

1

LESSON 1

Group to make ten when there are three parts.

Lesson at a Glance

Students learn to add three parts efficiently by grouping addends that make ten. Students apply the commutative and associative properties to their work as they think of addends in different orders and group them to make ten. This lesson introduces the term *addend*.

Key Question

- How can we use ten to make an easier problem?

Achievement Descriptor

1.Mod3.AD2 Add within 20 with equations that have more than two addends. (1.OA.B.3, 1.OA.C.6)



1

Name _____

Make 10 to add.



Show how you know.



$$9 + 7 + 1 = 17$$

Agenda

Fluency 10 min

Launch 10 min

Learn 30 min

- Group to Make Ten
- Partners to 10
- Problem Set

Land 10 min

Materials

Teacher

- Cups (3)
- Pencils (13)
- Sticky notes (4)
- Computer with internet access*
- Projection device*
- *Teach* book*

Students

- Pencil*
- *Learn* book*
- Personal whiteboard*
- Dry-erase marker*
- Whiteboard eraser*

** These materials are only listed in lesson 1.
Ready these materials for every lesson.*

Lesson Preparation

Arrange the cups in a row facing students. Place 5 pencils in the first two cups and 3 in the last cup.

Fluency



Whiteboard Exchange: Three Addends

Students find the total of two addends and then add one more to prepare for similar work making ten.

After each prompt for a written response, give students time to work. When most students are ready signal for them to show their whiteboards. Provide immediate and specific feedback. If students need to revise, briefly return to validate their corrections.

Display $1 + 1 + 1 = \underline{\quad}$.

Write the equation.

Display the arms of a number bond underneath the first two addends.

Let's think. $1 + 1$ equals what number? Raise your hand when you know.

Wait until most students raise their hands, and then signal for students to respond.

2

$$| + | + | = \underline{3}$$

2

Display the total of the first two addends.

What is 2 plus 1 more? (*Gesture to the third addend.*) Write the total.

Display the total.

Repeat the process with the following sequence:

$2 + 1 + 1$	$3 + 2 + 1$	$5 + 2 + 1$
$3 + 1 + 1$	$3 + 1 + 2$	$5 + 1 + 2$
$4 + 1 + 1$	$1 + 2 + 3$	$1 + 2 + 5$

Teacher Note

This module marks a significant transition in students' strategies for addition and subtraction. Students move from counting on to making an easier problem as they begin to apply the make ten and take from ten strategies.

The following three essential skills support students in making this transition:

- Partners to 10
- 10+ facts
- Decompositions within 10

Many fluency activities in module 3 support students in maintaining fluency with these essential skills.

Teacher Note

To help students notice connections, have them record each series of problems without erasing. In the final two series, encourage students to notice that the total remains the same even though the addends change positions.

$$3 + 2 + 1 = 6$$

$$3 + 1 + 2 = 6$$

$$1 + 2 + 3 = 6$$

Show Me the Math Way: Totals of 10

Students show numbers the math way and say an equation to prepare for making ten as a strategy to solve three-addend equations.

Show me 5.

Show me 10.

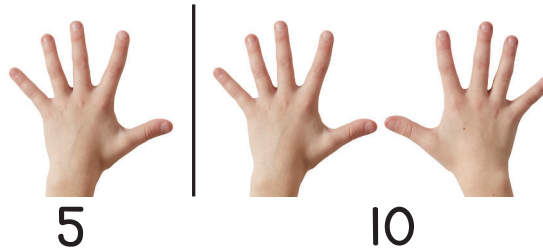
Show me 5.

How many more to make ten?

5

On my signal, say the addition sentence starting with 5. Ready?

$5 + 5 = 10$



Repeat the process of making ten with the following sequence of starting numbers:

9	1	8	2	6	4	7	3
---	---	---	---	---	---	---	---

Launch



Students share ways to organize a set and find the total.

Gather students and display the cupcake picture. Use the Math Chat routine to engage students in mathematical discourse.

