Kindergarten: Module 4

# DUVAL Math Parent Tips

DUVAL COUNTY PUBLIC SCHOOLS

## Number Pairs, Addition and Subtraction to 10

**Kindergarten, Module 4**

Module 4 marks the next exciting step in math for kindergarten students: addition and subtraction! Students will start with composing and decomposing numbers using number bonds and move toward work with addition and subtraction equations.

**Special points of interest:**

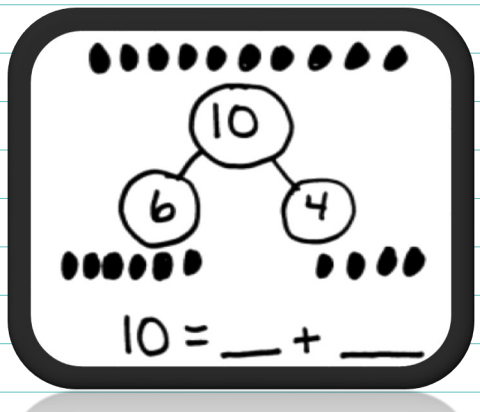
- ✓Words to Know
- ✓Number Bonds
- ✓Number Bonds Progression
- ✓Mathematical Practices
- ✓Homework Helpline

**What Came Before this Module:** Students compare lengths, weight, and capacity, and then worked with comparing numerals.

**What Comes After this Module**: Students will work on their understanding of teen numbers, and work on counting to 100 by ones and by tens.

## Words to Know

- Addition
- Addition and Subtraction sentences (equations)
- Make 10 (combine two numbers from 1-9 that add up to 10)
- Minus (-)
- Number bond (mathematical model)
- Number pairs or partners (embedded numbers)
- Number sentence (3 = 2 + 1)
- Part (addend or embedded number)
- Plus (+)
- Put together (add)
- Subtraction
- Take apart (decompose)
- Take away (subtract)
- Whole (total)




## Questions?

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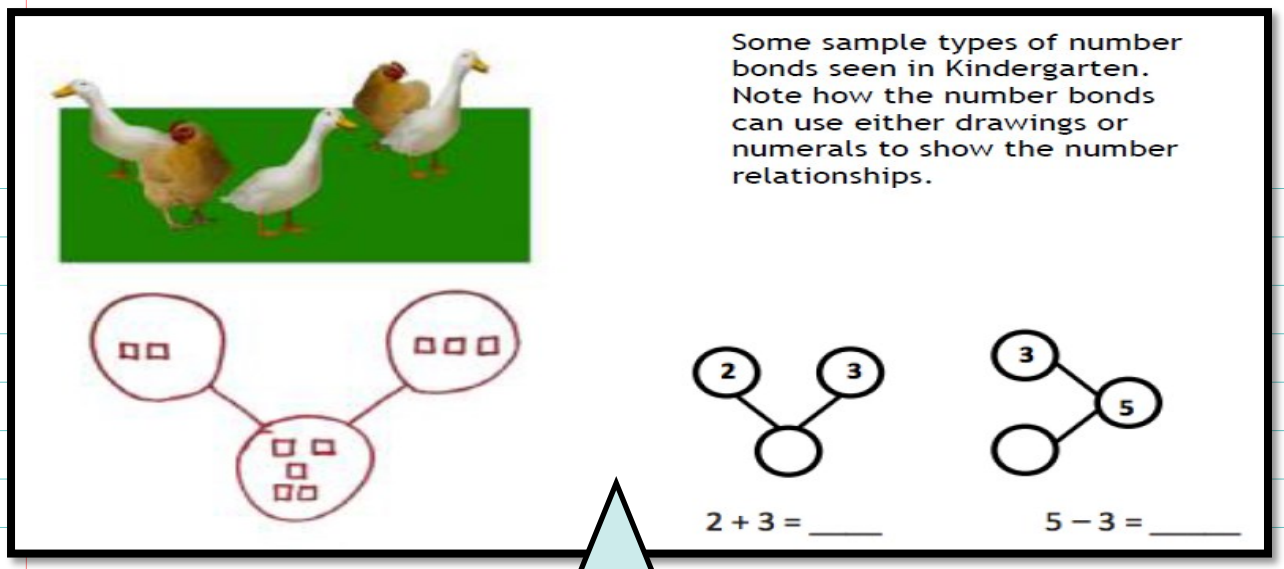
# Number Bonds

