

# Bond Blocks Support Book:

# Differentiation

- **Bonds of 5) Part-Part-Whole:** Desk Visual
- **Doubling and Halving to 10) Part-Part-Whole:** Desk Visual
- **Five Plus Bonds) Part-Part-Whole:** Desk Visual
- **Bonds of 10) Part-Part-Whole:** Desk Visual
- **Bonds of 10 and Doubles) Part-Part-Whole:** Desk Visual 1
- **Bonds of 10 and Doubles) Part-Part-Whole:** Desk Visual 2
- **Bonds of 6, 7, 8, 9) Part-Part-Whole:** Desk Visual
- **41 - Ten Plus Bonds) Sequencing Numbers to 20:** Cards
- **Doubling and Halving to 20) Part-Part-Whole:** Desk Visual
- **Bonds of 11 to 20) Part-Part-Whole:** Desk Visual
- **Bond Blocks Calculation Board**
- **Mathematical Connections for Numbers 1 - 5**
- **Mathematical Connections for Numbers 6 - 10**
- **Number Board: Starting at One**
- **Number Board: Starting at Zero**
- **Comparison Language Chart**
- **Part-Part-Whole: Blank Cards**
- **Part-Part-Whole - Equation: Recording Sheet**
- **Place Value Arrow Cards and Number Expanders**
- **Ten Frame Cards**



# Copyright

## Bond Blocks Support Book – Differentiation

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Thank you for purchasing Bond Blocks.

We hope they help build

**Curiosity,**  
**Connections** and  
**Confidence** with maths.

- Narelle and Paul.

# Contents

<b>About This Book</b> .....	<b>4</b>
------------------------------	----------

## Differentiation Resources

<b>Bonds of 5) Part-Part-Whole: Desk Visual</b> .....	<b>5</b>
<b>Doubling and Halving to 10) Part-Part-Whole: Desk Visual</b> .....	<b>6</b>
<b>Five Plus Bonds) Part-Part-Whole: Desk Visual</b> .....	<b>7</b>
<b>Bonds of 10) Part-Part-Whole: Desk Visual</b> .....	<b>8</b>
<b>Bonds of 10 and Doubles) Part-Part-Whole: Desk Visual 1</b> .....	<b>9</b>
<b>Bonds of 10 and Doubles) Part-Part-Whole: Desk Visual 2</b> .....	<b>10</b>
<b>Bonds of 6, 7, 8, 9) Part-Part-Whole: Desk Visual</b> .....	<b>11</b>
<b>41 - Ten Plus Bonds) Sequencing Numbers to 20: Cards</b> .....	<b>12</b>
<b>Doubling and Halving to 20) Part-Part-Whole: Desk Visual</b> .....	<b>14</b>
<b>Bonds of 11 to 20) Part-Part-Whole: Desk Visual</b> .....	<b>15</b>

## General Teaching Resources

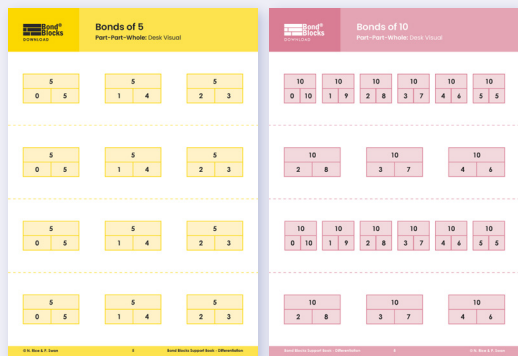
<b>Bond Blocks Calculation Board</b> .....	<b>16</b>
<b>Mathematical Connections for Numbers 1 to 5</b> .....	<b>17</b>
<b>Mathematical Connections for Numbers 6 to 10</b> .....	<b>23</b>
<b>Number Board: Starting at One</b> .....	<b>29</b>
<b>Comparison Language Chart</b> .....	<b>30</b>
<b>Part-Part-Whole: Blank Cards</b> .....	<b>31</b>
<b>Part-Part-Whole - Equation: Recording Sheet</b> .....	<b>32</b>
<b>Place Value Arrow Cards</b> .....	<b>34</b>
<b>Place Value Number Expanders</b> .....	<b>35</b>
<b>Ten Frame Cards</b> .....	<b>36</b>



# About This Book

Each activity's web page contains differentiation ideas.

Each differentiation activity download is located on the related activity web page.



These examples show Part-Part-Whole desk visuals for the Bonds of 5 and Bonds of 10.

## Desk Visuals

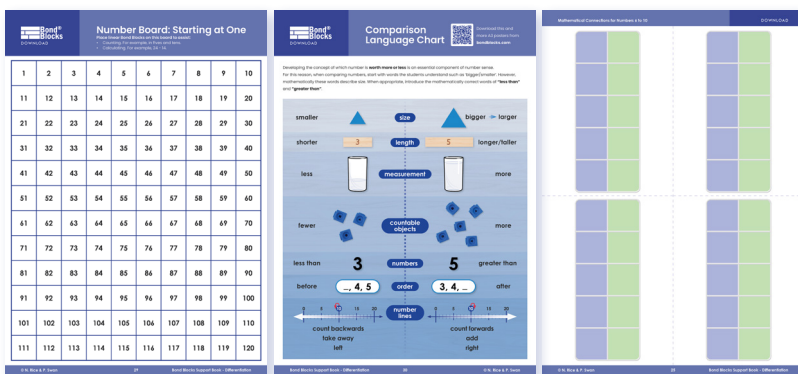
These support students with working memory difficulties. There is a related Teacher Note document titled "Using Part-Part-Whole Desk Visuals" that explains how to use them.