How many cupcakes are there? How do you know?

Give students a moment of silent think time to find the total. Prompt students to give a silent signal to indicate that they are finished.



Teacher Note

The following fluency activities in module 3 topic A support students in maintaining fluency with the three essential skills as they transition from counting on to making an easier problem:

- Show Me the Math Way: Totals of 10
- Say Ten Push-Ups

Invite students to discuss their thinking with a partner. Circulate and listen as they talk. Have a few students share their thinking. Purposely choose work that allows for rich discussion about connections between strategies.

Then facilitate a class discussion. Invite students to share their thinking with the whole group, and record their reasoning.



I saw 4 on top and 4 under that. I know that's 8. Then I counted on 2 more so I know there are 10.

I saw the 6 cupcakes on the bottom first. Then I saw 2 and 2. I know 6 plus 2 is 8 and 8 plus 2 is 10.

I saw 4, 4, and 2. I know 4 plus 4 equals 8 and 2 more is 10.

Some students see the cupcakes in two parts. Others see three or more parts. We can combine two, three, or even four parts to find a total.

Transition to the next segment by framing the work.

Today, we will discover a helpful way to add three parts.

Language Support

Consider using strategic, flexible grouping throughout the module.

- Pair students who have different levels of mathematical proficiency.
- Pair students who have different levels of English language proficiency.
- Join two pairs to form small groups of four.

As applicable, complement any of these groupings by pairing students who speak the same native language.

Language Support

As students share, support student-to-student dialogue by inviting the class to agree or disagree, ask a question, give a compliment, make a suggestion, or restate an idea in their own words.

Learn

30

Group to Make Ten

Materials—T: Cups, pencils, sticky notes

Students group two addends that are partners to 10 to solve a three-addend equation.

Show three cups of pencils. Invite a student to count the pencils in each cup. Write the totals on sticky notes and place the sticky notes on the cups.

What equation can we write to show the total number of pencils in the three cups? Write it on your whiteboard.

$$5 + 5 + 3 = \underline{\quad}$$

Write $5 + 5 + 3 = \underline{\quad}$.

The parts in an addition equation or expression are called **addends. Addends are parts we are adding. (Point to the 5, 5, and 3.)**

What can we call the parts 5, 5, and 3 in this addition equation?

Addends

Why are there three addends in our equation?

There are three addends because there are three cups, or three parts.

Ask students to work in pairs to find the total number of pencils. Listen for a variety of strategies, but in particular, listen for adding 5 and 5 to make ten. Have one or two students share. If no one suggests making ten, model it.

13. I counted on. Fiiive, 6, 7, 8, 9, 10. Tennn, 11, 12, 13.

I know $5 + 5 = 10$ and 3 more is 13.



Language Support

Support students to learn the term *addend* by displaying addition equations. Ask students to identify the addends in each equation.

$$10 = 4 + 4 + 2$$

addends

$$4 + 3 = 7$$

addends

Teacher Note

Students apply the commutative property when they think of the addends in another order.



Students apply the associative property when they think of grouping addends to make the problem easier.

$$3 + 5 + 5$$

10

Ask a student to combine both groups of 5 pencils into a single cup and label it with the number 10.

Show the strategy of making ten first by drawing a number bond. Ask students to follow along on whiteboards.

5 and 5 are partners to 10. We can add 5 and 5 first to make ten. 10 and 3 make 13.

Is grouping 5 pencils and 5 pencils into one cup helpful? Why?

Grouping 5 and 5 is helpful because it makes ten.

It is easier to add 10 and 3 than 5, 5, and 3.

Return the pencils and sticky notes to their original cups. Rearrange the order of the cups to show 5, 3, and 5.

What changed about our cups?

You put them back, but now they are in a different order.

What three-addend equation can we write?

$5 + 3 + 5 = \underline{\quad}$

Write $5 + 3 + 5 = \underline{\quad}$ as students do the same. Ask them to work in pairs to find the total. Invite a student who uses partners to 10 to share.

