


Core Focus

- Number: Writing two-digit numbers
- Number: Exploring the properties of odd and even numbers
- Number: Working with three-digit numbers
- Addition: Using the commutative property

Two-digit numbers

- Hands-on tools and visual aids help students develop a firm understanding of the base-10 number system (i.e. two-digit numbers are made up of tens and ones).

1.2 Number: Writing two-digit numbers and number names

Step In Look at the number on this expander. 

How do you read and say the number?

Color blocks to show the same number.

How many people would be needed to show the number with their fingers?

How would you write the number without using the expander?

How would you write the number name?

In this lesson, students write two-digit number names and relate the names to the number of tens and ones.

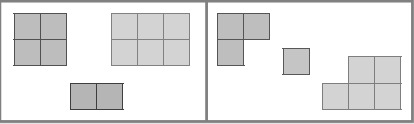
Odd and even numbers

- Students define odd and even numbers. They explore what happens when two even numbers are added, when two odd numbers are added, and when an even number and an odd number are added.

1.4 Number: Exploring the properties of odd and even numbers

Step In These number mats have been sorted into two groups.


How would you describe the sorting?



What types of numbers are in each group?

What are some other numbers you could show in each group? How do you know?

Even numbers can be shown with a *groups of two* arrangement, where every part has a partner.
For **odd** numbers, there is always one left over.



In this lesson, students investigate and identify odd and even numbers.

Three-digit numbers

- Once students have mastered two-digit numbers through grouping by tens and **place value**, they then apply this understanding to three-digit numbers.

Ideas for Home

- Talk informally with your child about two-digit numbers during everyday activities such as grocery shopping (comparing prices), watching sports (comparing teams' scores), and tracking the weather (finding the temperature in the morning and seeing how it changes during the day).
- Take turns with your child to give clues about two-digit numbers. E.g. say, "I'm thinking of a number between 21 and 24. It's an odd number. What could it be? How do you know?"

Glossary

- **Place value** describes how the value of digits in a number is determined by their position. Both 43 and 34 have the digit 4. The 4 in 43 represents 4 *tens*, while the 4 in the 34 represents 4 *ones*.

Helpful video

View these short one-minute videos to see these ideas in action.

www.bit.ly/OI_33

- Students read 463 as *four hundred sixty-three*. The word *hundred* is said after reading the number in the hundreds place, but the tens and ones are said together as *sixty-three*.

1.6 Number: Reading and writing three-digit numbers




Step In What number is shown by this picture of blocks?

How do you know?

How could you write the same number on this expander?

How do you read the number?
What parts of the number do you say together?

How would you read and say these numbers?

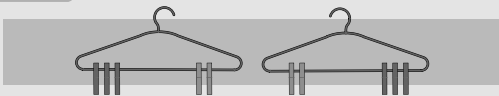
In this lesson, students represent three-digit numbers with base-10 blocks and record the numbers of hundreds, tens, and ones on a numeral expander.

Addition

- Students continue to build their understanding of addition and subtraction by thinking about putting parts together to make a total, as well as separating a total into parts.
- It is important to see that the order does not matter when two parts are put together. This characteristic is called the **commutative property**, illustrated by **turnaround facts**.


1.12 Addition: Using the commutative property (count-on facts)

Step In Look at these pictures. What do you notice?



What addition facts could you write to match the pictures?
What do you call a pair of facts like this?

These are called turnaround facts. Turnaround facts have the same parts and the same total.



In this lesson, a hanger and clothespins illustrate that 2 add 3, and 3 add 2 both make a total of 5.

Ideas for Home

- Look for sharing opportunities at home. E.g. ask, “If you and your friend share these 7 cookies, will you each get the same amount or will there be leftovers? How do you know?”
- When shopping, ask your child to point out if items are packaged in even or odd amounts. (E.g. hamburger buns and eggs are typically sold in packages of even numbers.) Also ask, “Can you find items sold in odd amounts, like three or five?”

Glossary

- The **commutative property** describes how the order of addends can change without changing the sum:

$$5 + 2 = 7 \text{ and } 2 + 5 = 7$$

These are called *turnaround facts*.

- Turnaround facts** have the same parts and same total.

$4 + 1 = 5$
is the turnaround for
$1 + 4 = 5$