BONDING WITH NUMBERS (LEVEL 1)

Description	Learners will play & design his/her games to grasp the concept of number bonds (1-10) while learning simple addition up to 10.
Leading Question	Can you use numbers to create other numbers?
Total Time Required	4 days, 1 hour per day
Supplies Required	Cardboard, paper, glue or tape, pencil, scissors, colors, any container, rectangular shaped household item, item with straight edge or ruler, plate (paper or plastic), counters (buttons ,beans, stones)
Learning Outcomes	Learner will be able to - Add numbers and the sum is up to 10 - Recognize the number bonds for all numbers 1-10
Previous Learning	Count numbers up to 10

DAY 1

Today you will learn simple addition up to 5 & number bonds for numbers 3-5

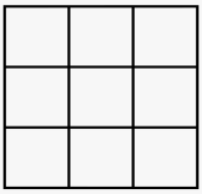
Suggested Duration	**Activity and Description**
10 minutes	Introduction: Do you know what the phrase part of the whole means? Can you say or draw *part* of the following objects: 1. Tree, 2. Bed, 3. T-shirt (A tree is the whole and the leaf is a *part* of it, bed is the whole and a leg is a *part* of it, and t-shirt is a whole and a *sleeve* is a part of it)

15 minutes

Bingo:

Find a parent or sibling to play bingo with and review numbers 1-20.

Draw a 3×3 grid of squares like the one shown to the right with the help of an adult on cardboard or on the sand. Each player must have a 3x3 grid with 9 different numbers from 1-20 and a pencil. You can use your finger if the grid is done on sand).



Ask your Parents or partner to call out a number and if that number is on your bingo sheet, then you should cross it out, a player gets bingo (wins) when they cross out all the numbers in a horizontal, vertical, or diagonal line.

15 minutes

Introduction to Addition:

Draws a table with the help of an adult using counters (anything can be used as a counter - stone, sticks, pencils, or any household items)

To discover the sum of two numbers (from 1-5)

First number of counters (count)	Second number of counters (count)	Count of the counters of the first column and second column together
1	1	1+1=2
1	2	1+2=3
1	3	1+3=4
1	4	1+4=5

You can do the same activity using your fingers with each hand representing one of the two columns of the table above. Use your fingers to represent the

	number of each object and then count all the raised fingers to find the total.
15 minutes	Introduction to number bond: Draw 3 people – the first person you should draw is yourself. Person 2 is your father (or a sibling) and person 3 is your mother (or a grandparent). Next, get 4 counters and write the number 4 next to them. Imagine you have 4 counters and had to split them between your mother and father (or any other family member)– in how many ways can you divide this number? e.g. if the father has 1 stone, the mother will have 3. Draw a table to record the results

I had	I gave my mother (or grandparent)	I gave my father (or sibling)
4	1	3
4	2	2
4	3	1
4	0	4
4	4	0

Did you notice that there are different ways to form the number 4? Combinations include: (1, 3), (2, 2), (3,1), (0,4) etc.

We can say that 4 is *whole* and 1,2, and 3 are *parts* of this number. Repeat the same activity for number 3, 5 and find out how many ways that we can form those numbers.

Number bond for 3: (1,2), (2,1), (3,0), (0,3)

Number bond for 5: (1,4), (2,3), (3,2), (4,1), (5,0), (0,5)

Or use the worksheets in the appendix.

	5 is the whole and 1 is a part, 2 is a part etc.

DAY 2

Today you will create number bonds for numbers 6 & 7

Suggested Duration	Activity and Description
15 minutes	Create number bonds for numbers 6 & 7 Literacy activity : 1. Trace and write the new vocabulary from day 1 activities a. Square b. Tree c. Bed d. Shirt 2. Use those words in sentences. e.g., the shape of my window is a square.
10 minutes	Make a group number game: Play the following game with family members /friends: - Players walk around in a circle while clapping - An adult will shout “Make a group of 3”, and players must quickly try to get into a group of that number - The players who do not get into the group or are extra in a group are out - Players can repeat the game to make groups of 2,3 & 5 depending on the number of players
20 minutes	Learners will repeat the same activity on day 1 to discover the number bonds for numbers 6 & 7: For example the table for number bonds of 6 will be I had | I gave my mother | I gave my father

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6	1	5
6	2	4
6	3	3
6	4	2
6	5	1
6	6	0
6	0	6

Number bonds for 6: (1,5), (2,4), (3,3), (4,2), (5,1), (6,0), (0,6).