There is one desk visual for every bond made of two, single-digit numbers. This set of bonds is referred to as **'basic facts'**.

## Generic Downloads

Generic downloads that can be used to differentiate a range of activities.

These examples show generic downloads for "Place Value Arrow Cards" and "Number Expanders" and "Comparison Language Chart."



# Bonds of 5

## Part-Part-Whole: Desk Visual

5	
0	5

5	
1	4

5	
2	3

5	
0	5

5	
1	4

5	
2	3

5	
0	5

5	
1	4

5	
2	3

5	
0	5

5	
1	4

5	
2	3

# Doubling and Halving to 10

## Part-Part-Whole: Desk Visual

2	
1	1

4	
2	2

6	
3	3

8	
4	4

10	
5	5

2	
1	1

4	
2	2

6	
3	3

8	
4	4

10	
5	5

2	
1	1

4	
2	2

6	
3	3

8	
4	4

10	
5	5

2	
1	1

4	
2	2

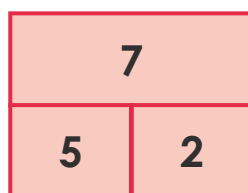
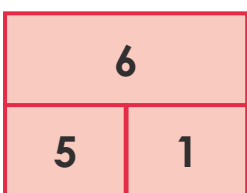
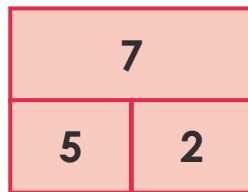
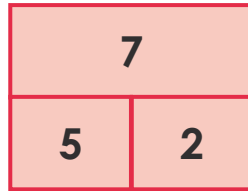
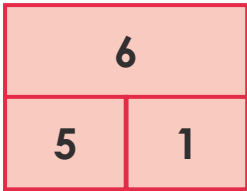
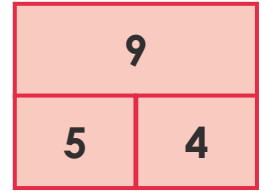
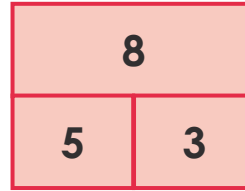
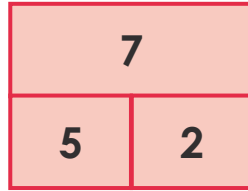
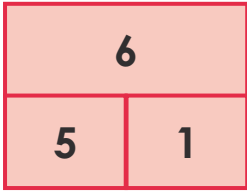
6	
3	3

8	
4	4

10	
5	5

# Five Plus Bonds

Part-Part-Whole: Desk Visual



# Bonds of 10

## Part-Part-Whole: Desk Visual

10	
0	10

10	
1	9

10	
2	8

10	
3	7

10	
4	6

10	
5	5

10	
2	8

10	
3	7

10	
4	6

10	
0	10

10	
1	9

10	
2	8

10	
3	7

10	
4	6

10	
5	5

10	
2	8

10	
3	7

10	
4	6

# Bonds of 10 and Doubles

## Part-Part-Whole: Desk Visual 1

Smaller part-part-whole visuals.

These can be taped to the back of a ruler and used discretely. Cut on the dashed line.

10		10		10	
2	8	3	7	4	6

12		14		16		18	
6	6	7	7	8	8	9	9

10		10		10	
2	8	3	7	4	6

12		14		16		18	
6	6	7	7	8	8	9	9

10		10		10	
2	8	3	7	4	6

12		14		16		18	
6	6	7	7	8	8	9	9

10		10		10	
2	8	3	7	4	6

12		14		16		18	
6	6	7	7	8	8	9	9

10		10		10	
2	8	3	7	4	6

12		14		16		18	
6	6	7	7	8	8	9	9

10		10		10	
2	8	3	7	4	6

12		14		16		18	
6	6	7	7	8	8	9	9

# Bonds of 10 and Doubles

## Part-Part-Whole: Desk Visual 2

Smaller part-part-whole visuals.

These can be taped to the back of a ruler and used discretely. Cut on the dashed line.

