, PART FIRST, PART SECOND, and PART THIRD. The method employed for illustrating the subject, it

will be seen, is original and peculiar.

PART FIRST is confined to the simple elements, and it may be advantageously used as an introduction to the subsequent study of arithmetic from any larger book now in common use. Learn ers will, however, find the steps of progress to be most gradual, easy, and certain, in passing from this book immediately into Part Second.

The lessons contained in Part First are all to be performed orally; the slate and pencil not being required. In the title-page will be seen a drawing of an improved structure of the Abacus. It is a convenient apparatus for illustrating the combinations of numbers; aithough it need not be used in teaching from this book: its use is superseded by cuts and unit marks.

F. E.

Boston, August 1, 1838.

This book is adopted in the Public Schools of the cities of Boston, Salem, Portland, Providence, New York, Philadelphia, and Louisville, by orders of the respective Boards of School Committee and Trustees.

ARITHMETIC.

NUMERATION.

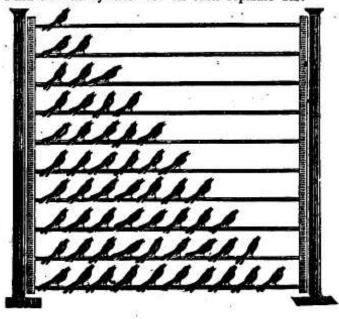
Note to Teachers. The learners are to have their books open before them, while performing the lessons in Numeration. Do not omit any lesson.

LESSON FIRST. I.

Here is the picture of some apples: - count them.



See this flock of black-birds: they have lighted upon the bars of a gate, and are all singing together. Find how many there are on each separate bar.



NUMERATION.

LESSON SECOND. II.

Note to Teachers. In this lesson, the teacher may read the questions, and the children give the answers; or, if the children can read with flucincy, they may read the questions to each other, by turns; each one reading a question to be answered by the scholar next below him, and thus proceeding through the class. This lesson should pass through the class several times at one recitation, until each scholar has had several turns in answering. The chief purpose of the lesson is to show, that numbers are formed, successively, by adding one unit to the next preceding number.

How many stars are one star and one star?

How many stars are two stars and one star?

How many stars are three stars and one star? ※ ※ ※

How many stars are six stars and one star? 茶 茶 茶 茶 茶 茶

How many stars are seven stars and one star?

How many stars are eight stars and one star? 茶 茶 茶 茶 茶 茶 茶 茶 茶

How many stars are nine stars and one star? 茶 茶 茶 茶 茶 茶 茶 茶 茶 茶

LESSON THIRD. III.

Note to Teachers. The design of the preceding lessons has been, to teach the names, and the comparative magnitude of numbers, from one to teat. The teacher should now inform the learners, that numbers are represented by FIGURES. He may direct them, to obtain the names of the figures by counting the unit marks, (from left to right,) which stand against the figures severally, in the following table. As this exercise will tend to fix a mental association of each figure with the number of units, which it represents, the lesson should not be omitted, even by children, who are already able to read figures.

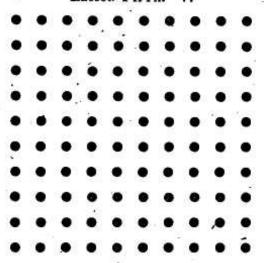
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LESSON FOURTH. IV.

Note to Teachers. Make two exercises of this lesson. First, let the rhildren read the words in the columns. Then, let the words be covered with a stip of paper, and the reading be performed on the figures. While reading the figures, lead the children to observe the analogies, two—twenty; three—thirty; four—forty; five—fifty; &c.

1	One,		34	thirty-four,	67	sixty-seven,
2	two,			thirty-five,	: 68	sixty-eight,
	three,		36		69	
	four,		37	thirty-seven,	70	seventy.
	five,	. 3	38	thirty-eight,	71	seventy-one,
	six,		39	thirty-nine,	72	seventy-two,
7	seven,		40	forty,	73	seventy-three
. 8	eight,		41	forty-one,	74	seventy-four,
9	nine,		42	forty-two,	75	seventy-five,
10	ten,	0	43	forty-three,	76	seventy-six,
11	eleven,		44	forty-four,	77	seventy-seven,
G 22	twelve,		45	forty-five,		seventy-eight,
	thirteen,		46	forty-six,	79	seventy-nine,
14	fourteen,		47	forty-seven,	80	eighty,
15	fifteen,		48	forty-eight,	81	eighty-one,
16			49	forty-nine,	82	eighty-two,
17	seventeen,		50	fifty,	83	eighty-three,
18	eighteen,		51	fifty-one,	84	eighty-four,
19	nincteen,	7	52	fifty-two,	85	eighty-five,
20	twenty,		53	fifty-three,	. 86	eighty-six,
21	twenty-one,		54	fifty-four,	87	eighty-seven,
22	twenty-two,		55	fifty-five,	88	eighty-eight,
23	twenty-three,		56	fifty-six,	89	
24	twenty-four,		57	fifty-seven,	90	ninety,
25	twenty-five,		58	fifty-eight,	91	ninety-one,
26	twenty-six,		59	fifty-nine,	92	ninety-two,
27	twenty-seven,		60	sixty,	93	ninety-three,
28	twenty-eight,		61	sixty-one,	94	ninety-four,
29	twenty-nine,		62	sixty-two,	95	ninety-five,
30	thirty,		63	sixty-three,	96	ninety-six,
31	Hirty-one,	-7	64	sixty-four,	97	ninety-seven,
32	thirty-two,		65	sixty-five,	98	ninety-eight,
33	thirty-three,		66	sixty-six,	99	ninety-nine,
		\mathcal{L}			100	one hundred.

LESSON FIFTH. V.



How many balls are there in the upper line, counted across the page from left to right? How many in the first and second lines, counted together? How many in three lines? How many in four lines? How many in six lines? How many in seven lines? How many in eight lines? How many in nine lines? How many in ten lines?

LESSON SIXTH. VI.

Tell the numbers expressed by these figures.

		i ali na mana any an					
45	14	70	38	85	22	11	92
78	80	49	18	20	55	44	66
67	36	82	51	53	88	25	27
13	69	43	84	41	23	91	60
46	15	76	39	74	56	77	93
79	48	17	72	87	24	26	32
35	81	50	19	42	57	59	65
68	37	83	52	75	90	83	94