PRESENTING THE

Stamp Game

Montessori Maths Material

MONTESSORI AUSTRALIA

The Stamp Game is a Montessori maths material used by an individual child to practice the operations of addition, subtraction, multiplication and division.

It is presented to the child after they have been introduced to the decimal system using the Golden Bead Material.

It is suitable for ages 4½ to 7 years of age.

Supplies Needed

STAMP GAME

Either a purchased Stamp Game or follow the instructions for making your own Stamp Game.

PENCIL

A normal pencil is fine (some opt for pencils in red, green and blue to match the stamps).

RULERS

Rulers or printed strips for line markers.

NUMBER CARDS & OPERATIONS

For the younger children. Printed Number Cards and Operations (= - x ÷). Included in the Stamp Game templates. Blank paper to write answers.

ACTIVITIES PAPER & WRITING PAPER

Progression for older children. Printed Stamp Game writing paper & activities paper. Included in the Stamp Game templates.

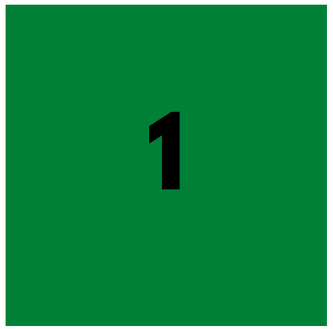
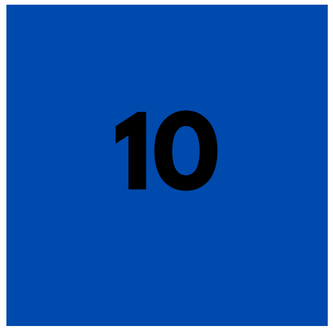
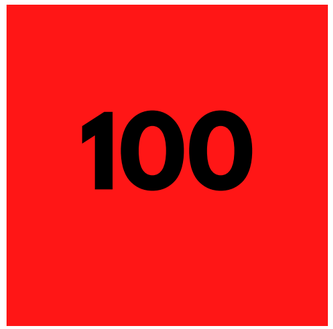
INTRODUCTION TO THE STAMP GAME