I added 5 and 5 first; that is 10. I know that $10 + 3 = 13$.

Show the strategy of making ten first by drawing a number bond as students follow along.

Why did we group 5 and 5?

To make ten

What is $10 + 3$?

13

Ask students to tell a partner the strategy of making ten first in their own words.



$$5 + 5 + 3 = 13$$



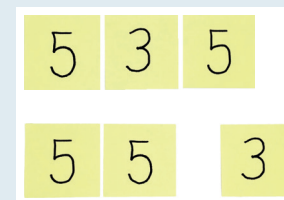
$$5 + 3 + 5 = \underline{13}$$

UDL: Representation

Showing labeled pencil cups provides a concrete model for students to associate with the three-addend equation. Physically combining the groups of 5 pencils provides a concrete experience with the grouping represented by the number bond.

UDL: Action & Expression

As students transition to representing their thinking with the number bond, consider providing sticky notes or construction paper squares with the addends written on them. Students can physically group the addends to show their thinking.



Partners to 10

Students group two addends in a three-addend equation to make ten first.

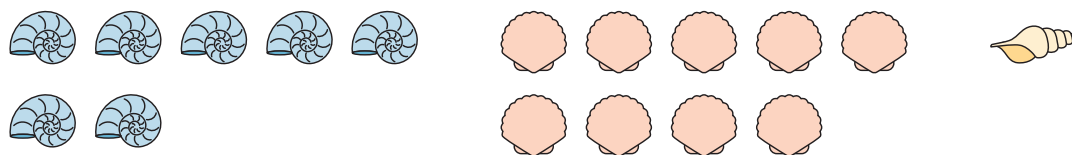
Play a game to review partners to 10. Give the following directions for the game:

- Students stand and face a partner.
- Partner A puts up some fingers, showing any number other than 0 or 10.
- Partner B looks at partner A’s fingers and thinks about partners to 10. Partner B shows the part that makes ten.
- Partners give each other a high ten because they made ten. Then they switch roles.



Have pairs play for about a minute. Then tell students to ready their whiteboards for the Whiteboard Exchange routine.

Display the picture of shells.



What three addends do you see?

7, 9, 1

Which two addends are partners to 10?

9 and 1

Write the number sentence with three addends. Show how you made ten.

$$7 + 9 + 1 = \underline{17}$$

$$\begin{array}{c} \vee \\ 7 + 10 \end{array}$$

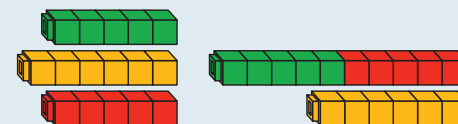
Use the Whiteboard Exchange routine to provide immediate feedback:

- Tell students to turn their whiteboards over so the red side is up when they are ready. Say, “Red when ready!”
- When most are ready, tell students to hold up their whiteboards to show you their work.

Differentiation: Support

If students need concrete practice, give them 30 Unifix Cubes. Provide a different color cube for each ten. Write a three-addend expression, such as $5 + 6 + 5$. Have students make a different color cube stick to show each addend.

Tell students to combine the two cube sticks that make ten. Ask them to add 10 and 6 and state the total.



Promoting the Standards for Mathematical Practice

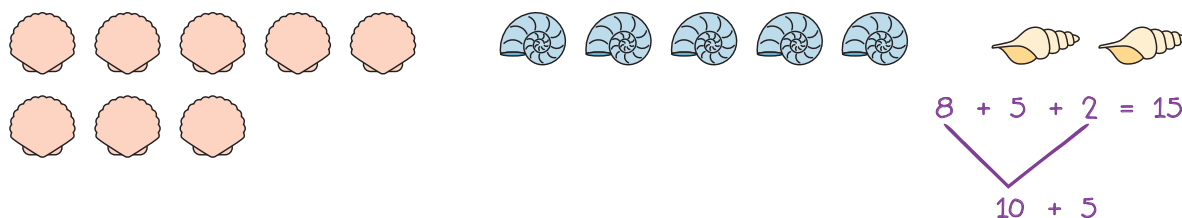
Students look for and make use of structure (MP7) when they look for ways to make ten and use structure to solve problems more efficiently.

