

Lesson 2: Numbers 1-5: Number Bonds (2 Days)

Getting Started

? Questions to Explore

- How do we explain our thinking mathematically?
- How do we show the value of a given quantity?



Facts and Definitions

- A number (greater than 1) can be broken into parts.
- **Base-10 blocks:** blocks that represent numbers.
- **Number bond:** a picture that shows how the parts of numbers are related to the whole (part-part-whole relationship)

• Skills

- Develop a plan for counting
- Use manipulatives and graphic organizers to show number values and solve problems

✂ Materials

- | | |
|------------------------|--|
| • apple | • knife |
| • base-10 blocks (kit) | • laminated number bond (kit) |
| • egg carton | • mini marshmallows* (Activity 5 - optional) |
| • glue | • scissors |
| • Interactive Notebook | • tape |
| • items to count | • toothpicks* (Activity 5 - optional) |

Introduction

In this lesson, your child will learn how to use a number bond and base-10 blocks to represent a given number. Begin by asking your child to show you the numbers 1 through 5 using her fingers.

Activities

Activity 1: Sing a Song to 5

To review the numbers 1 through 5, show your child the video of the "Counting 1 to 5 Song" at the following web link. Ask your child to sing the song several times. Encourage her to use arm movements like punching across the chest or doing jumping jacks as this will enhance her memory.



Counting 1 to 5 Song

www.beyondthepage.com/link/5328/

Have your child practice this song every day if she is struggling with counting the numbers 1-5.

Activity 2: Counting

Give your child different numbers (1-5) of objects such as paper clips, marbles, pennies, or small pom poms. Ask her to count the objects one by one while pushing the objects forward to show one-to-one correspondence. If she needs more support with counting one object at a time, give your child an egg carton and have her place one object at a time into the carton while counting orally.

Activity 3: Number Bonds

Show your child a whole apple. Now cut it into four pieces. Ask your child to count the apple pieces. Tell her that you've broken the whole apple down into four parts.

Ask your child if she can show you the number 4 using both hands. She may show 1 finger and 3 fingers on her hands or 2 on each hand. Tell her that we can break numbers down into parts just like you did with the apple. Tell your child that today she will be learning about number bonds and that a number bond is a picture that shows how we can break numbers down into parts to show how the parts are related to make the whole.

Show your child the laminated number bond sheet. Place combinations of objects in the circles to demonstrate the part-part-whole relationship. For example, place 1 penny in one of the small circles and 2 pennies in the other small circle. Ask your child how many pennies there are in all (3), and place that number of pennies in the large circle. Repeat this process with the following number combinations:

- 1, 1, 2
- 1, 3, 4
- 1, 4, 5
- 2, 2, 4
- 2, 3, 5

As you're modeling the given number combinations, pose the following questions: Which circle shows a part? (a small one) How many parts are there? (2) Which shows the whole? (the large one) Where does the largest number in the group go? (the large circle) Next, give your child a number between 2 and 5, and ask her to show the parts that make up the whole you've provided by placing objects in the circles. Make sure that she puts the largest number of objects in the large circle.

If your child is ready for the challenge, place objects in one of the small circles and in the large circle, and ask her to figure out what number goes in the other small circle. For example, if you put 4 pennies in the large circle and 1 penny in one of the small circles, what should go in the other small circle? (3) This approach will serve as a simple introduction to subtraction, though you don't need to share that with your child yet.

Now, give your child the "Number Bond" sheets, and ask her to cut out the pictures and words along the dotted lines provided on the second one. She should then glue the words in the correct spaces on the first sheet, showing that the small circles represent "parts" and the large circle is the "whole." Next, she will glue the pictures of objects in the correct circles, making sure to place the largest number of objects in the large circle. Put this sheet in her Interactive Notebook so that she can refer back to it as needed.

Day 2

Activity 4: Number Bonds and Base 10

In this activity, you will introduce your child to base-10 manipulatives to count and use on the number bond. As she's done before with other objects, ask her to count 5 of the base-10 unit blocks (the small cubes). Using the base-10 unit blocks and the laminated number bond sheet, have your child show you combinations of the part-part-whole relationships within 5 (4 and 1, 3 and 2, 2 and 3, 1 and 4). For example, she should put 4 unit blocks in one of the small circles, 1 unit block in the other small circle, and 5 unit blocks in the large circle. As she works, ask her to also show you these number patterns to 5 on her fingers using both hands.

Activity 5: Groups of Objects

Ask your child if she would rather have 1 cookie or 2 cookies, and tell her to explain her answer.