THIS DOCUMENT PROVIDES YOU WITH INTRODUCTORY CONCEPTS & PRESENTATIONS OF THE STAMP GAME

AFTER THIS, PLEASE REFER TO THE VIDEO SERIES

STAMP GAME PIECES

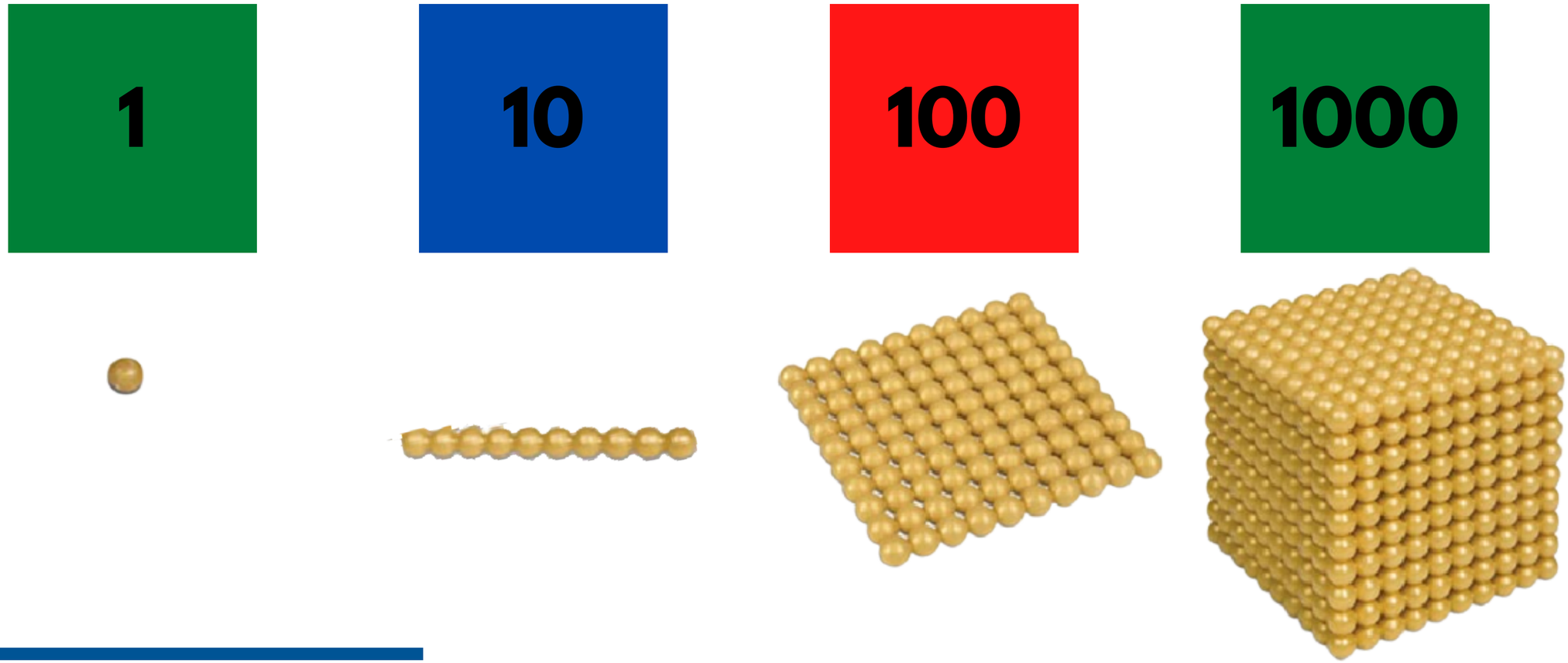
The Stamp Game contains coloured, numbered 'stamps' or tiles:

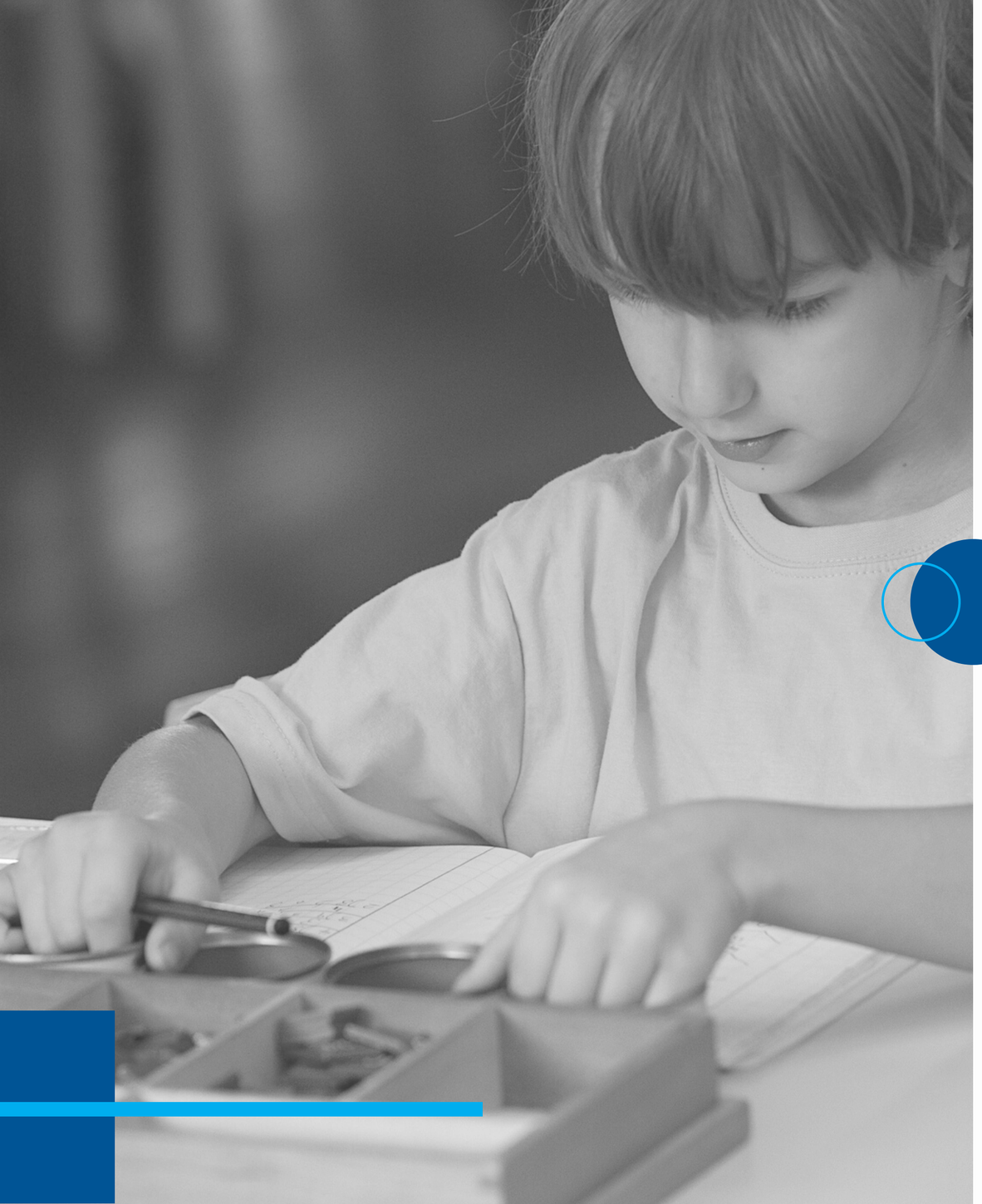
Units	Tens	Hundreds	Thousands
			

In a Montessori classroom, the Stamp Game would normally be introduced by linking the Golden Bead Material so the child can make the connection, showing that:

1 cube of 1,000	=	1,000 stamp
1 square of 100	=	100 stamp
1 bar of 10	=	10 stamp
1 bead of 1	=	1 stamp

If using the Stamp Game without access to the Golden Bead Material, this can be done using pictures:





YOU ARE NOW READY TO PRESENT THE STAMP GAME

INVITE THE CHILD TO COME AND WORK WITH YOU

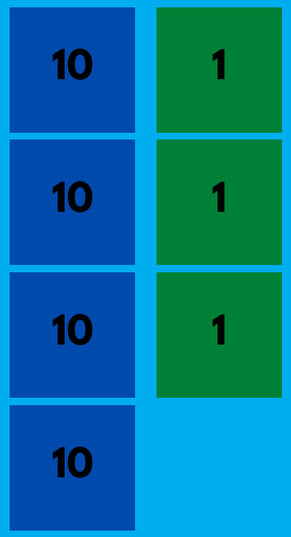
MAKING NUMBERS WITHOUT WRITING

Using the three period lesson technique

Ask the child to hand you a stamp for a number in a single category

"show me a one"
"show me a ten"
"show me a hundred"
"show me a thousand"

Show the child how to form a number with two or more categories, placing them on the table separating the categories, with the units on the right, and how to read the number.
Eg. the number shown here has 4 tens and 3 units = 43.



Ask the child to make a number and read it.

Once the child has demonstrated sufficient competence, ask them to make a number with a missing category and read it, thus introducing a zero
Eg 101

MAKING & WRITING NUMBERS

Take out the Stamp Game writing paper and pencil.

Ask the child to make the number 2345 with the stamps.

Starting from the highest category, ask the child:
“how many thousands are there?” (two)

Write the 2 in the box on the left hand side of the paper.

Ask "how many hundreds are there? (three)

Write the 3 in the next box to the right of the 2.

Continue asking and writing the numbers:

"how many tens are there? (four)

"how many units are there?" (five)

2	3	4	5

Repeat as long as the child needs it

MAKING & WRITING NUMBERS IN A COLUMN

Ask the child to make two numbers using the stamps:
2345 and 325

Place the stamps of the second number, 325, below the first so that all the categories fall in columns.

Write the first number as shown.