The problems in this topic are purposely chosen so that two of the three addends can always be combined to make a ten. It is important for students to practice composing ten in this topic so that they are prepared to decompose an addend to make ten in future topics.

- Give quick individual feedback, such as “Yes!” or “Check your total.” For each correction, return to validate the corrected work.

Choose a student or two to share their work, highlighting how they made ten by grouping two addends. Students may or may not use number bonds to show how they made ten. Some may circle the addends that make ten instead.

Display another picture of shells and repeat the Whiteboard Exchange routine with the new problem.



Problem Set

Differentiate the set by selecting problems for students to finish independently within the timeframe. Problems are organized from simple to complex.

Directions may be read aloud.

Language Support

Pair English learners by native language and direct them to share their reasoning in their native language first to support conceptual understanding. Help students organize their ideas.

To support transitioning into English, provide sentence stems such as the following:

There are _____ shells. I know because _____.

Land

10

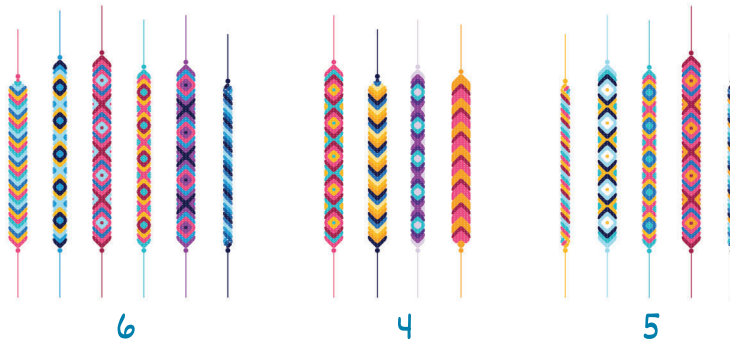
Debrief 5 min

Objective: Group to make ten when there are three parts.

Gather students and display the picture of three groups of bracelets. Pair students and allow time for them to notice and wonder about the picture. Then share a story.

There are three friends. They all wear bracelets. Imani has 6 bracelets. (Write 6.) Senji has 4 bracelets. (Write 4.) Corey has 5 bracelets. (Write 5.)

How many bracelets are all three friends wearing?



What equation could we write to find how many?

$6 + 4 + 5 = \underline{\quad}$

Write the equation.

What can we add together first to make this problem simpler, or easier?

6 and 4 because they make ten

$$\begin{array}{r} 6 + 4 + 5 = 15 \\ \swarrow \searrow \\ 10 + 5 \end{array}$$

Draw a number bond to show that 6 and 4 make ten.

How did we use 10 to make this problem easier?

Now the problem only has two addends, not three.

10 + 5 is easy. I just know the answer.

Ask students for the total of 10 + 5 and write it to complete the equation. Have students answer the original question by using a complete statement.

We can add partners to 10 first to make ten, and then add the other addend. Finding the total that way is called the make ten strategy.

Exit Ticket 5 min

Provide up to 5 minutes for students to complete the Exit Ticket. It is possible to gather formative data even if some students do not complete every problem.

Sample Solutions

Expect to see varied solution paths. Accept accurate responses, reasonable explanations, and equivalent answers for all student work.

1

Name _____

1. Make 10 to add.

Show how you know.

$5 + 2 + 5 = 12$

$9 + 1 + 8 = 18$

Copyright © Great Minds PBC 5

2. Make 10 to add.

Show how you know.

$6 + 2 + 8 = 16$

$9 + 7 + 1 = 17$

6 **PROBLEM SET** Copyright © Great Minds PBC

3. Make 10 to add.



Show how you know.

$$1 + 9 + 3 = 13$$

$$5 + 6 + 5 = 16$$

$$9 + 8 + 2 = 19$$