Now, make 5 groups of base-10 unit blocks to show the numbers 1 through 5. One group will have 1 unit block, another will have 2 unit blocks, another will have 3 unit blocks, and so forth to 5. Lay out strips of tape with the sticky side up, and ask your child to stick the unit blocks for each group next to each other in a row on the tape (making sure the blocks touch). She will make a strip for 1, a strip for 2, a strip for 3, and so forth. If needed, bend down the end of the tape to make a non-sticky tab. Mix the groups/strips up, and ask your child to put them in order 1 through 5, using the tabs to move the strips.

(Note: You can also do this activity using mini marshmallows and toothpicks. Be sure to help your child put the marshmallows on the toothpicks as needed. These marshmallow rods should be easy to move, and, if you allow, your child can enjoy the marshmallows after the activity is completed.)

Select two of the groups/strips (for example, the group of 2 and the group of 4), and pose the following questions:

- Which group of objects is greater than the other?
- Which group of objects is less than the other?
- Can you tell me how many more objects the larger group has than the other group?

Repeat this process using different pairs of the groups/rods until it's clear that your child can determine which one is greater and which one is less. Encourage her to line the rods up to see how many more blocks one has than the other.

Activity 6: Numbers 1-5

Tell your child that in this activity she will be showing the numbers 1-5 as numbers, in word form, in picture form, and by coloring the correct number of beads out of ten. Give her the "Number Work" sheet, and encourage her to work as independently as possible. She can use the word box at the top of the sheet if she needs help with spelling the number words.

When she's finished, add this sheet to her Interactive Notebook.

