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ILLUSTRATOR:

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Eleven truck drivers deliver thirty-nine animals and the top of a merry-go-round ride. Add up the tigers, swans, frogs, horses, and pandas as they pass by.

Ages: 3 to 6 years

ATOS Reading Level:

1.6

Lexile: 490L

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Animals on Board

Where are all the animals going?

Topics: addition, equations

Activities To Do Together:

Before you read the book *Animals on Board* with your child:

- Count the tigers on the book's cover.
- Ask your child if they think the tigers are alive and to explain why or why not.
- Ask your child to predict where the truck is going and why it's carrying a load of tigers.

As you read *Animals on Board* with your child:

- Figure out the total number of tigers, swans, frogs, pandas, and horses. For each type of animal start by counting the number of animals on the first truck. Then count the animals on the second truck. Add these numbers together.
- Notice the animals in the second truck increase the total of each type of animal. By how much?
- Notice that the number of pandas doesn't change because there are no pandas or zero pandas on the second truck. When zero is added to a number, its value doesn't change.
- Predict what Jill is carrying in her truck.

When you are done reading *Animals on Board*:

- Talk about how and when you use addition with your child.
- Look at how the addition problems are written in the story. The first green truck carried 3 tigers. The second had 2 more. Notice this is represented by the equation $3 + 2 = 5$.
- Find out what happens when you add numbers in a different order. Start with two numbers, for example add $3 + 2$ and $2 + 3$. Do you get the same answer? Add a group of three numbers in a different order. For example $1 + 3 + 2$ and $3 + 1 + 2$. What do you notice?
- Figure out the total number of tigers, swans, frogs, horses, and pandas.
- Look at different ways that addition problems can be written:

$1+4=5$	$5=4+1$	$\begin{array}{r} 4 \\ +1 \\ \hline 5 \end{array}$	$\begin{array}{r} 1 \\ +4 \\ \hline 5 \end{array}$
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Questions for Mathematical Thinking:

1. What are some of the different ways that two trucks could be loaded with 10 animals?
2. Find the pages of the story that show two trucks driving five tigers. Why does the equation $3 + 2 = 5$ explain what is happening on these pages? What do the 2, 3, and 5 stand for?
3. What does it mean when something is equal? What is the purpose of the equal sign in the equation $2 + 3 = 5$?
4. If $2 + 3 = 5$, is it also true that $5 = 3 + 2$? Why do you think so? How could you prove you are correct?
5. Find the pages that show the trucks taking the pandas to the merry-go-round. Why does the equation $9 + 0 = 9$ explain what is happening with the two trucks? What is different about the second truck? What do you think that truck is doing?

Early Math Project Resources:

Visit [Animals on Board Activities](https://www.earlymathca.org/animals-on-board) (<https://www.earlymathca.org/animals-on-board>)

Follow this [link](#) or visit [earlymathca.org/external-resources](https://www.earlymathca.org/external-resources) for additional online resources

Vocabulary

Math words found in the story: add, all, another, big, count, eight, finally, five, four, little, more, nine, one, seven, six, ten, three, two, zero

Related Math Words: addition, all together, equation, sum, total

Words to Build Reading

Comprehension: chugs, load

Spanish Title: Animales a bordo

ISBN: 978-0062983268

Related Books: *Quack and Count* by Keith Baker

Click this link to the [World Catalog](#) or enter <https://bit.ly/43TMGkL> to find *Animals on Board* in the public library.



Math Connections: Use the book *Animals on Board* to explore counting, addition, and equations with your child.

Counting is an important precursor to addition. Count often with your infant or toddler. Count steps climbed, pieces of snack eaten, buttons buttoned, shoes tied, etc. Count with your child everyday and in many different situations and locations. Use the word “more” when talking to your child. Do you want more bananas? Do you want more blocks? This will support their understanding that something increases when there is more.

Count with preschool age children to figure out the total number of objects. Counting helps young children solve many simple problems. Encourage your child to find out how many you have when one more object is added to a small group. Combine small groups of objects and count them. For example if you start with two forks and add two more forks, find the total number of forks. Explain that addition is a process for figuring out the total number of objects. Ask your child to show you how they combine groups of objects and explain how they figured out the total. Through practice with counting, children begin to understand that adding more items to a group will increase the total amount of the group.

If your child is just beginning to learn about numbers. Point to and count the animals you see in the story. Point to the written numerals that represent what you see in the pictures. There are three tigers on one truck and two on the other. Count the tigers and point to the numerals 2 and 3. Talk about how two tigers and three more tigers equal a total of five tigers.

Children who are comfortable with counting and recognize the number of objects in a small group can practice the skill of counting on. For example, if combining four spoons with two spoons, your child could start with the four spoons saying the word “four” to represent the amount of spoons in the first group and add on by saying “five,” “six” to represent the two remaining spoons in the other group. Alternately your child might begin with the two spoons, saying “two” and follow this with the numbers “three,” “four,” “five,” “six.”

Look at the addition problems throughout the book and talk about how the numbers, addition signs, and equal signs represent what is happening in the pictures.



Talk about what it means for quantities to be equal. Talk about the important role of the equal sign in an addition problem. The sign means that the value of the numbers on one side of the equal sign is the same as the value of the numbers on the opposite side of the equal sign.

Introduce your child to different ways of writing addition problems or equations. For example, show them that the addition equation three plus one equals four can be written more than one way, as shown below:

$$\begin{array}{r} 3 \\ + 1 \\ \hline 4 \end{array} \quad 3 + 1 = 4 \quad 4 = 3 + 1$$

In the equations above, the equal sign and the line drawn between the numbers in the vertical representation of the equation mean the same thing.

Create some problems that have a value missing and figure out what number is needed to make both sides of the problem equal.

$$2 + \square = 4 \quad \begin{array}{r} 3 \\ + \square \\ \hline 5 \end{array}$$

Make some of your own addition equations. For example, if you have three crayons and four pencils write an equation to show how many objects you have: $3 + 4 = 7$. Explore whether $3 + 4$ and $4 + 3$ equal the same number. Does it matter which side of the equals sign the numbers are written on as long as both sides of the equation have the same value? Talk about why it works to write the pencil and crayon problem all of these ways:

$$\begin{array}{ll} 7 = 3 + 4 & 3 + 4 = 7 \\ 7 = 4 + 3 & 4 + 3 = 7 \end{array}$$



Age Level	Related Preschool Foundations and CA State Standards
Preschool/ TK	Number Sense 1.0 Children begin to understand numbers and quantities in their everyday environment. 1.2 Recognize and know the name of some written numerals. 2.0 Children begin to understand number relationships and operations in their everyday environment. 2.2 Understand that adding to (or taking away) one or more objects from a group will increase (or decrease) the number of objects in the group. 2.3 Understand that putting two groups of objects together will make a bigger group. 2.4 Solve simple addition and subtraction problems nonverbally (and often verbally) with a very small number of objects.
Kindergarten	Operations and Algebraic Thinking K.OA.1 Understand addition as putting together and adding to and understand subtraction as taking apart and taking from.