Read the second number, 325.

Starting from the highest category ask the child "how many hundreds are there?" (three)

Write the 3 hundreds under the hundreds of the first number.

Proceed as before for the second number.

Repeat as long as the child needs it, later introducing numbers with zeros

OPERATIONS WITH THE STAMP GAME

YOU ARE NOW READY TO LEARN THE PRESENTATIONS FOR ADDITION, SUBTRACTION, MULTIPLICATION & DIVISION

CLICK ON THE LINKS TO THE VIDEO LESSONS:

ADDITION

SUBTRACTION

MULTIPLICATION

DIVISION

PROGRESSION

The Stamp Game is used to assist children aged between 4.5 and 7 years with mathematics.

Younger children would start using the number cards and operators to make the calculations. They can write the answers on a blank piece of paper as shown in the video series.

As they progress, the child can then move to the more abstract presentation of the calculations, generated activities printed for them to work on.

After this, the child can create their own calculations on the writing paper.

UNDERSTANDING STATIC VS DYNAMIC OPERATIONS

Before progressing to the operations, it is important to know the difference between static and dynamic arithmetic. Using addition as an example, a **static** addition is where there is no ‘carrying over’ of a number, for example:

  68
+21

...where the 8 and 1 would be 9, and the 6 and 2 be 8.

We then introduce the child to **dynamic** addition, where there is a need to ‘carry over’ to the next place value, for example:

  69
+22

...where the 9 and 2 would be 11, requiring ‘carrying over’ the 1 to the tens.

The video lessons don't show the specifics for dynamic equations, so we have included details here.

INTRODUCING DYNAMIC OPERATIONS

After the child has worked with static operations, they can be introduced to dynamic operations.

The function to 'carry over' to the next place value is demonstrated by exchanging 10 units with 1 from the higher category.

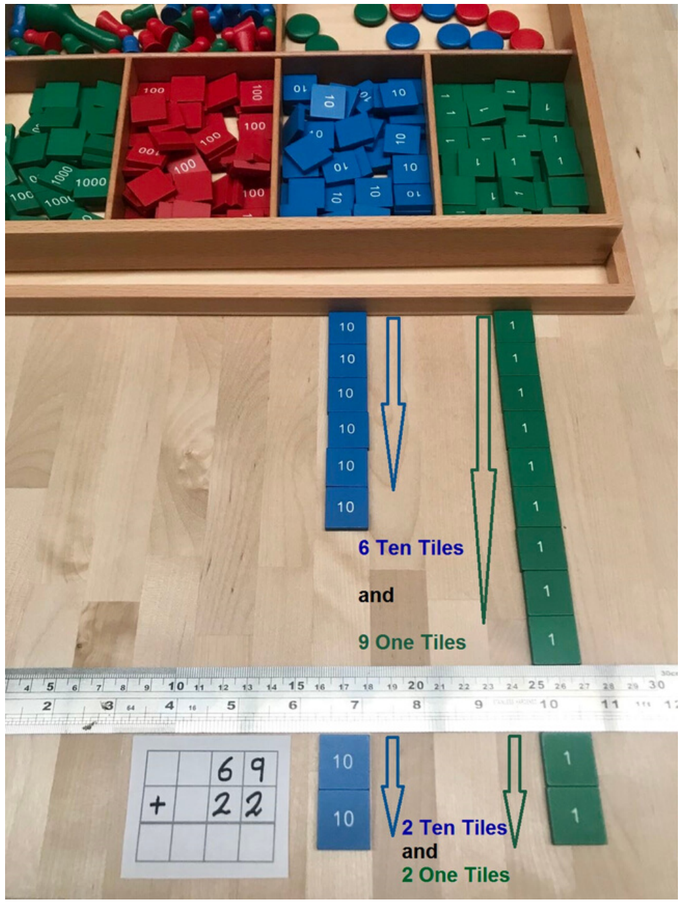
The exchanges are:
10 units = 1 ten
10 tens = 1 hundred
10 hundreds = 1 thousand
10 thousand = 1 giant skittle (representing ten thousand)

As an example, adding 69 + 22 we add the 9 units and the 2 units together and we end up with 11 units. We therefore need to exchange 10 of the single units by placing them back in the box and getting 1 tens tile from the box and placing it with the other tens. We then continue as normal with the rest of the equation, ending up with 9 ten tiles and 1 unit tile, giving the answer 91.

