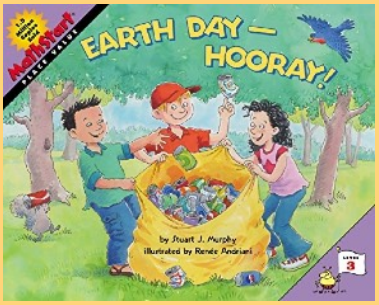


AUTHOR:

Stuart J. Murphy

Carly, Luke, and Ryan plan to recycle over 5,000 cans to buy flowers for the Earth Day celebration at Gilroy park. Will they make enough money to fix up the park in time for Earth Day?

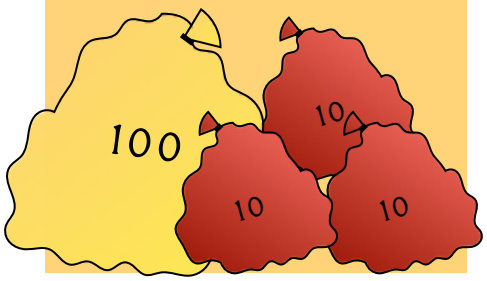
Ages: 5 to 9 years

Interest Level: Kindergarten to 3rd Grade

ATOS Reading Level: 3.7

Lexile: Not available

ISBN: 9780060001292



Earth Day- Hooray!

Will Ryan, Luke, and Carly collect 5,000 cans before Earth Day?

Topics: place value, addition

Math Connections: Use *Earth Day - Hooray!* to explore place value with your child. Place value is the value of each digit in a number. The place value is determined by the position of the digit. For example, the number 25 has a tens and a ones digit. The number 5 represents 5 ones while the 2 represents 2 tens. Explore numbers 1 to 20. Ask your child to identify the ones and tens digit for each number.

Explore numbers from 20 to 99. Write down 5 or more numbers on a piece of paper. Ask your child to draw a square around the number in the ones place and draw a circle around the number in the tens place. After your child is comfortable with two-digit numbers, look at three-digit and four-digit numbers. Have them identify the ones, tens, hundreds, and thousands digits.

An understanding of place value will help your child with multi-digit arithmetic. It is important for your child to know that each digit's place (ones, tens, hundreds, thousands, etc.) determines the value of the digit.

Children often begin learning how to add two digit numbers sometime during first grade. If your child has started to learn about two digit addition, ask them to show you how they have learned to add 12 + 23. If they are fairly comfortable with simple two digit addition, ask them to show you how they add 45 + 37 which involves regrouping. Regrouping is used in addition when the sum of two digits is more than 9 (it is also sometimes called carrying or composing). Ask your child to explain how they added 45 + 37. What strategies could your child use to show the value of each digit when adding? For example, use cubes or another manipulative or draw a picture to show the equation. Expanding each number 45 = 40 + 5 and 37= 30 + 7, may help your child better understand how to solve the equation.

Why do we line up the digits by place value when we do multi-digit addition? Does it help to visualize which numbers are in each place value? Why could visualizing the problem help when the number of digits in each number are not the same? For example, 16 + 8.

Go through the book and pause each time Carly, Luke and Ryan are adding the number of cans they collected for the day. Help your child write an equation containing the numbers. For example, on page 16, the kids have 5 bags, each containing 10 cans, and 6 single cans. An equation for this could be 10 + 10 + 10 + 10 + 10 + 6 =. What other equations can you make looking at pages 11, 20, 21, 22, 23, 28 and 29? Once your child writes the equations, ask them to identify the ones, tens, hundreds, and thousands for each number by pointing to the digit and saying its place value. Then solve the equations. Talk about how we commonly begin by adding digits in the ones place and follow by adding the digits in the tens, hundreds, and then the thousands place. Compare that approach to how the cans are added in the book.

Find a recycling place near you and make a plan to recycle cans for a month. With your child, estimate the number of cans they can collect. Talk about how to collect the cans and how they will store them. Then research the amount of money they will get for the cans. How is the amount of money determined? Per can? Per pound? Ask them to estimate the amount of money they will get for their cans. What will they do with the money? Write down the plan on a piece of paper and post it where they can see it throughout the month. At the end of the month, talk with your child about how closely they followed their plan and whether they collected their estimated number of cans. What did they do differently from the plan? Did they group the cans in a way that made it easier to count? What would they do differently if they want to continue to recycle?