The whole is 6 and parts are 1, 2, 3, 4, 5, 0.

15 minutes

Number card game:

- Use any household items shaped like a rectangle (e.g. a small item like a phone) to draw a rectangle on cardboard or paper
- Use the cutout to cut 28 rectangles in total with the help of an adult
- Write number 7 on two cards, number 6 on two cards, and all numbers from 0-5 on the remaining cards. There should be 4 cards for each number from 0-5
- All players sit in a circle with the deck of cards placed in the middle
- Mix all cards and place them face up
- Collect two cards whose numbers together create number 6. Each player must quickly take two cards and say the number bond out loud. For example, a player picks up 2 and 4 and shouts “2, 4”!
- The fastest player will get 3 points, the second fastest will get 2 points, and the third fastest will get 1 point

Repeat the game for a couple of rounds. Record the points at the end of each round for each player

DAY 3

Today you will learn simple addition up to 10 and create number bonds for numbers 8 & 9

<table>
<tr><th>Suggested Duration</th><th>Activity and Description</th></tr>
<tr><td>20 minutes</td><td>Create your own game to form numbers 2 to 7 with help of an adult. The game could be for one number bond (e.g only for number 3) or for multiple numbers bonds for more than one number. Play the game with family members/friends. Domino blocks can also be used instead of cards or counters.</td></tr>
<tr><td>20 minutes</td><td>Addition machine activity:

Create an addition machine with the help of an adult using two tubes or large pieces of paper

- Fold the two pieces of paper to create a cylindrical shape and glue the two cylinders on the wall making sure that they are touching on one end, creating a V-shape
- Underneath the two tubes, place a bucket or container. (See the image below or the appendix for other ideas on how to create addition machines)
- Pass a number of counters or stones through the tubes. For example, 4 stones pass through the first tube and 3 stones through the second tube. Then, count the total number of counters in the container (which will be 7 in our example).
- Repeat the activity with a different number of counters
- Record their results in a table:

<table><tr><td>Number of counters in tube 1</td><td>Number of counters in tube 2</td><td>Number of counters in the container (tube 1 + tube 2)</td></tr><tr><td>4 counters</td><td>2 counters</td><td>6</td></tr></table></td></tr>
</table>

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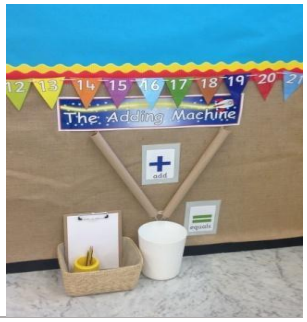


25 minutes

Repeat the same activity from day 1 to discover the number bonds of numbers 8 & 9.

For example the table for number bonds of 8 will be

I had	I gave my mother	I gave my father
8	1	7
8	2	6
8	3	5
8	4	4
8	5	3
8	6	2
8	7	1
8	8	0

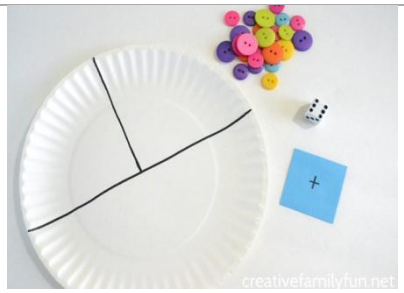
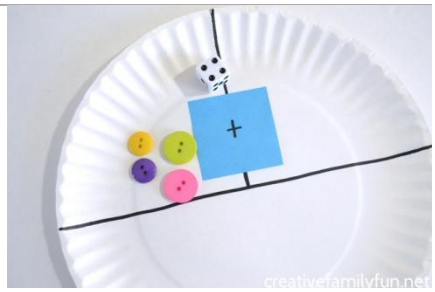
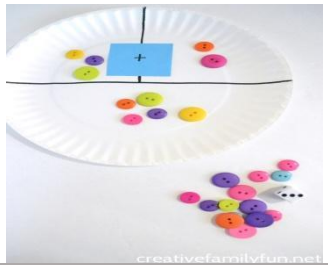
	8	0	8