10		10		10	
2	8	3	7	4	6

12		14		16		18	
6	6	7	7	8	8	9	9

10		10		10	
2	8	3	7	4	6

12		14		16		18	
6	6	7	7	8	8	9	9

10		10		10	
2	8	3	7	4	6

12		14		16		18	
6	6	7	7	8	8	9	9

10		10		10	
2	8	3	7	4	6

12		14		16		18	
6	6	7	7	8	8	9	9

10		10		10	
2	8	3	7	4	6

12		14		16		18	
6	6	7	7	8	8	9	9

10		10		10	
2	8	3	7	4	6

12		14		16		18	
6	6	7	7	8	8	9	9

# Bonds of 6, 7, 8, 9

## Part-Part-Whole: Desk Visual

6	
0	6

6	
1	5

6	
2	4

6	
3	3

7	
0	7

7	
1	6

7	
2	5

7	
3	4

8	
0	8

8	
1	7

8	
2	6

8	
3	5

8	
4	4

9	
0	9

9	
1	8

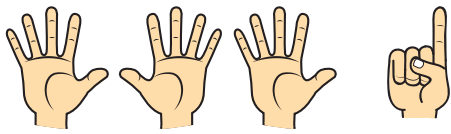
9	
2	7

9	
3	6

9	
4	5

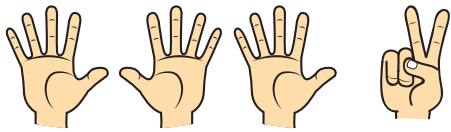


	<b>WILD!</b>	



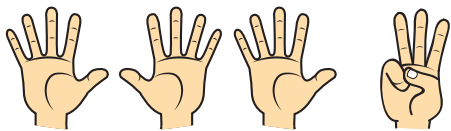
10

16



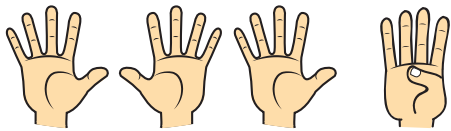
11

17



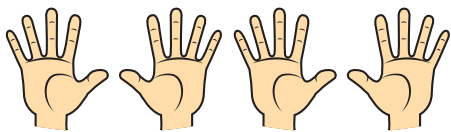
12

18



13

19



14

20

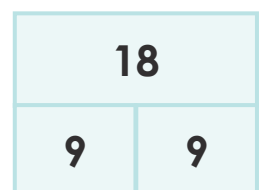
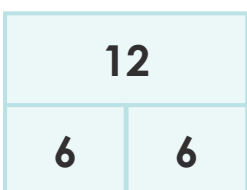
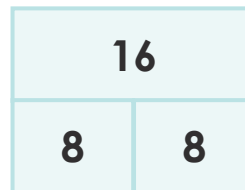
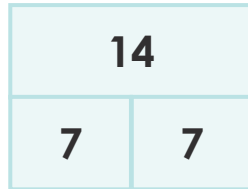
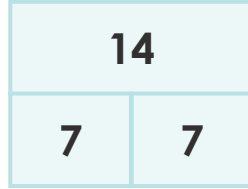
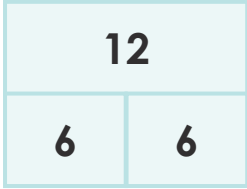
**WILD!**

15

**WILD!**

# Doubling and Halving to 20

## Part-Part-Whole: Desk Visual



# Bonds of 11 to 20

## Part-Part-Whole: Desk Visual

11	
2	9

11	
3	8

11	
4	7

11	
5	6

12	
3	9

12	
4	8

12	
5	7

13	
4	9

13	
5	8

13	
6	7

14	
5	9

14	
6	8


15	
6	9

15	
7	8

16	
7	9

17	
8	9

The generic **Bond Blocks: Calculation Board** is an A3 download available from <http://bondblocks.com/general-resources/>

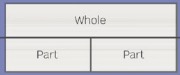



**Bond®  
Blocks**  
DOWNLOAD

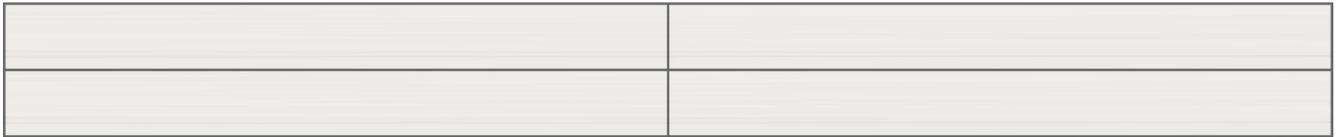
Bond Blocks:  
**Calculation Board**


Part + Part = Whole  
Whole - Part = Part

Number Line









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### Purpose

- Make connections between: the physical material, language and symbols, for numbers 1 to 5.
- To make connections about numbers in relation to other numbers. For example, 4 is one less than 5.

### Activity

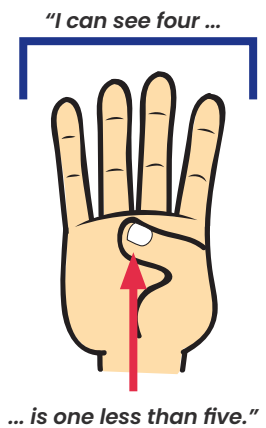
The teacher or leader rolls a dice. Students make this amount on their hand and say the matching number word. Then students fill their frame with the amount of counters rolled on the dice.

### Teacher Notes

This is a subitising activity. Students need to see and make the quantity without counting by ones. Students can see the quantities of one, two and three without counting.

Four is seen as one less than five. Explicitly relate the number of cells on the five frame to the five fingers on their hand. When making four on their hand, one finger is held down, this matches the empty cell on the five fame.

Students do NOT clear the frame of counters after making each number. Instead students alter the number of counters on the frame to make the new quantity. Doing this helps students learn about the comparative size of numbers. For example, 4 is 1 less than 5.