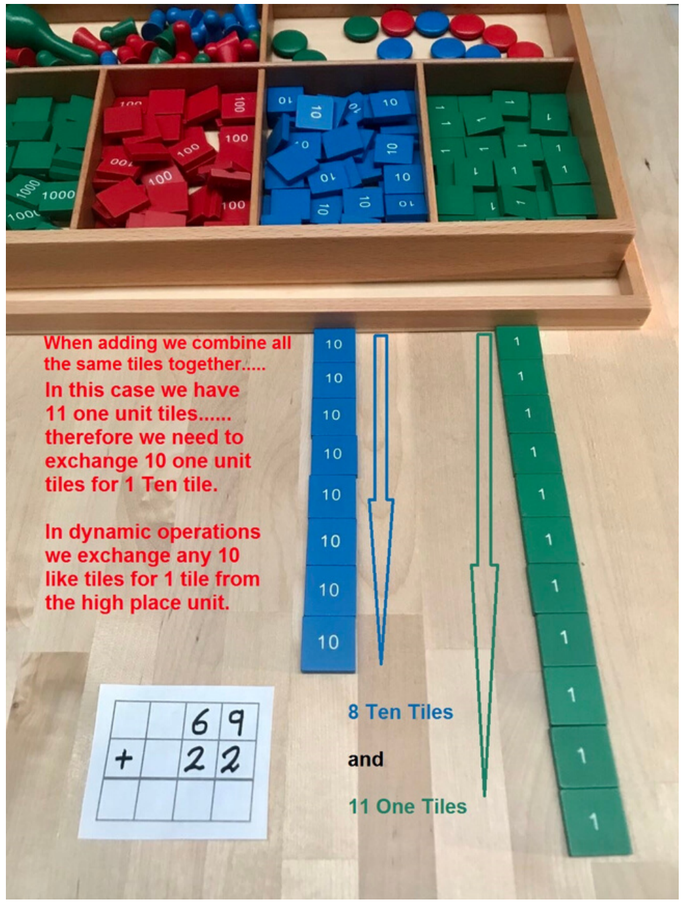
The images on the following pages show this graphically.

DYNAMIC ADDITION

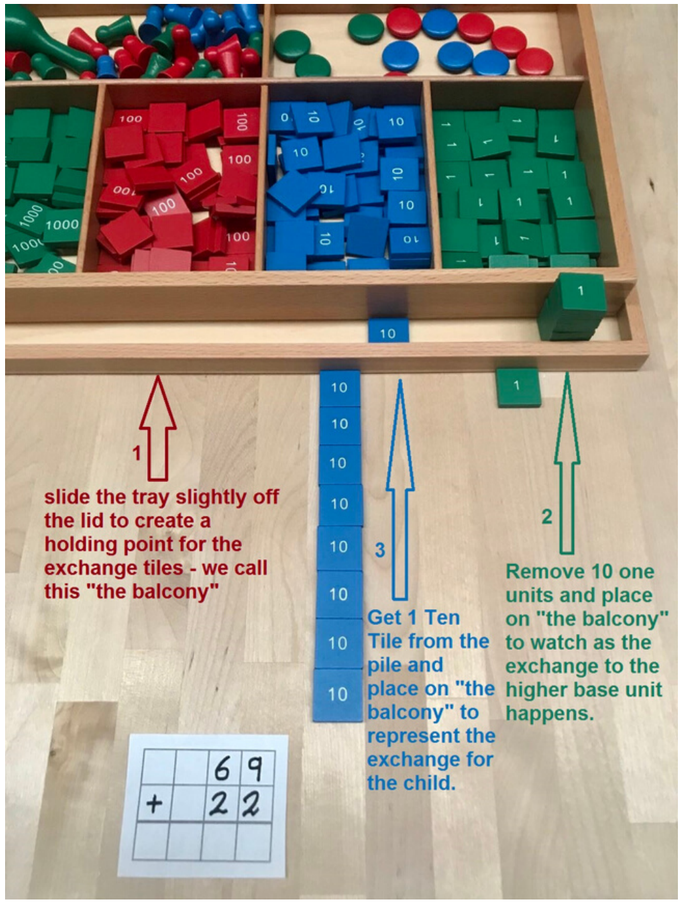
Step 1:



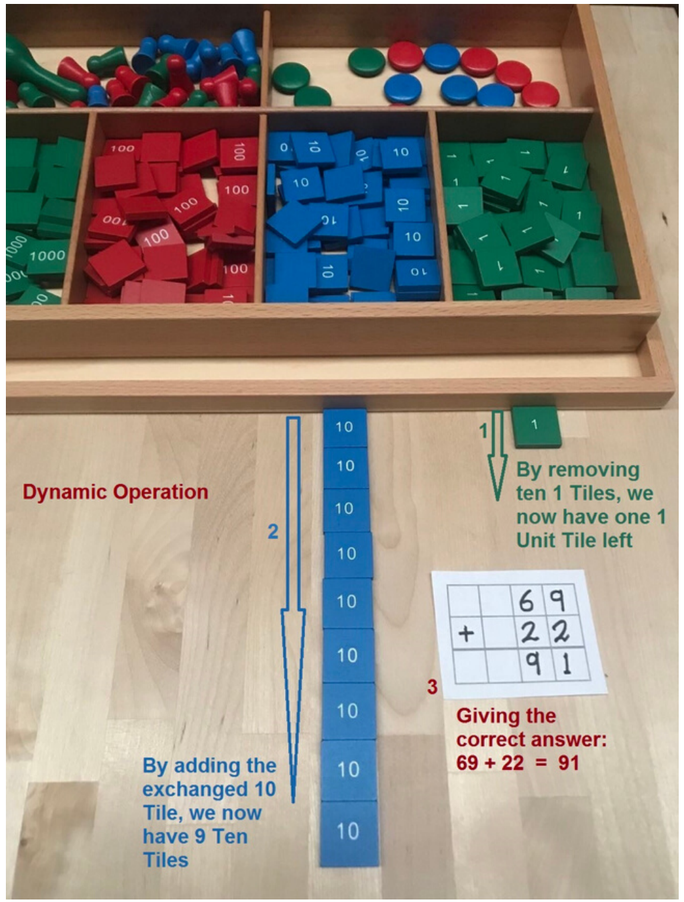
Step 2:



Step 3:

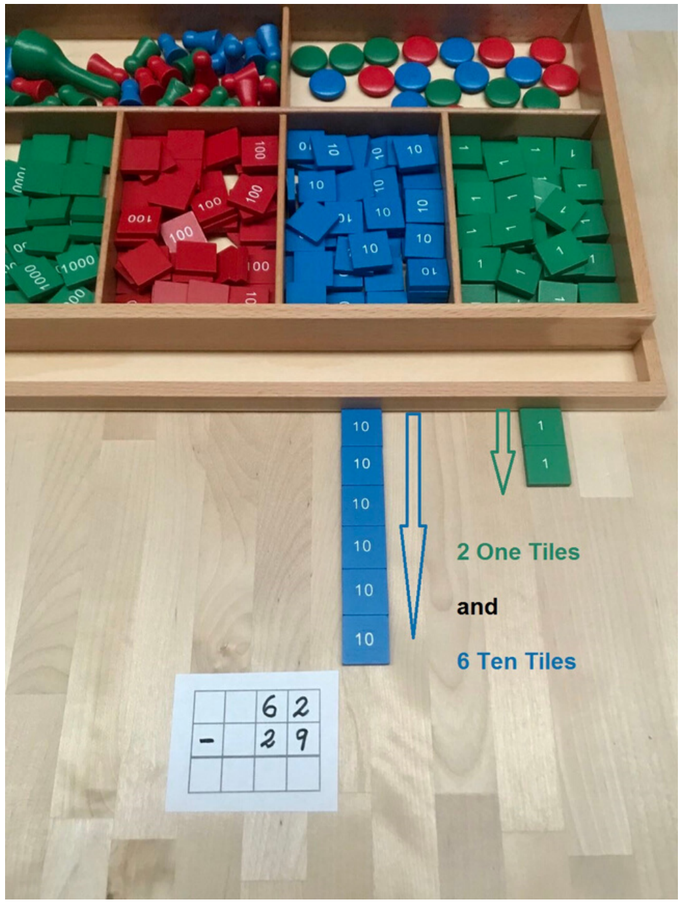

1
slide the tray slightly off the lid to create a holding point for the exchange tiles - we call this "the balcony"
3
Get 1 Ten Tile from the pile and place on "the balcony" to represent the exchange for the child.
2
Remove 10 one units and place on "the balcony" to watch as the exchange to the higher base unit happens.
6 9
+ 2 2

Step 4:

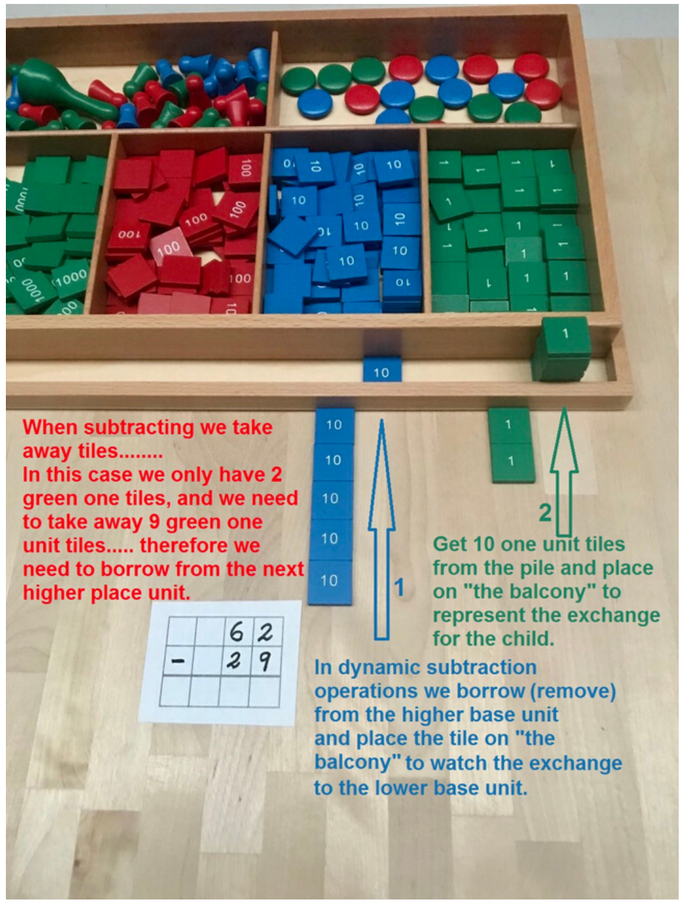

Dynamic Operation
2
By adding the exchanged 10 Tile, we now have 9 Ten Tiles
1
By removing ten 1 Tiles, we now have one 1 Unit Tile left
3
Giving the correct answer:
69 + 22 = 91
6 9
+ 2 2
9 1