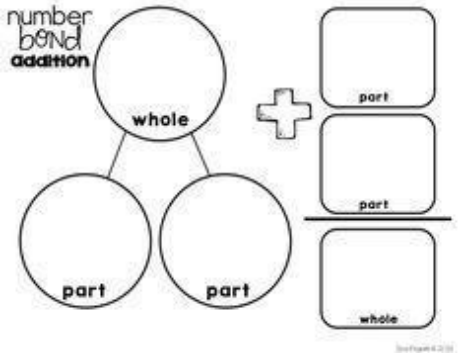
Number bonds for 8: (1,7), (2,6), (3,5), (4,4), (5,3), (6,2), (7,1), (8,0), (0,8)

DAY 4

Today you will create number bonds for number 10 & add up to 10 using a paper plate & counters.

Suggested Duration	Activity and Description
10 minutes	Lets reflect on what you have learned over the last 3 days: ● What did you learn in the last 3 days? ● Which part did you enjoy? ● Which part did you find difficult? ● What are some number parts of number 5? List at least two parts ● What are parts of number 8? List at least two parts
15 minutes	Paper plate activity for addition up to 10: - Materials: paper plates, one or two dice, counters (any small objects buttons, stones, leaves, sticks etc.). You can also use a round piece of regular paper - With the help of an adult, you will draw a line across the center of the plate using any item that has a straight edge to divide it into two equal parts. Next draw a line to divide the top part into half again. - Draw a plus sign "+" between the smaller halves (quarters).

	  - Roll the die. Place a number of counters in the first section of the plate equal to the number you got when you rolled the die. Roll the die again. Place that number of counters in the second section. - Add the two sections together and put the correct number of buttons in the bottom half of the plate. - Remove the buttons and play again. 
15 minutes	Repeat the same activity from day 1 to discover the number bonds for number 10. The whole is 10 and the parts are 1, 2, 3, 4, 5, 6, 7, 8 & 9. You can complete the worksheet in the appendix.
20 minutes	Create a poster using drawing to explain number bonds for your favorite number using the words whole & part. Be creative and use different materials. Refer to the appendix for more ideas.

	Share your poster with family members and explain how to form numbers using number bonds and the difference between a whole and a part.  

ASSESSMENT CRITERIA

- Adding numbers up to 10 accurately
- Creativity in designing number bond poster
- Recognizing number bonds of numbers 1-10 accurately

ADDITIONAL ENRICHMENT ACTIVITIES

- Learner can find out the number bonds of number 11-20

DAY 1

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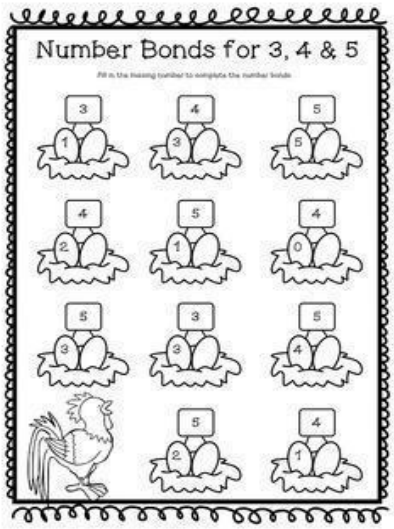

