## WORD PROBLEMS

## Adding \& Subtracting to 20



Make Learning Fun!
Original songs and videos to introduce and reinforce the skill.



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## Word Problems

Solving word problems is a complicated, but critical skill for students to learn early on. After all, word problems pose real-life situations where math is applicable. Word problems are really the key we want to help all students find the meaning in math.

In first grade, it is important to explicitly teach addition and subtraction word problems. While students are still learning the basic addition and subtraction facts, learning how these operations apply in life will help them understand the meaning of the operations.

In first grade, it is important to teach students tools they can use to help
them solve word problems. Students should use manipulatives, drawings, and equations.
Allow regular access to manipulatives. Allow students a choice of which tools to use.
It is also important to introduce the different types of addition and subtraction word problems. This is NOT something students need to memorize or master; however, if students are taught to understand if the problem is asking them to put together, take apart, or compare, they are gaining a larger understanding of addition and subtraction operations.

Another key skill that should be introduced in first grade is the problemsolving process. Even as adults, when we are presented with a word problem, many of us automatically go through a problem-solving process in our brains. The process is not completely rigid, and much of it we learn to do mentally. If students are explicitly and repetitively taught this process early on, they will also learn to internalize and shorten the process to become stronger mathematicians.

## * <br> Word Problems to 20

Day I: Tell students-Word problems are real-life situations that involve using math. In first grade, we will be working on solving addition and subtraction word problems up to 20. Word problems can be confusing, so it is important that we use steps to help us understand and solve word problems. These steps will help us learn to tackle word problems, and with a lot of practice, we won't even need to think about the steps! But since we are novices with problemsolving, we need to think about these steps and use our posters to help us. Show students the chart that walks through the problem-solving process. Introduce the song about the word problem-solving process. Lisfen to the song two times, while referring to the posters.

Mini Lesson: Today, we will begin to practice using the problem-solving process. We will work as a class and in groups. I will pose a problem, then I will model how to use the problemsolving process to solve this problem. Today, we are going to use very small and simple numbers, because I want our focus to be on the problem-solving process.

- Show students the problem "Cookie Snack" on a poster.
- Model how to follow the problem-solving process, beginning with reading the problem, visualizing, and retelling. When it comes to solving the problem, show students the anchor chart with "Three Ways to Solve a Problem." Decide on a method, such as drawing a picture, and model solving the problem. When it comes to checking work, select a different method to check work.
- Be sure to explicitly model each problem-solving step, while showing students how to refer to the Problem-Solving Process Posters.

Guided Practice: Complete the next introductory problem "cookout" as a class, with student input.

Group Practice: Students work on the final two introductory problems as a group. Give students the word problems, printed out and pasted on a half sheet of chart paper or poster board. Review group work expectations. Reinforce the importance of students walking through each step in the problem-solving process together. Rotate to assist and question students as they work.

Closing: Select one group to share their work using the problem-solving process for each blem.

# Types of Story Problems 



## Adding To <br> You start with <br> $\qquad$ and more gets added.

 Key Words: altogether, in all, sum, total You start with $\qquad$ and some gets taken away.
Key Words: left, less, remains

## Putting Together Putting grouses together

Key Words: altogether, both, in all, sum, total

## $\odot \odot$

Taking Apart Taking groups sport:
Key Words: left, less
Comparing

Finding the difference.
Key Words: more than, less than, difference

There is a missing piece at **Unknown Variable the beginning or in the middle of the problem.
Key Words: some

## I. $\cdot \cdot$ • Adding 3



## Directions

I. Divide class intro groups ( I keep my students in their table groups of $4-5$ students).
2. Select a problem that matches the type of problem that you want kids to work on independently (ex. Adding together, taking apart, comparing).
3. Make enough copies for each group to have one problem. Paste or staple the problem on a half sheet of chart paper or a large piece of construction paper.
4. For problems with blanks, tell students to write a name of their choice.
5. Allow time for groups to work through all problem-solving steps (I have mine posted and look for evidence of each step as I circulate).
6. While circulating ask questions that guide students to understand errors and explain their thinking.
7. Select one group that has a good understanding of the problem to share their strategy with the class.

## Cookie Snack <br> had baked goods for snack.

She had 2 chocolate chip cookies and I cupcake.
How many baked goods did _________ eat?

## ookout

was having a cookout.
He made 5 cheeseburgers.
He ate two cheeseburgers.
How many cheeseburgers does

have left?



Name: $\qquad$ Date:

## Dog Walking

Beth started a dog walking business.
She walked 10 dogs in December.
She walked 8 dogs in January.
How many dogs did Beth walk in December and January?


Use the problem-solving steps. Check the box after you have completed each step.


Name: $\qquad$ Date:

## Library Visits

Mrs. March's class checked out 14 books.
They returned 7 of their books.


How many books does Mrs. March's class still have checked out?

Use the problem-solving steps. Check the box after you have completed each step.


## Quiz Comparing Word Problems

Solve each problem using the problem-solving strategies.
I. The San Diego Zoo has IU elephants and II zebras. How many more elephants do they have than zebras?
2. Ken has 10 cousins.

Tanya has 16 cousins.
How many more cousins does Tanya have than Ken?

Name: Date:

## Picking Flowers

Cambria picked 20 flowers.
She gave some to her mom.
Now Cambria has 3 flowers.
How many flowers did Cambria give to her mom?


Use the problem-solving steps. Check the box after you have completed each step.


## Test: Word Problems

Solve each problem using the problem-solving strategies.
I. Annie collected 12 pennies.

Her sister gave her six more.
How many pennies does Annie have now?
2. Sandy collected 18 shells at the beach. She gave 4 to her mom. How many shells does Sandy have left?

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