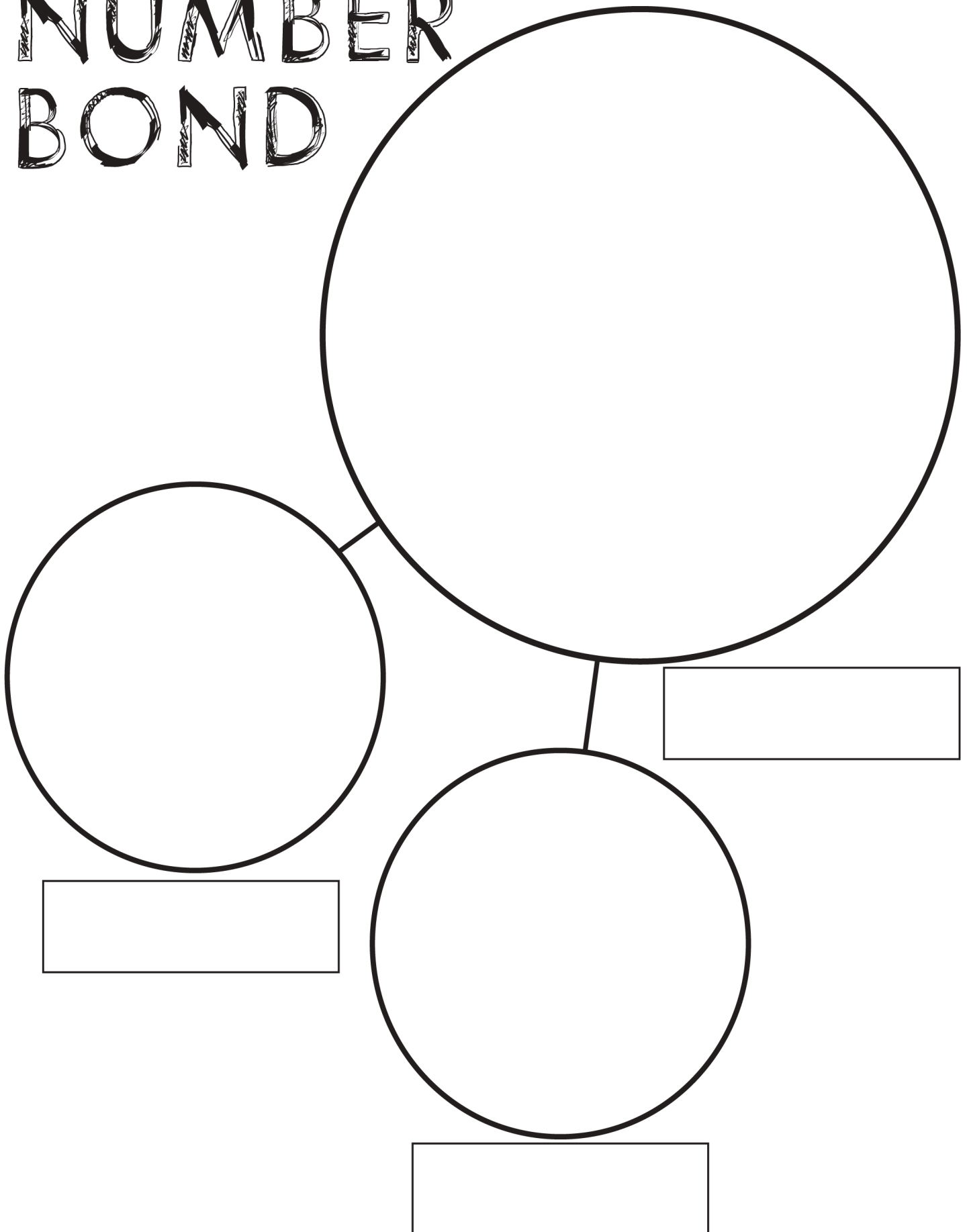
Wrapping Up

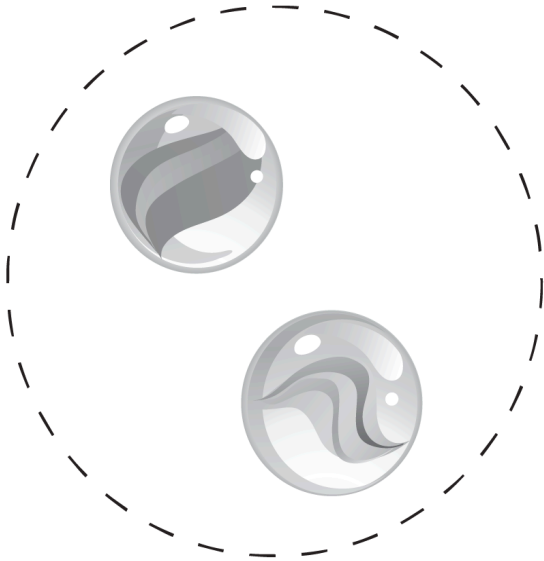
Take a walk around the neighborhood and ask your child to find given numbers of objects. For example, "Can you find 3 windows?" "Can you find 4 cars?" "Can you find 5 trees?"

Learning Gates

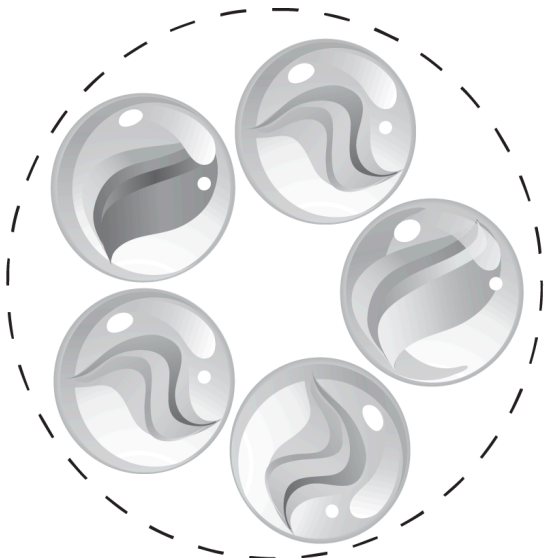
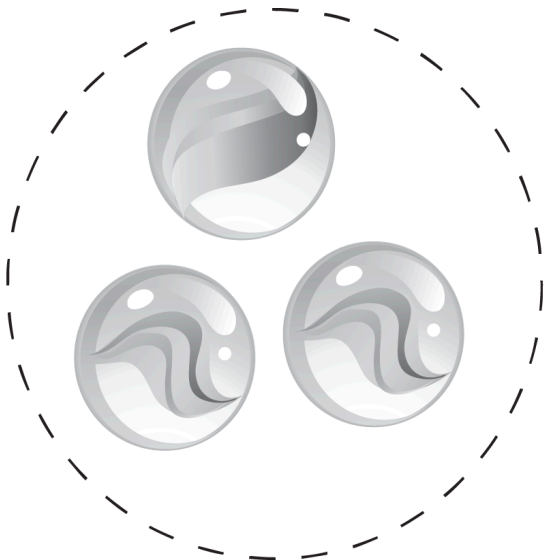
Have your child take the [Learning Gates quiz](#) for this lesson.

NUMBER BOND





part
part
whole



Number Work

one two three four five

Directions: Show what you know about numbers 1-5 by showing them in different ways.

Trace	Write	Draw	Color the beads.
1			
2			
3			
4			
5			