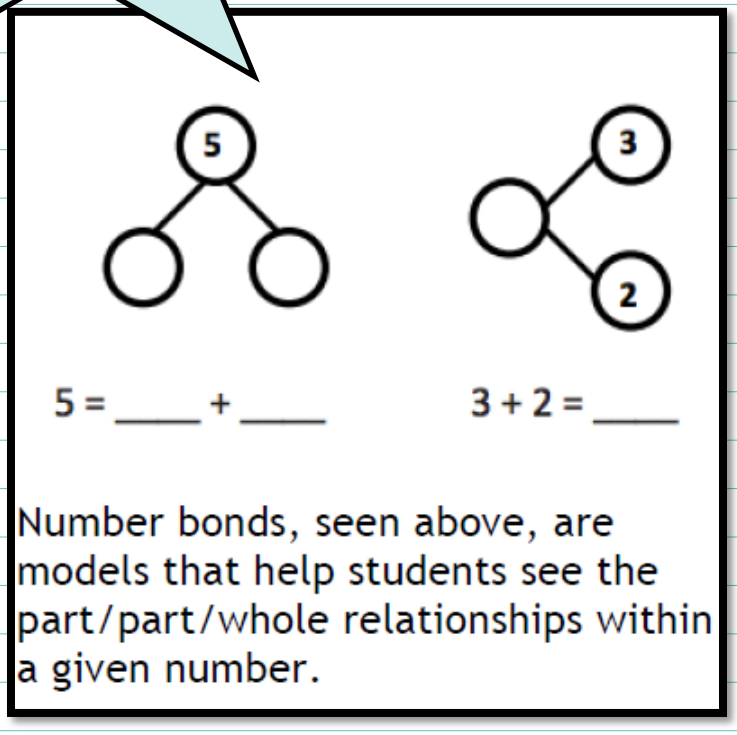



**Spotlight on Math Models**

## Number Bonds

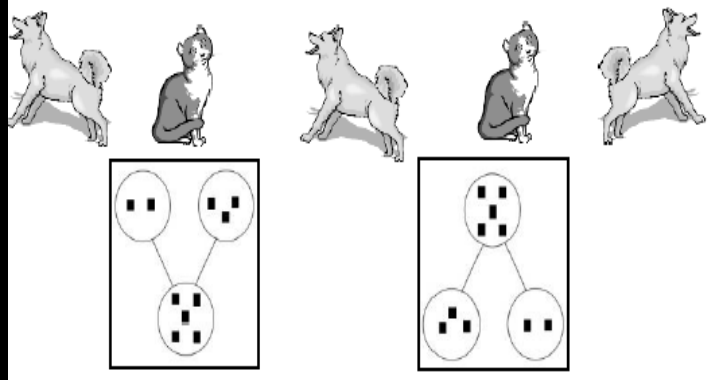
The number bond is a pictorial representation of part/part/whole relationships showing that smaller numbers (the parts) make up larger numbers (the whole). The number bond is a key model for showing students how both take apart (decompose) and put together (compose) numbers with ease. This in turn leads directly to their emerging addition and subtraction skills.

In Kindergarten, students first become fluent with number bonds to 5, and then build understanding of the very important number 10. As students become more comfortable using number bonds, the bonds may be presented in different orientations (e.g. the whole is not always on top).



