

**THE FIRST STEPS IN NUMBER,
TEACHER'S EDITION, PART I.
- FIRST YEAR: NUMBERS
ONE TO NINE INCLUSIVE**

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The First Steps in Number, Teacher's Edition, Part I. - First Year: Numbers One to Nine
Inclusive by G. A. Wentworth & E. M. Reed

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THE
FIRST STEPS IN NUMBER.

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FIRST STEPS IN NUMBER.

CHAPTER I.

INTRODUCTION.

FOR a successful teaching of Number the teacher needs a great variety of objects. Blocks, splints, sticks, buttons, paper patterns, peas, beans, corn, spools, counters, shells, pebbles, horse-chestnuts, acorns, little tin plates, cups and saucers, tin money, are inexpensive and convenient to handle. For measurements, the teacher must have inch measures, foot rules, yard measures, a set of tin measures, a set of wooden or paste-board measures, a set of weights, and a pair of scales.

The teaching of Number as far as ten does not include the teaching of figures or other signs used in Arithmetic. No blackboard work is required of the child until after he has learned the numbers below ten. There is no difficulty in learning the figures along with the numbers; the difficulty comes in learning the numbers along with the figures. So it seems best to ignore the sign in favor of the thing.

It is more convenient in these exercises to have the children stand about a table on which are the objects to be handled, and many of the directions to the class are given with this arrangement in view. Let the children illustrate each story with objects, until it is evident that the relation between the numbers is as clearly seen without the objects as with them. Whenever a mental picture is formed, then the material is a hindrance to the teaching. Objects are a

means to an end, not the end. When an idea has been abstracted from the concrete, objects no longer have an office to perform, and should be put aside.

Ascertain the child's knowledge of Number before attempting any teaching of Number. Do this by skilful examination after the child feels at home in the school-room.

"Show me so many blocks (two blocks); so many beans; so many pebbles; so many spools; so many pencils."

"How many blocks have I in my hand? Come, whisper to me, if you know."

After each has whispered the number, ask the class:

"How many spools did you show me? how many beans? how many blocks?"

Let the class answer in concert, "Two," each time.

"Show me two buttons; two boys; two girls; two chairs."

"Put two blocks on the table in front of you; put two buttons on the table; take one button from the table and put it under the table; put one block under the table."

If *two* be known, try *three*, and so on until a number is reached which is not known.

Second step in the examination:

Require the child to show some number with which he is familiar. For example, *two*.

"Take one of your two blocks away. How many blocks have you left?"

"If I have two horses and sell one horse, how many horses shall I then have?"

"If I have two pencils and lose one pencil, how many pencils have I left?"

"You may put one block on the table in front of you. You may put another block with it. How many blocks have you now shown me?"

"One block and one block are how many blocks?"

"One horse and one horse are how many horses?"

"If I have one pencil and buy another, how many pencils shall I have?"

"If John has one cent and I give him another cent, how many cents will he have?"

"If Susie has one apron and mamma makes her another, how many aprons will Susie have?"

"Show me two buttons. Take the two buttons away. How many buttons remain?"

"If there are two cows in the barn and two cows are turned out in the yard, how many cows remain in the barn?"

"Show me two boxes. Put one block in each box. How many blocks does it take?"

"If these two little girls have each a doll, how many dolls have they together?"

"If these two little boys have each a sled, how many sleds have they together?"

"If there are two nests, and an egg in each nest, how many eggs are there?"

"If there are two stores, and a wagon at each store, how many wagons are there?"

"Show me two blocks. Put one of these two blocks in this box. Put another of your blocks in this box. How many boxes does it take?"

"If you have two hens, and each sits in a nest by herself, how many nests will it take?"

"If you have two spoons, and put each into a cup by itself, how many cups will it take?"

"If you have two cents, and give one each Sunday, how many Sundays can you give before the two cents will be given away?"

"If you have two pencils, and put each on a slate by itself, on how many slates will you put them?"

This outline for review is merely suggested as being searching in its nature. The aim should be solely to bring to light all the child's knowledge of Number, that the teacher may waste no time upon teaching him what he already knows. Do not hurry the examination. See that each child does for himself what you require, and does not imitate you or his neighbor in his work. Let each one answer for himself. Distinguish between the child's failure to understand your language and his inability to do what you require of him.

When the examination is complete, begin the teaching, and take the child where he is. As far as the experience of most primary teachers goes, few children know beyond *two* when they enter school for the first time. In most instances *three* will be the starting-point in teaching.

The ability to count up to a number does not constitute a knowledge of the number; so this must not be taken as the test of the child's knowledge. Do not permit counting by ones throughout the work in Arithmetic.

In the teaching of every number the order to be observed is as follows:

- I. The perception of the number.
- II. Analysis of the number.
- III. Drill upon facts discovered by analysis.
- IV. Comparison with smaller numbers.

CHAPTER II.

THE NUMBER THREE.

§ 1. THREE AS A WHOLE.

SHOW me two blocks. Put one more block with them.

Show me just as many spools; just as many pebbles; as many buttons; as many pencils; as many marks on the board; as many fingers.

You have shown me *three* fingers.

Show me three marks you have made on the board; three spools; three pencils; three pebbles; three shells; three little girls; three boys; three blocks.

How many blocks have you shown me? How many spools? How many splints? How many buttons?

I have a block, a spool, and a nut. How many things?

I have a box, a pen, and a stick. How many things?

Show me a button, a nut, and a shell. How many things have you shown me?

Show me three other things. Go to your desk and bring me three things.

Who thinks he has seen three men on the street? three boys playing ball? three houses in a row? three horses drawing a load? three street cars in a row? three people in a carriage? three things in the shop window?

Name three things you saw on your way to school; three things you had for breakfast; three things you can do; three things you can wear; three things you own; three persons you know.