Tell me a mean number between three and five; between four and eight, five and seven, two and eight, eight and ten, seven and nine, &c,, respectively.

ILLUSTRATIONS .- I had eight apples, and my brother six; which of us had the greater number

That child is five years old, and the one next him is seven; which is the elder?

If one child sleep eight hours, and another ten hours, which of them sleeps the longer? The teacher should ask a variety of questions such as these. They may be invented as they are needed.

Addition and Subtraction.

Object .- To teach the addition and subtraction of numbers under ten.

Plan.-This is exemplified in detail in the exercises which follow.

It is clear that the simple enumeration of a series of numbers gradually increasing by one, call the process by what name we please, is in fact an exercise in the addition of ONE, and that the simple enumeration of a similar series in descending order, is in fact the subtraction of ONE. Hitherto, however, the gradual in-crease or decrease of numbers has been treated as a matter of sencrease or decrease of numbers has been treated as a matter of sen-sible perception, rather than as an appeal to the reasoning faculty of the mind. While, however, it is almost impossible, and perhaps equally undesirable, to separate these two processes, it is important that the child should now be taught to use those numbers of which he has gained a clear perception, in a manner more allied to an act of reasoning. Neither will it do for him to enumerate by ones all his life; he must learn to bound over the minute intervals which separate one number from author and still to be sure of his which separate one number from another, and still to be sure of his ground. He must learn to be as ready in enumerating, ascending and descending by nine, as he is in enumerating by one. This facility is to be attained by a graduated series of exercises, with objects, which shall make each step sure before a further step is ventured upon.

## ADDITION.

## 1. The Addition of the Number One.

The children are supposed to have become familiar with the increase of numbers from one to ten, as carried out practically by the exhibition of objects. Lines should now be drawn on the slate in the order indicated by the following table, the children observing and describing each line as it is constructed :

> | and | are? | | and | are? | | | and | are? | | | | and | are?

## | | | | | | | | and | are?

The teacher, drawing two lines, says: "One line and one line are?" The children take up her works and one line are ?" The children take up her words, and complete the sen-tence: "One line and one line are two lines." Again: "Two and one are ?" "Three," and so on, to "Nine and one are ten." Their answers may be written in strokes as they are given, each opposite its component numbers.

The teacher should now exercise the children in the addition of the number one to other numbers without the use of objects or strokes; bringing these forward, however, when necessary to prove the correctness of calculations, or to detect errors.

The subject may now be illustrated by some miscellaneous ques-tions, such as the mind of an apt teacher will at once be able to opose. A few examples are given : James has one orange. If I give him one more, how many will propose.

he then have?

Jane has eight walnuts. If her father give her one more, how many will she have?

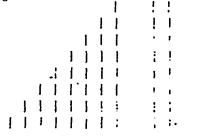
A boy had two rabbits given to him. His father bought him one more; how many had he?

A baby had nine teeth. One day, another came; how many teeth had the baby in all?

2. The Addition of Two.

The mind of the child, having acquired the power of adding over once, will now be prepared to add it twice; for into this the addition of two resolves itself.

The teacher should arrange objects, or draw lines on the slate, in the following order :



The children being required to repeat together, first with the use of the lines, and then without :

> "" One line and two lines are three lines; Two lines and two lines are four lines

Three lines and two lines are five lines,"

to

" Eight lines and two lines are ten lines."

The teacher should then question the children individually upon the lesson without any reference to order of numbers, avoiding any result exceeding the number ten.

Here, also, a few practical questions should be put to the class, as in the addition of one: Three boys were going to school. Two others joined them; how many boys were there then?

Two little girls went to buy bread. One of them carried home four loaves, the other two loaves; how many loaves had they in all ? In a working man's cottage there are three rooms on the ground

floor, and two rooms up stairs ; how many rooms does the cottage contain ?

The apt teacher will invont many other simple illustrative questions of this kind, until the class has had sufficient practice.

Addition of Three.

This is to be taught on the same plan. The teacher arranges objects, or draws lines on the blackboard, in the following order : 1 1 1

						1	I.		1	
					1	1	1	1	1	
				ł	1	1	L	1	1	
			1	1	1	T	L	1	T	
		ł	I	١	١	١	L	١	:	
	1	1	1	I	1	1	1	1	I	
1	1	1	1	1	I	1	I	ł	1	

The children then say together, as each line is pointed to :

" One line and three lines are four lines;

I wo lines and three lines are five lines;

Three lines and three lines are six lines,"

and so on to ten lines

The children should then, as before, recapitulate the lesson, without reference to the objects or lines on the board. In doing this, the word *lines*, &c., may be omitted, saying only, "One and three are four; two and three are five; three and three are six," &c.; only do not suggest the answer to the children, nor lead on

After this repetition, as in every other lesson of this kind, the teacher should energetically question the children individually upon it, introducing also questions bearing upon the instruction given in preceding lessons on the same subject. The necessity of this cannot be to strongly impressed on the number of teachers. this cannot be too strongly impressed on the minds of teachers. A few practical illustrations are given by way of example. A boy has two cents. His uncle gives him three cents how

many has he then ?

There are five apples in a basket; how many will there be if I put in three apples more?

I gave a boy three cents yesterday, and I have given him three

cents to-day; how many cents have I given him in all? A boy fond of playing at marbles, has a hole in the pocket in which he keeps them. He lost seven marbles last night and three this morning; how many has he lost?

Addition of Four, Five, Six, Seven, Eight and Nine.

These operations need no further illustration ; the plan adopted the same with the previous numbers. The teacher must careis the same with the previous numbers. the frequent repetition of previous instruction. It must be con-stantly borne n mind, that as the children are supposed to know little or noth ag, as yet, of any number more than ten, all operations are to be so adapted as to involve no higher number.

## ILLUSTRATION OF THE FOREGOING EXERCISES.

The scope afforded by the preceding lessons is so narrow, that it is found difficult in actual practice to extend the instruction upon them to that point which nevertheless must be reached, if they are to be fully comprehended and indelibly fixed on the mind. The following exercises have been devised in order to meet this difficulty. They will be found useful, as presenting the numbers

to the observation of the children in new aspects, and so exercising their faculties upon them in a manner less formal and methodical than the lessons already given, whilst at the same time the operation of addition is adhered to.

1. TO FIND WHAT NUMBER MUST DE ADDED TO A GIVEN NUMBER IN ORDER TO FRODUCE A THIRD NUMBER.

In some of the above lessons on this Step, two numbers have been given, and the children required to find a third number which should be the sum of both. In the following exercises two numbers are given, the one being always larger than the other, and the children are required to find