

# FAMILY MATH

## Explore Composition and Decomposition

Dear Family,

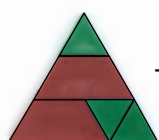
Students are learning to put together and take apart shapes and numbers. They use small shapes to create a larger shape. Then they count how many shapes, or parts, are used to make the whole shape. They use dot cards and pictures to find smaller numbers, or parts, inside of a larger number. Your child might say, “There are 7 dots. I see 5 on one side and 2 on the other.” We then write a number bond to show the parts and total. Look for more information about number bonds on the back of this page.

### Words We Are Learning

part

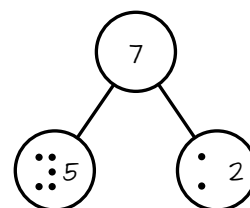
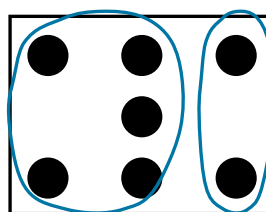
whole

total



There are 5 parts.

*This triangle uses 5 shapes, or parts.*



*Circling 5 dots and 2 dots is one way to break apart the 7-dot card. The number bond shows the part-total thinking.*

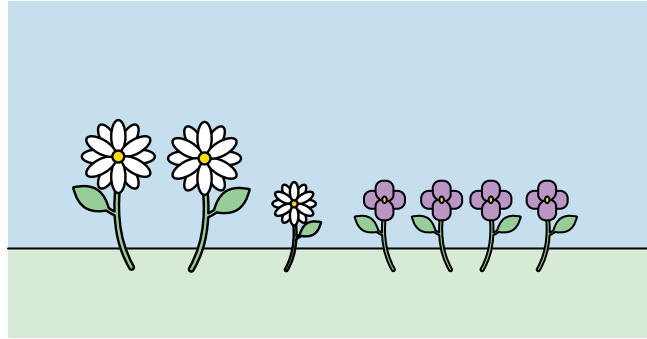
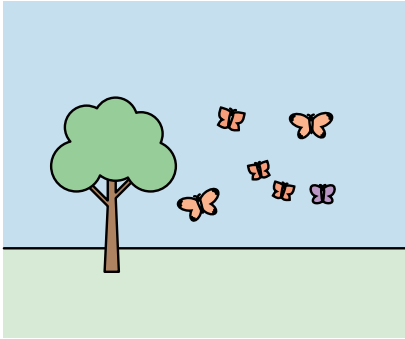
## At-Home Activities

### Activity Idea 1 Puzzle Time!

Invite your child to put a puzzle together with you. Puzzles are a fun way to see how smaller parts can be put together to make a larger shape, providing students with a hands-on experience with part-whole relationships.

### Activity Idea 2 What Parts Do You See?

Invite your child to look at each picture and circle the parts. Ask your child to explain how they sorted. There are many different ways to break apart the total. Some children may even break the total into more than two parts.



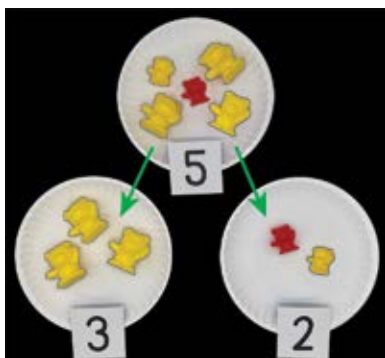
## Number Bonds

What is a number bond? A number bond is a tool that helps students see that numbers can be put together to make a total. It can also show how a number, or total, can be broken into parts in different ways. This is known as the part-total relationship.

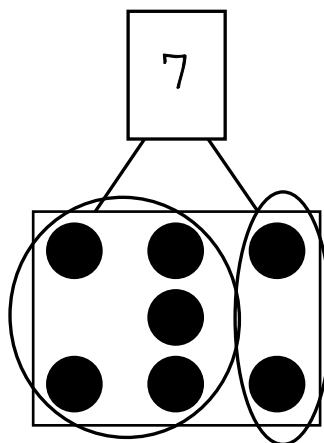
Why do we use number bonds? Number bonds serve at least three purposes:

- Help students think flexibly about numbers
- Prepare students to do quick calculations in their heads
- Offer a visual structure that helps students learn basic facts more easily

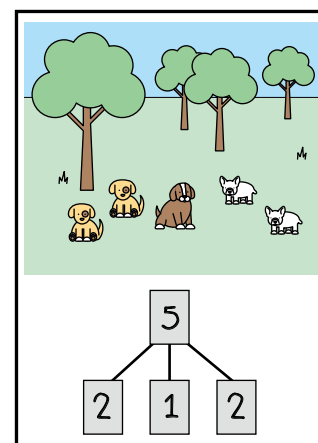
From the beginning of kindergarten, students start to learn part-total relationships. They do this when they count the items in a group, sort the items into smaller groups, and then count the items in each smaller group. The learning grows when they see the same number separated in many ways, initially through sorting the same group of objects in different ways and noticing that the total does not change. Students become ready to understand addition as putting parts together and subtraction as taking away a part of the total as they develop a deeper understanding of part-total relationships.



Sorting by size shows that 5 bears can be sorted into 3 big bears and 2 little bears.



There are 5 dots and 2 dots on a 7-dot card.



There are 5 dogs. 2 dogs are light brown, 1 dog is dark brown, and 2 dogs are white.