

Core Focus

- Using a mental strategy (make-ten) for addition facts
- Thinking about one-half in a variety of ways



Addition

- Mental strategies like **count-on** and **double** have provided children with more adaptive, efficient, and flexible approaches to solving addition and subtraction problems rather than simply memorizing facts. In this module, students learn the **make-ten** strategy.
- **Make-ten** is an essential skill for mastering mental strategies in the base-10 number system. It is relatively easy for students because these facts have been practiced using finger pictures since Kindergarten.
- The **make-ten** strategy uses the **associative property of addition** to make mental calculation easier by “finding a ten” in an addition sentence where one addend is close to 10. E.g. see $9 + 6$, *think* $9 + 1 + 5 = 15$, or see $8 + 5$, *think* $8 + 2 + 3 = 13$.

7.3 Introducing the Make-Ten Strategy for Addition

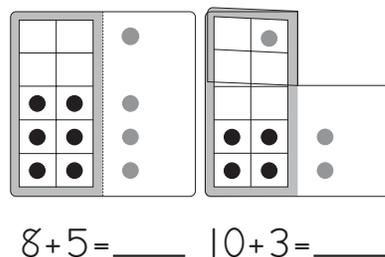
Look at this picture of counters.
How can you figure out the total?

I moved one counter to make a group of 10. This made it easier to add.

$9 + 3$
is the same as $10 + 2$.
 $10 + 2$ is 12.

In this lesson, students work with an addition sentence with one addend close to ten. Because ten is “nearby”, they use it to help find the total.

- A ten-frame is the perfect model to show how the **make-ten** strategy works. When there are two quantities less than 10, the frame is filled with the first quantity (8) and then part of the second (2) to make 10. The 10 plus the “leftover” (3) creates an easier equation to solve mentally: $10 + 3 = 13$.



- The **make-ten** strategy is the last of the main strategies students use to build their fluency with facts to 10 in Grade 1. Student choose their preferred method (**count-on**, **use doubles**, or **make-ten**) to learn facts and to solve problems.

Ideas for Home

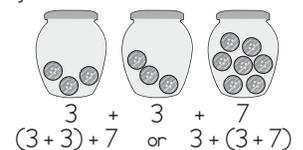
- Ensure your child already knows pairs of numbers that total to 10 (e.g. $1 + 9$, $2 + 8$, $3 + 7$, $4 + 6$, etc. plus their associated turnaround facts: $9 + 1$, $8 + 2$ etc.)
- Make 10 in everyday situations by asking, “How many more to make 10?” Talk with your child about how they think about numbers in everyday addition situations.
- Encourage the use of 10 to figure out totals greater than 10. E.g. “There are 4 eggs. How many more are needed to fill a carton that holds 12 eggs?” These could be $4 + 6 = 10$, $10 + 2 = 12$, or $4 + 6 + 2 = 12$.

Glossary

- ▶ This **Deca Hands** model shows two parts that make a total of ten. These examples show 1 (1 up and 9 down) and 3 (3 up and 7 down).



- ▶ The **associative property of addition** allows multiple addends to be added in any order.

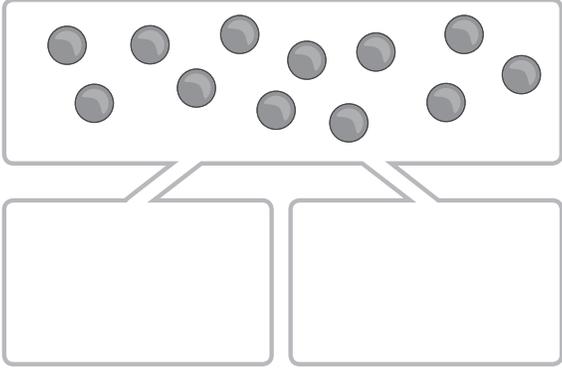


Fractions: One-Half

- Student explore **one-half** informally. Dividing a whole into two groups/pieces of equal size introduces the concept of **half** and the language of **one-half** as the name for each group/piece.
- There are two important ideas about **one-half**: one-half involves dividing something into two groups, and the two groups must be the same size.

7.9 Sharing Between Two

How many counters can you see?



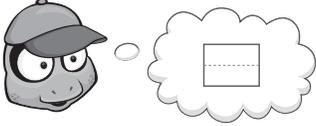
Can the counters be shared equally between two groups?
How do you know?

In this lesson, students share concrete objects between two groups to find the number of objects in each group.

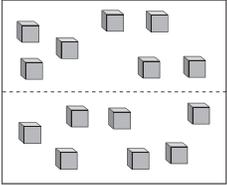
- The idea of splitting into equal groups is closely linked with fractions. Students will discover that even numbers can be shared between two and the number in one share is half of the total.

7.10 Identifying One-Half of a Collection

Look at this sheet of paper.
How many parts can you see?
What do you notice about the parts?
What is another way you could fold the paper to show two parts the same size?



How many cubes can you see?
How many cubes are in each share?
How many cubes are in one-half?



Write numbers to complete this sentence.

One-half of is .

In this lesson, students find one-half of a collection. They are also given the number in one-half of the collection and asked to give the total.

- The language of **one-half** is natural for a young child and is used only informally in this module. This language is foundational and will help children read half-past-the-hour times in the next module.

Ideas for Home

- Hold up two hands with all fingers raised and ask, “How many fingers in total? How many fingers on each hand? Is each group the same size? How many is one-half of ten? How do you know?”
- Highlight any equal shares when splitting portions of food into halves. Say “whole” or “total” and “half” when divvying out anything equally into 2 groups/parts. If one “half” of the candy bar is bigger and “not fair,” this is an opportunity to talk about how halves are equal and “fair.”
- Cut out paper shapes and fold them in half, crease, and unfold the paper. Remind your child that just dividing the shape into two parts does not necessarily make halves. To make halves, the two parts of the shape must also be the same size (in terms of area).