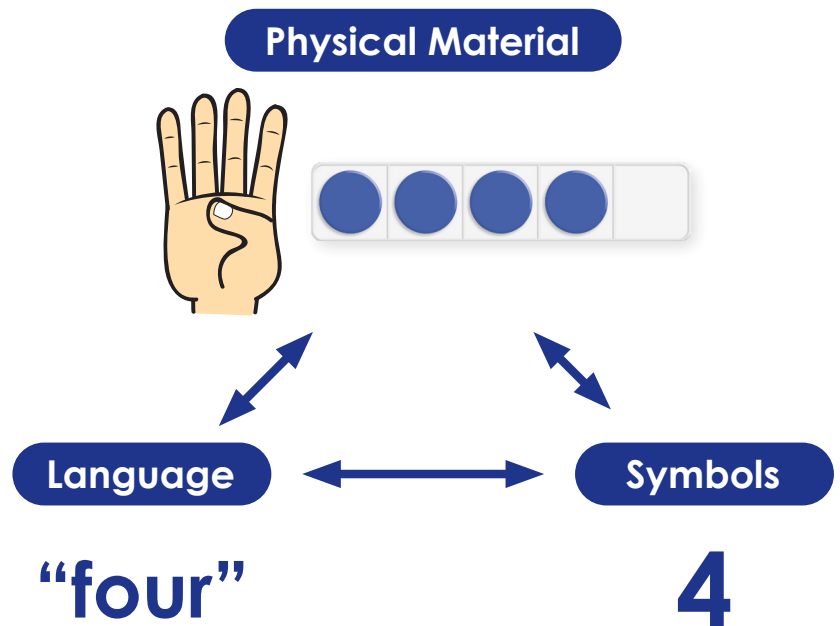
### Variations

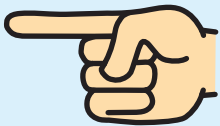

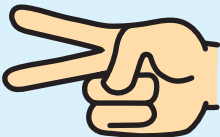
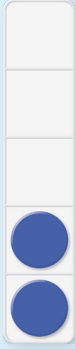




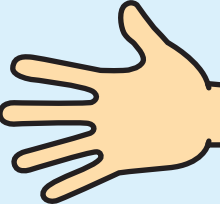
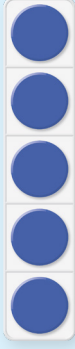
Alter the activity by changing the representation on the face of the dice. You will need to use a Pocket Dice.

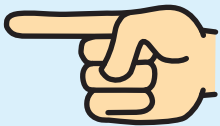

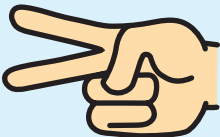





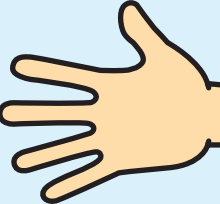
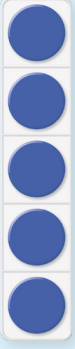
Follow this progression using dice with:

- Finger images.
- The written number word.  
This is said by the teacher, NOT read by the student.
- Numbers 0 to 5.

Once students are fluent making each of these quantities, saying the matching word and recognising the matching written number repeat this activity, altering it so that students represent **one more** than was rolled by the teacher. Once students have mastered this progress to having students represent **one less** than was rolled by the teacher.



1		
2		
3		
4		
5		

1		
2		
3		
4		
5		

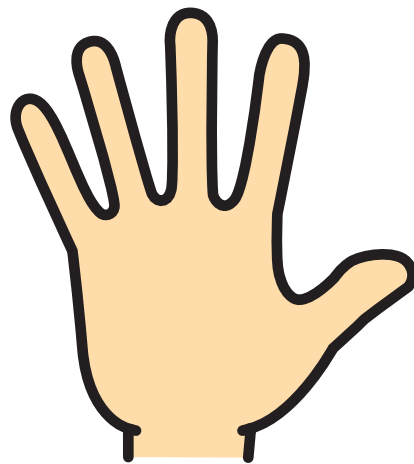
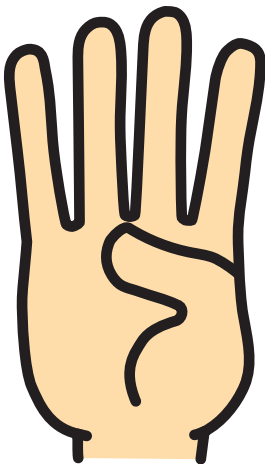








### Fingers (0 - 5)



**Numbers (0 - 5)****0****1****2****3****4****5**

## Number Words (0 - 5)

***zero***

***one***

***two***

***three***

***four***

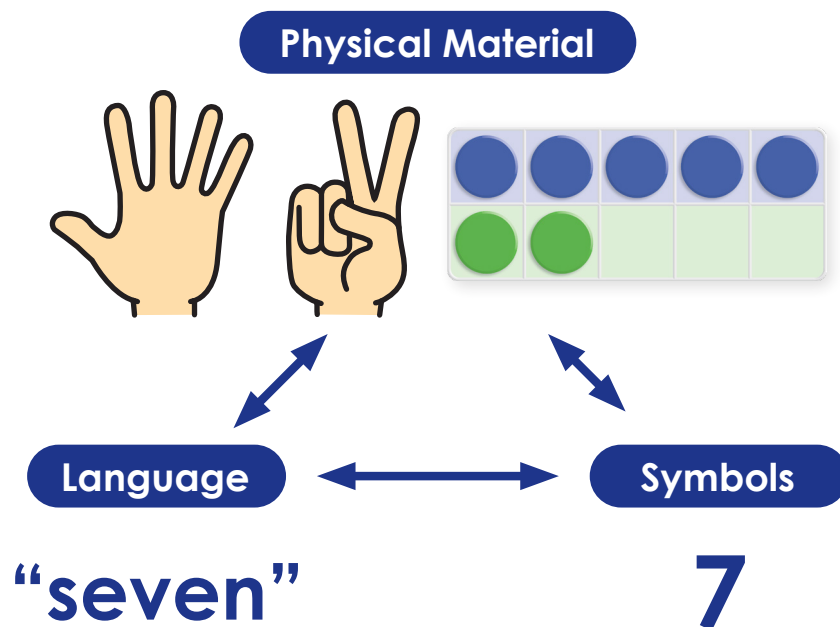
***five***

## Purpose

- Make connections between: the physical material, language and symbols, for numbers 6 to 10.
- To make connections about numbers in relation to other numbers. For example, 7 is two more than 5.
- This is a subitising activity. Students need to see and make the quantity without counting by ones.