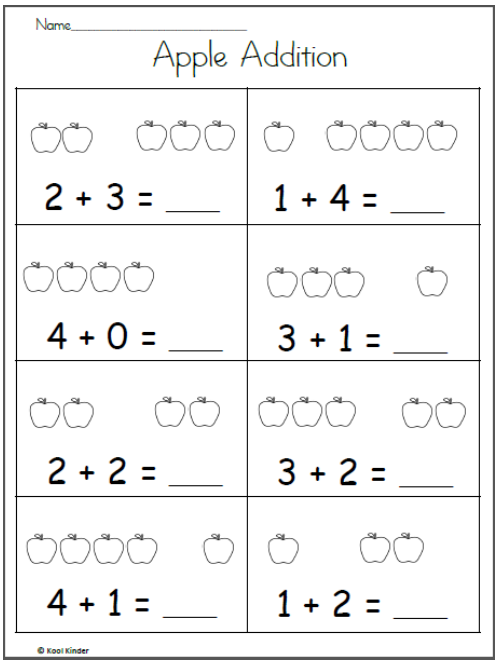

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DAY 2

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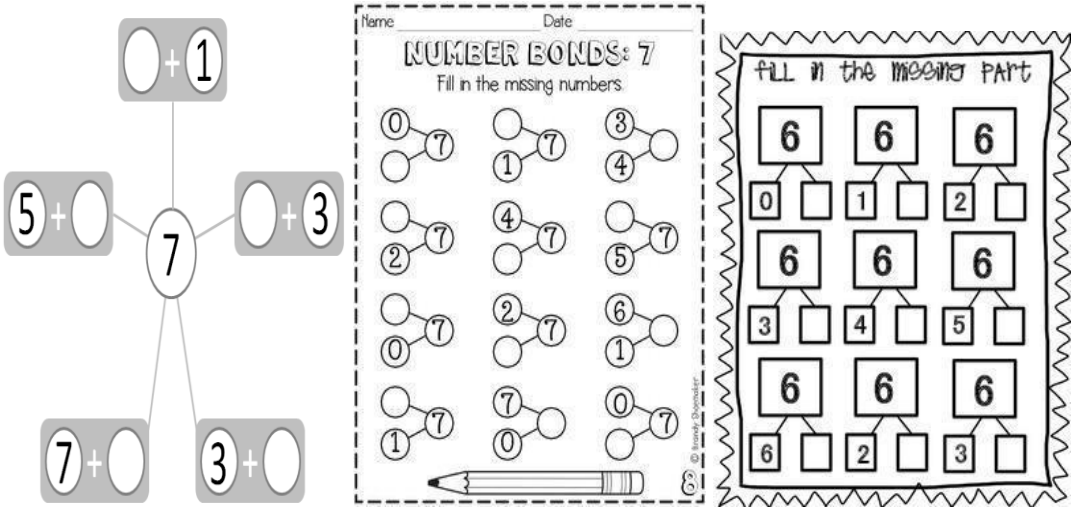

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DAY 3

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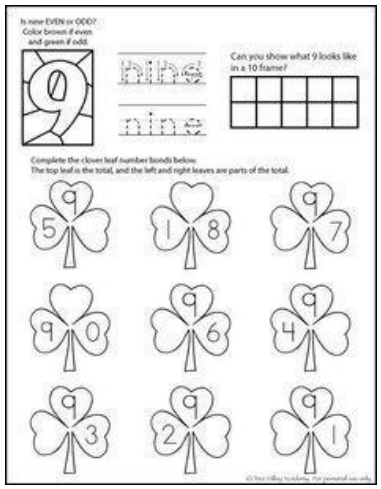

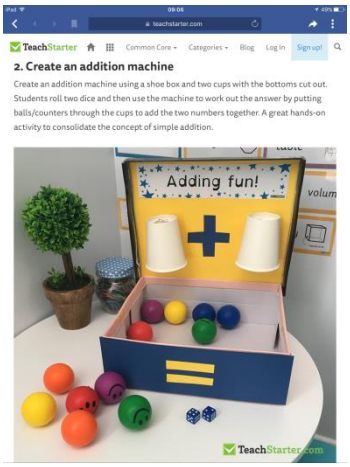

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DAY 4

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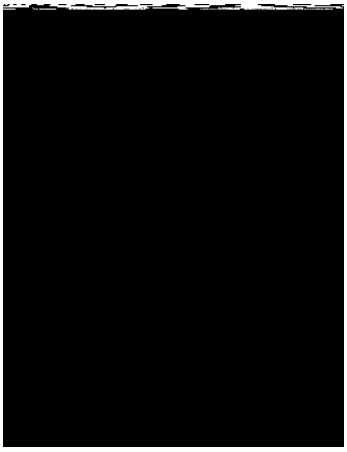