DYNAMIC SUBTRACTION

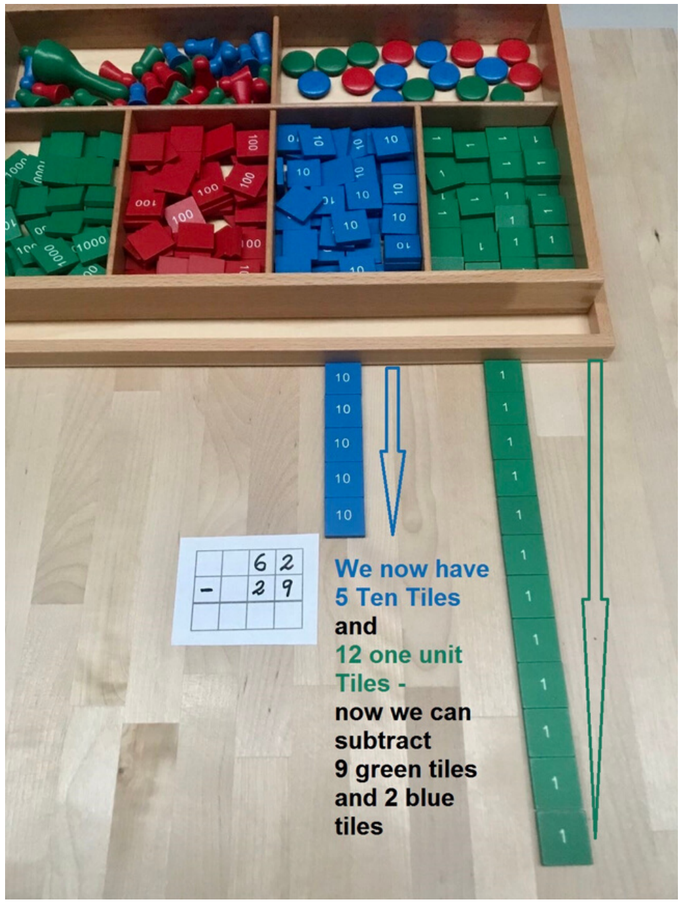
Step 1:



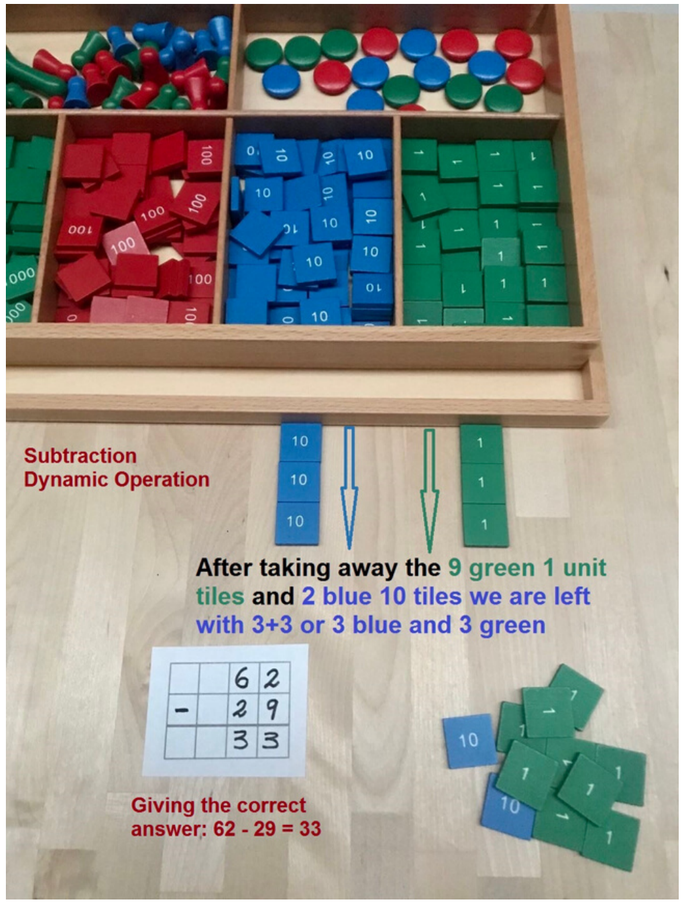
Step 2:



Step 3:


6 2
- 2 9
We now have
5 Ten Tiles
and
12 one unit
Tiles -
now we can
subtract
9 green tiles
and 2 blue
tiles

Step 4:


Subtraction
Dynamic Operation
After taking away the 9 green 1 unit
tiles and 2 blue 10 tiles we are left
with 3+3 or 3 blue and 3 green
6 2
- 2 9
3 3
Giving the correct
answer: 62 - 29 = 33