## Activity

The teacher or leader rolls a dice. Students make this amount on their hand and say the matching number word. Then students fill their frame with the amount of counters rolled on the dice.

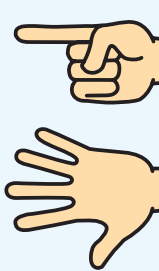
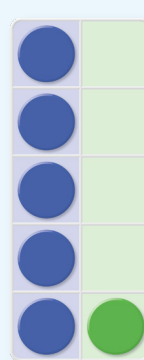
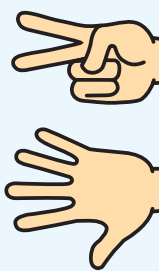
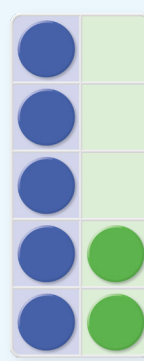

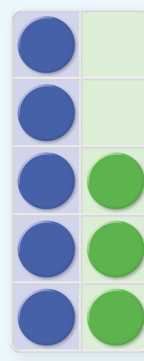

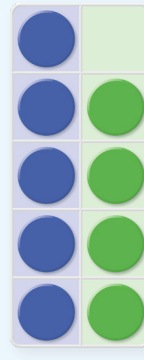

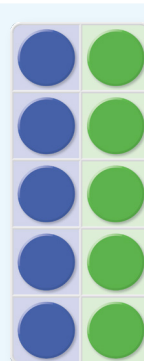


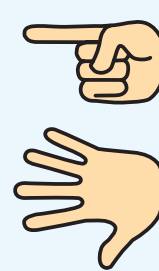
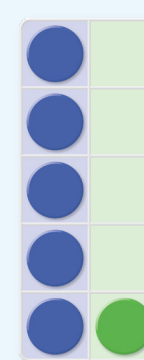
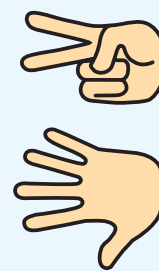
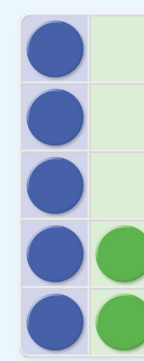
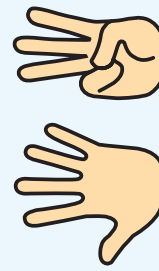
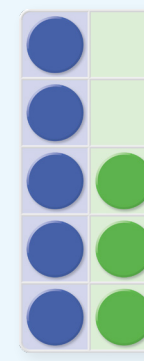
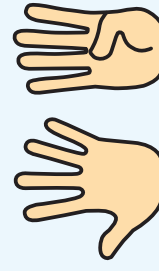
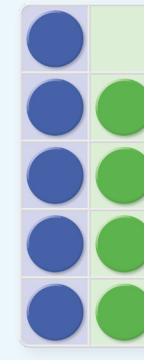

