InsightMath Texas

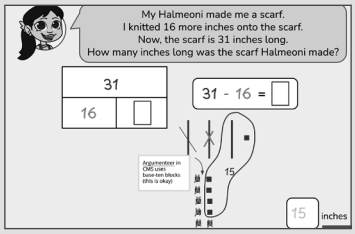
Exploring Addition and Subtraction within 100

Family Guide | Grade 2 | Unit 4

Your student is exploring how fluently solving addition and subtraction problems relies on flexibly selecting models and strategies.

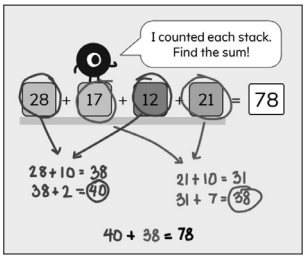
Key Math Ideas

In this unit, students build their understanding of how models can be used to represent and understand problems and support problem solving. Through exploration of different types of problems, students learn to select and combine appropriate models and strategies based on the relationship between the numbers in the problems and what they know and need to find out.



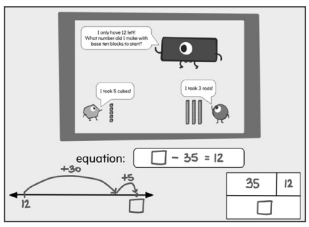
→ In the beginning of the unit your student will learn to

- describe that, in addition, the numbers can be added in any order and the total will stay the same;
- use estimation to explain why their answer is or is not reasonable. (For example, "I estimated 47 + 31 as 50 + 30, which is 80. My answer was 79 and that is close to 80, so my answer is reasonable.")



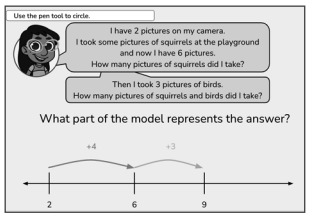
→ In the middle of the unit your student will learn to

- identify or create models and equations to represent a variety of word problems;
- compare, choose, and use appropriate strategies to solve addition and subtraction problems.



→ By the end of the unit your student will learn to

- choose and use appropriate models and strategies to solve a variety of two-step addition and subtraction word problems;
- efficiently add and subtract number between 0 and 100 using chosen strategies.



Helpful Hint

When solving word problems, sometimes students look for keywords like "in all" or "how many,", but these can lead to misconceptions. For example, "how many" can mean "how many more?" or "how many to make the sets equal?" or even in upper grades "how many equal groups?" To support your student's understanding of the word problem, ask them to act or draw it out to help understand the bigger picture of the problem. The priority is for students to make sense of a problem holistically so they can be flexible mathematical thinkers.

Tips for Supporting Your Student at Home

Questions to Ask Your Student

→ At the beginning of the unit:

- How can we use tens and ones to add or subtract?
- What do you do with more than 10 ones? Why?
- How can we subtract using the number line?

→ In the middle of the unit:

- How can you break apart or group together numbers to make adding easier?
- Is your answer reasonable? How can you estimate to decide?
- How can you represent the problem with a strip diagram?
- How does the strip diagram help you understand what you know and do not know?

→ By the end of the unit:

- What do you do first? What do you do next?
- What is the best way to make sense of the problem?
- What strategy did you use to add or subtract? Why?

If...	Try...
your student switches the order of numbers when subtracting, for example, begins to solve 54 - 16 by subtracting 50 - 10 and 6 - 4 . . .	asking them to look back at the original problem to see which number is the starting amount, and which number is being subtracted. Suggest that they show 54 - 10 and then subtract 6.
your student is confused by open equations with missing addends like in the equation 3 +__ = 8 . . .	having your student describe what is happening in the situation (for example., "A number is added to 3 and you end up with 8").

Student Strengths Spotlight

We make a plan to solve a problem and change our plan if we need to.	Before starting to solve, students consider the best strategy for the addition or subtraction situation based on what they know and what they are trying to find out.
We model our thinking.	Students show their addition and subtraction strategies, then compare strategies to learn from one another.

Try This Together!

- **Take a Walk!** Take a walk with your student, and while you are walking, pose different addition or subtraction problems. For example, "I see 23 flowers, 4 are pink and the rest are blue. How many blue flowers do I see?" Then ask your student to ask you addition or subtraction problems to answer.
- **Adding Measurements.** Pose some addition questions to your student about the length or height of objects around the house. For example, ask "If we stacked a chair on top of the table, how tall would it be?" Have your student measure the height of the chair and table separately (to the nearest whole inch) and add to find the height. Ask them to explain their addition strategy to you. Consider trying this with more than two objects, too!