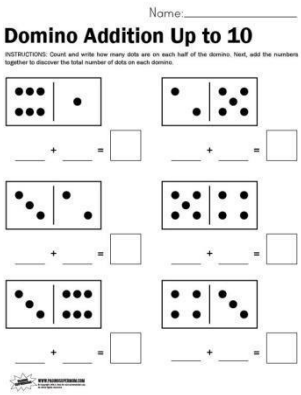

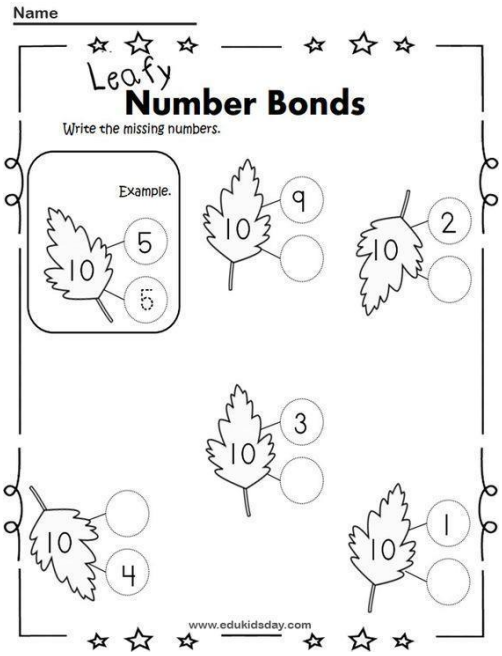

Samples of posters to show number bonds

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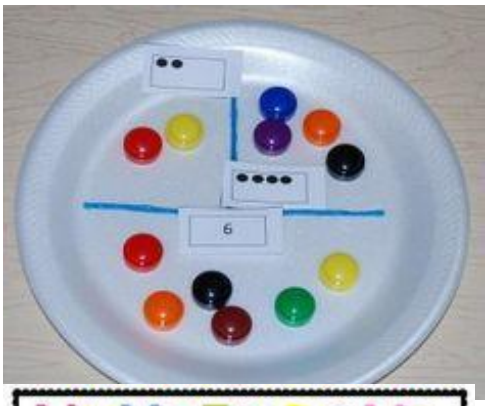

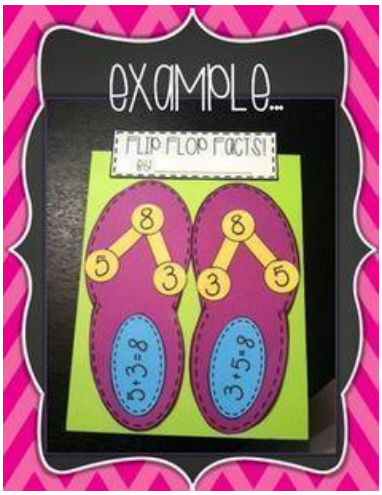

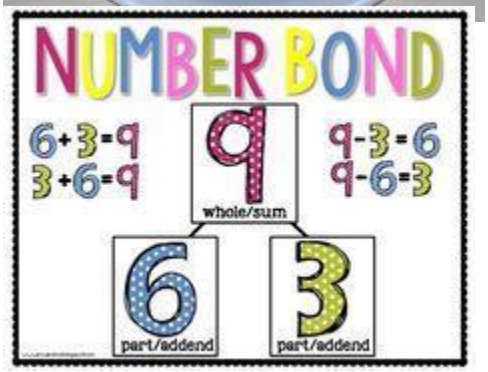

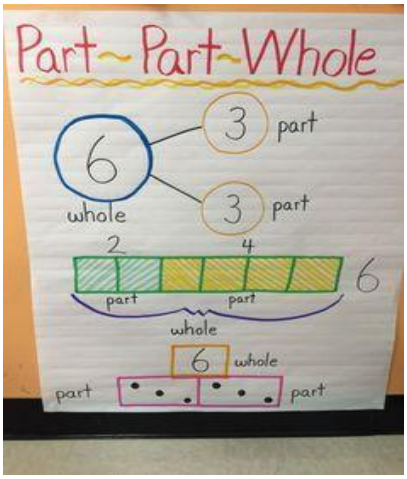

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