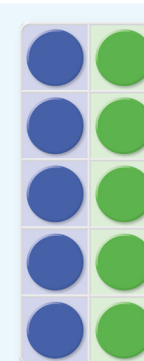
## Variations

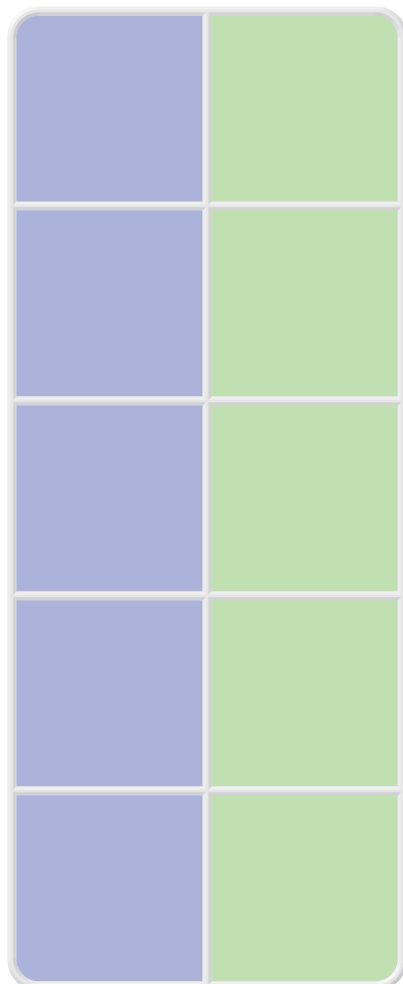
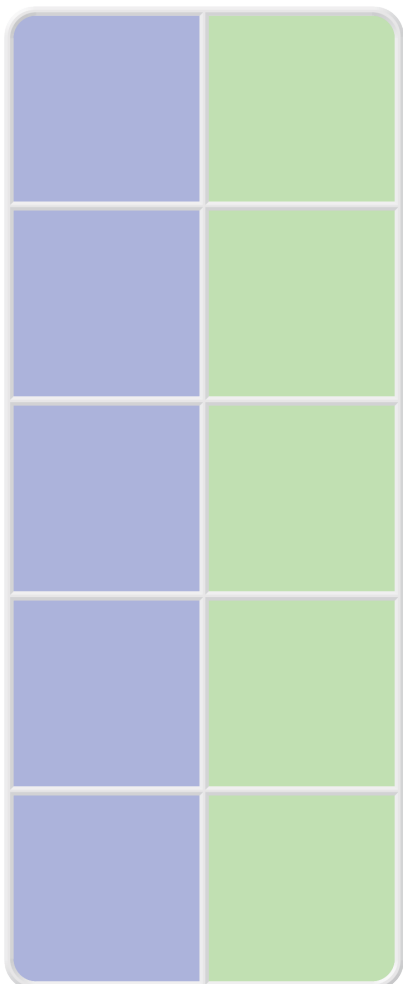
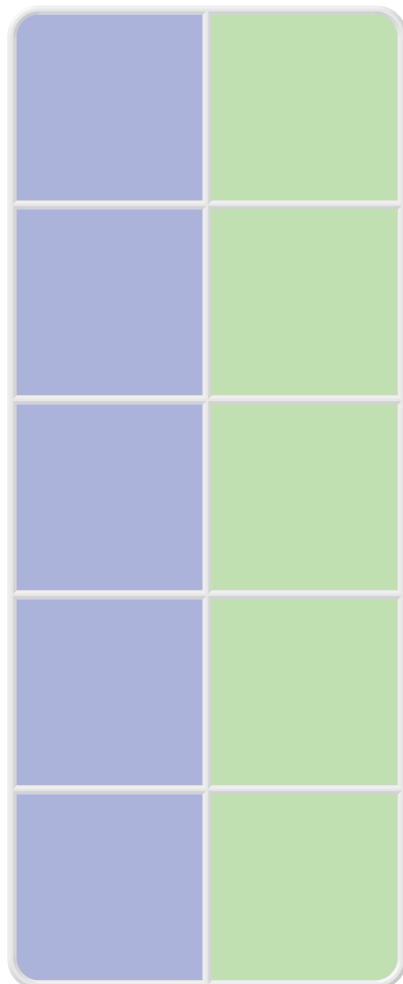
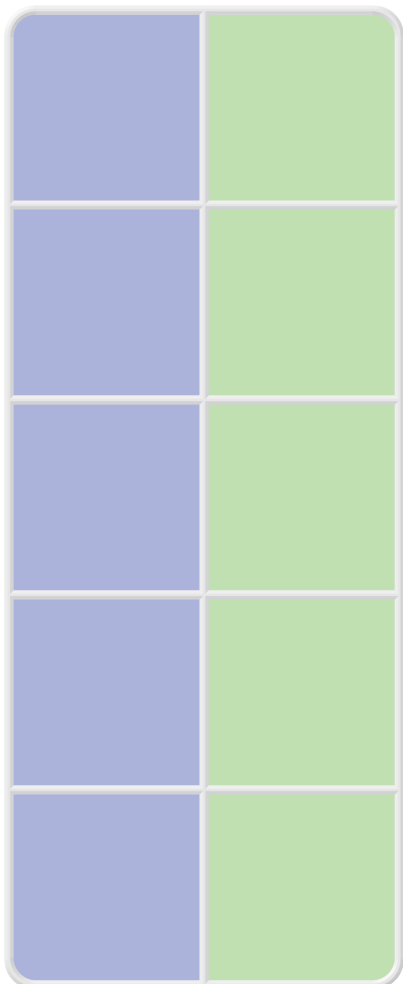
Alter the activity by changing the representation on the face of the dice. You will need to use a Pocket Dice. Follow this progression using dice with:

- Finger images.
- The written number word. This is said by the teacher, NOT read by the student.
- Numbers 6 to 10.