Extension Questions:

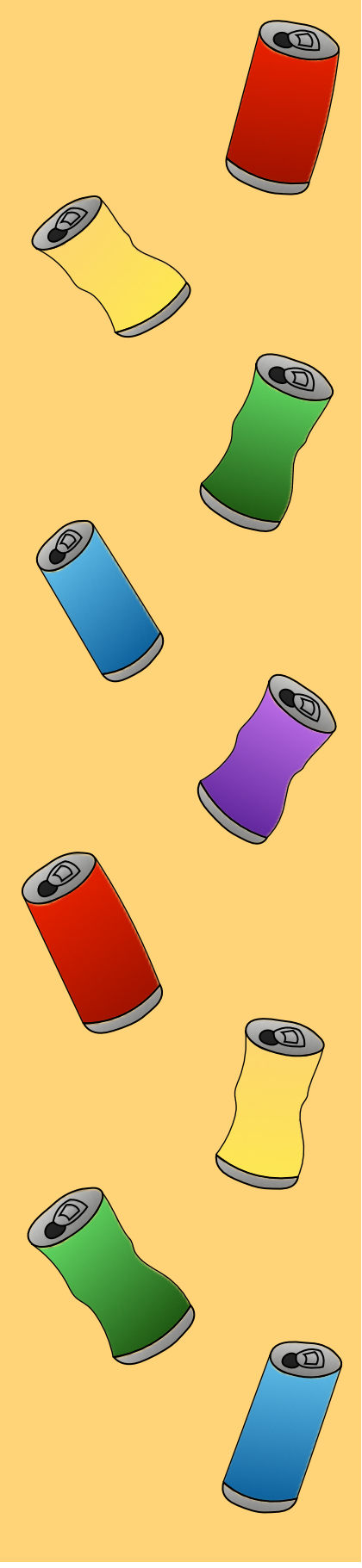
1. How would you group or gather cans to make it easier to count them?
2. Why is it important to understand place value?
3. How do you use place value when performing multi-digit arithmetic?
4. What is the value of each 4 in the number 4,444?
5. Why is it important to recycle? What were the benefits of recycling in the book?

Spanish Title: Not available

Related Books: *Zero the Hero* by Joan Holub; *A Fair Bear Share* by Stuart J. Murphy

Find this book at your local library: https://www.worldcat.org/title/earth-day-hooray/oclc/51297129?referer=di&ht=edition

Vocabulary for Building Math Concepts	10, 56, 60, 100, 359, 691, 1000, 1483, 2174, 2852, 3000, 5026, 247 million, 900 million, 1 billion, 64 billion, 80 billion, a lot, bigger, count, eight, empty, few, five, hundreds, lots, many, more, nine, only, pounds, six, small, some, sorted, thousands
Vocabulary for Extending Math Concepts	composing, equation, grouping, place value, regrouping, standard algorithm
Vocabulary for Reading Comprehension	aluminum, pollutes, recycle



Early Math Project Resources:

Get in Order: https://bit.ly/2S05tfn (English)

Place Value Toss: https://bit.ly/3xpuzn0 (English)

Spanish Versions Coming Soon!

Online Resources:

Book resources from MathStart: https://bit.ly/2HJyxCp

Age/Grade Level	Related Preschool Foundations and CA State Standards
Grades K-3	**California Common Core State Math Standards K-12** https://bit.ly/31No7bP
Kindergarten	**Number and Operations in Base Ten** **K.NBT.1** Work with numbers 11–19 to gain foundations for place value.
Grade 1	**Number and Operations in Base Ten** **1.NBT.2** Understand place value. **1.NBT.4** Use place value understanding and properties of operations to add and subtract.
Grade 2	**Number and Operations in Base Ten** **2.NBT.1** Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. **2.NBT.3** Read and write numbers to 1,000 using base-ten numerals, number names, and expanded form. **2.NBT.5** Use place value understanding and properties of operations to add and subtract.
Grade 3	**Number and Operations in Base Ten** **3.NBT.1** Use place value understanding and properties of operations to perform multi-digit arithmetic. **3.NBT.2** Fluently add and subtract within 1,000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.