# Number Bonds Progression

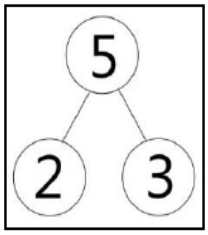
In ***Lesson 1*** and 2, students will be shown a group of pictures: two cats and 3 dogs. They will have to understand that there are 5 animals: 2 are cats and 3 are dogs. They will decompose the number 5 as 5 is 2 and 3. They will also **compose** the number 5. 2 cats and 3 dogs make 5 animals.



In Lesson 3, students will begin to write numbers in the place of pictures when creating a number bond.

In Lesson 4, students will begin to consider decomposing as a whole separated into number pairs.

5 rabbits were hopping in a forest. When they heard a noise, 2 ran in a hole and 3 hid under a broken branch. From this statement students will create number bonds.




In Lessons 5 and 6, students will explore the concept that number bonds can be used to add and subtract. They will also begin to create stories to match their number bonds.
Tell a story that matches your number bond, and draw a picture to match your story.

## Ways to help at home

Use cereal pieces to solve the following problem: Mason has 10 pieces of cereal. He eats 4 pieces. How many pieces are left

How old are you now? Subtract one from that number and record it. Add 3 to that number and record it.

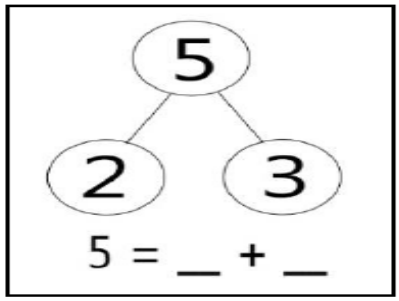
Count backwards from 100. Skip count to 100 by 10s. Which took longer? Write your answer.

Go outside and find two clovers. Write an equation to show how many leaves are on both clovers.

Use some fruit to solve the following problem: Ken has 5 bananas in a bunch. He eats some. There are 3 left. How many bananas did he eat?

Ben had 4 chairs at his kitchen table in the morning. After school there was only 1 chair at the kitchen table. How many chairs are missing?

There are 5 frogs in the pond. 3 jumped on the log and 2 stayed in the water.



# Standards for Mathematical Practice

## Mathematical Practices Addressed in this Module:

**MP.1** **Make sense of problems and persevere in solving them.** Students identify story problems as addition or subtraction situations and find the unknown. Students demonstrate with drawings and verbal explanations the referent of each number in a given problem type.

**MP.2** **Reason abstractly and quantitatively.** Students reason about the relationships between numbers in composition and decomposition situations. For example, they can use the number bond mat to show and explain that 6 and 4 make 10, and that 10 can be broken into 6 and 4.

**MP.4** **Model with mathematics.** Students use number bonds and addition and subtraction equations to model composition and decomposition. Students tell story problems using drawings, numbers, and symbols.

**MP.5** **Use appropriate tools strategically.** Students select and use tools such as drawings, number bonds, and the number path to solve problems.

**MP.7** **Look for and make use of structure.** Students draw the 5 + n pattern to reason about numbers within 10.

**MP.8** **Look for and express regularity in repeated reasoning.** Students add and subtract 0 to get the same number. They also use linking cubes to add and subtract 1 to reason about 1 more and 1 less than with numbers to 10.

**Grades K-5 Homework Help**
**Duval County Parent Helpline**

**Tuesday and Thursday Evenings (see dates to the right)**

**6:00 p.m. – 8:00 p.m**

Grades K-5 Homework Help

*You can access this help on your home computer so that we can demonstrate the mathematics on a white board or call in via telephone.*

**By Telephone:** (571)-392-7703 PIN: 731 439 616 412

**By Web:** click here

Want to help your child at home with DUVAL Math?

Every Tuesday and Thursday evening, we are offering a Homework Helpline! You can access using a home computer or call in via telephone. Use the link below to access more information!

http://www.duvalschools.org/Page/17877