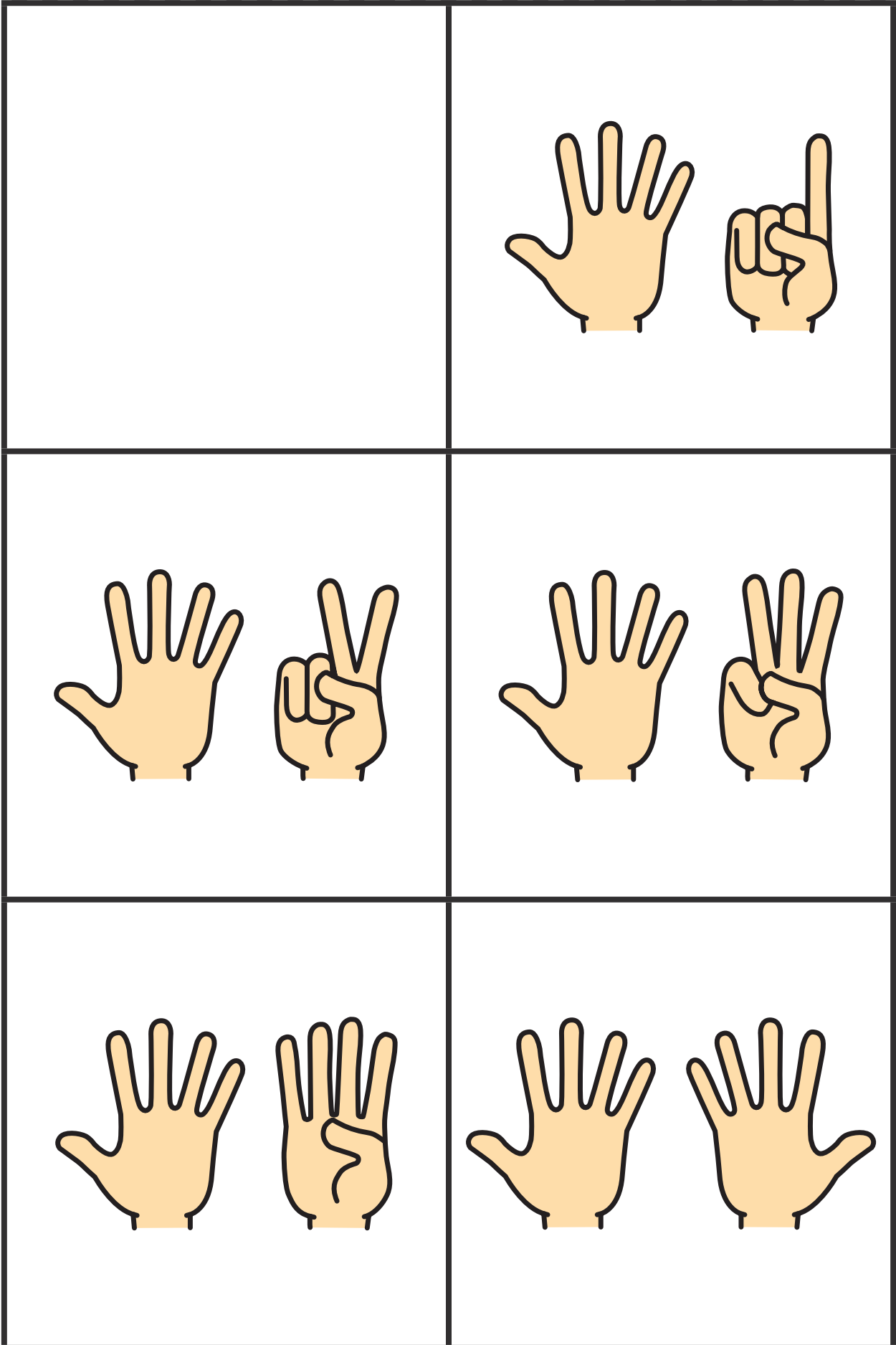
Once students are fluent making each of these quantities, saying the matching word and recognising the matching written number repeat this activity, altering it so that students represent **one more** than was rolled by the teacher. Once students have mastered this progress to having students represent **one less** than was rolled by the teacher.

6		
7		
8		
9		
10		

6		
7		
8		
9		
10		



### Fingers (0 - 5)



**Numbers (0 - 5)**

6

7

8

9

10

## Number Words (0 - 5)

*six*

*seven*

*eight*

*nine*

*ten*

# Number Board: Starting at One

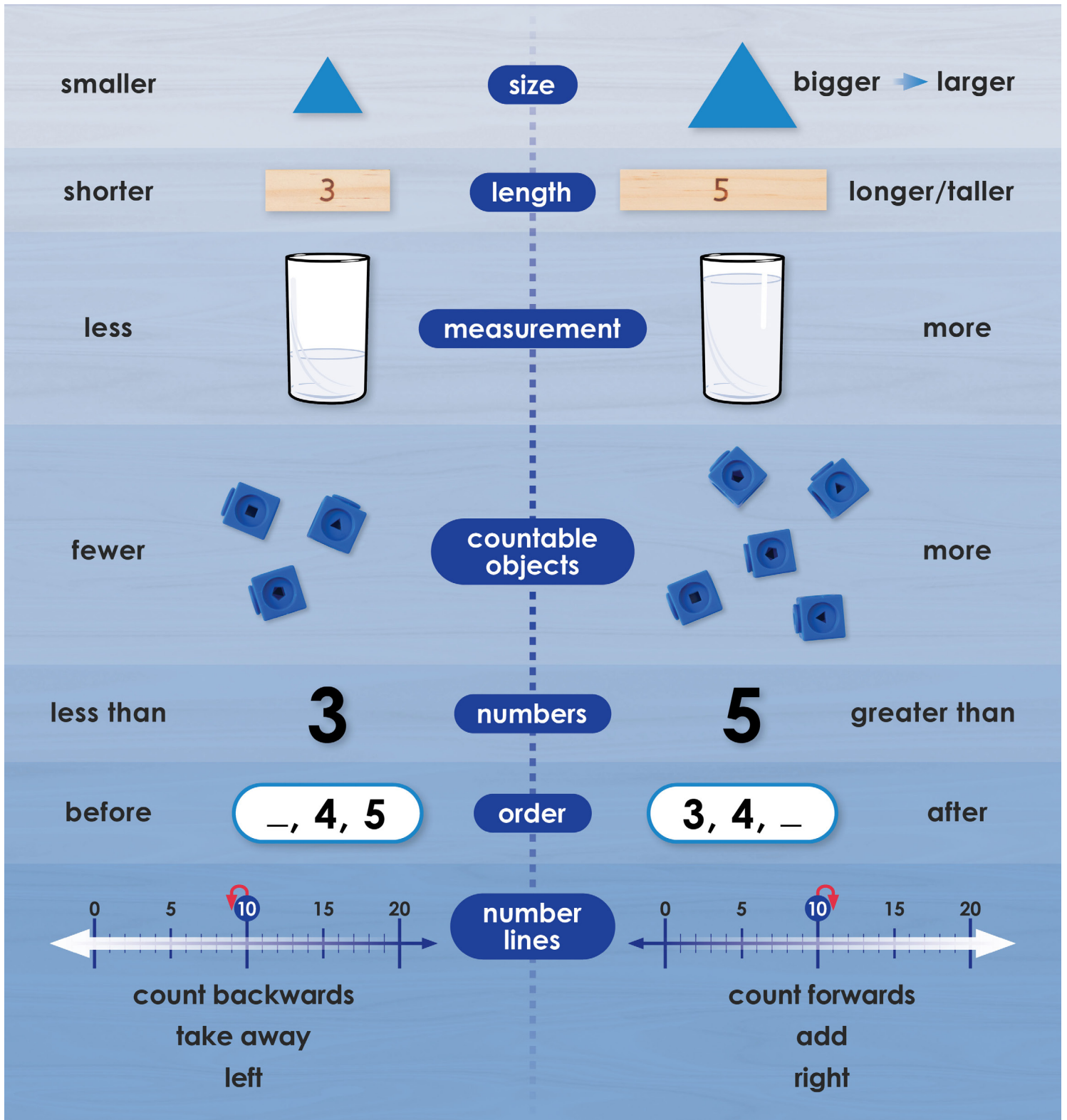
Place linear Bond Blocks on this board to assist:

- Counting. For example, in fives and tens.
- Calculating. For example,  $24 - 14$ .

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100
101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120



Developing the concept of which number is **worth more or less** is an essential component of number sense. For this reason, when comparing numbers, start with words the students understand such as 'bigger/smaller'. However, mathematically these words describe size. When appropriate, introduce the mathematically correct words of **"less than"** and **"greater than"**.



# Part-Part-Whole: Blank Cards

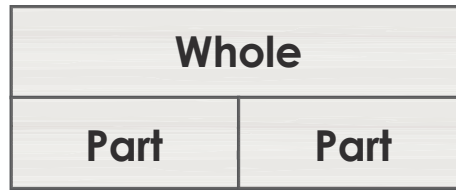



# Part-Part-Whole

Equation: Recording Sheet

Name: \_\_\_\_\_

Date: \_\_\_\_\_

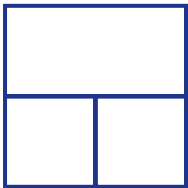


**Part + Part = Whole**

**Whole - Part = Part**

## Addition

## Subtraction

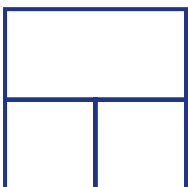
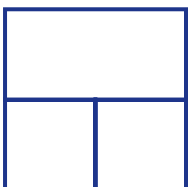
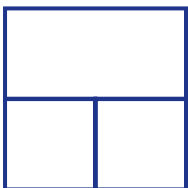
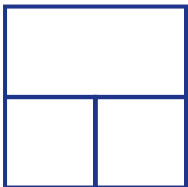
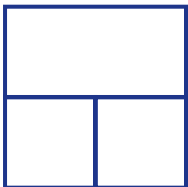


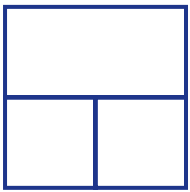
+            =

-            =

+            =

-            =



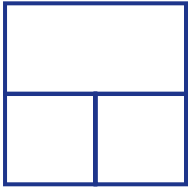


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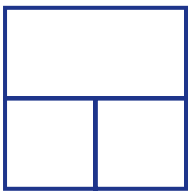


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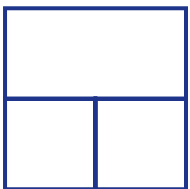


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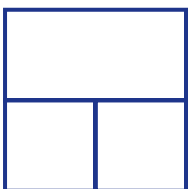


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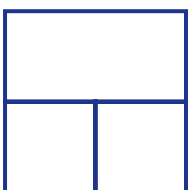


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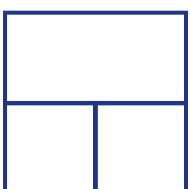


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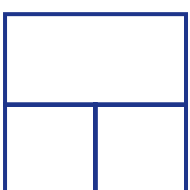


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# Place Value Arrow Cards

1	0		2	0		0
1	0		2	0		1
1	0		2	0		2
1	0		2	0		3
1	0		2	0		4
1	0		2	0		5
1	0		2	0		6
1	0		2	0		7
1	0		2	0		8
1	0		2	0		9
			3	0		0

# Place Value Number Expanders

—	<b>hundreds</b>	—	<b>tens</b>	—	<b>ones</b>
—	<b>hundreds</b>	—	<b>tens</b>	—	<b>ones</b>
—	<b>hundreds</b>	—	<b>tens</b>	—	<b>ones</b>
—	<b>hundreds</b>	—	<b>tens</b>	—	<b>ones</b>
—	<b>hundreds</b>	—	<b>tens</b>	—	<b>ones</b>
—	<b>hundreds</b>	—	<b>tens</b>	—	<b>ones</b>

# Ten Frame Cards

