Literature Vocabulary
tin
flour
flower
dent
footprint
mystery
solve

Math Vocabulary
two-digit numbers
tens and ones
regroup
exchange
trade

Materials
- Base ten blocks – 1 hundred, 18 tens, 18 units per student
  4 dice per pair of students

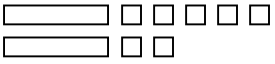
BLM Combining Tens and Ones - 1 per student

Time Clue
BB = 1 minutes
CI = 26 minutes
AC = 1 minutes

ELPS (*English Language Proficiency Standards*)
2B, 2C, 2F, 2H, 2I, 3D, 3E, 3G

CCRS *(College and Career Readiness Standards*)
ELA
II.B.1; III.B.1,2,3; IV.A.2,3; IV.B.1,2,3
MATH
I.A.1; I.B.1; VIII.B.1,2; IX.A.1; IX.B.1,2; IX.C.1,3; X.A.1,2
CROSS DISCIPLINARY
1.A.1,2; I.B.1,2,3,4; I.C.1,2,3; II.A2

SMART BOARD
Create the models.



Unit 3, Lesson 1

1st – 2nd

TV Lesson

Read objectives while pointing to the words in the math lesson objectives. After each math objective, show children what that means.

Math Objectives:
- Create sets of tens and ones using concrete objects to describe, Compare, and order whole numbers.
- Model addition (and subtraction) of two-digit numbers with objects, pictures, words, and numbers.

Language Objectives:
- Explain the process of adding 2-digit numbers.
- Use the math vocabulary during the activity.
- Discuss solution strategies.

Building Background, Math
You were creating 2-digit numbers during your classroom lesson. We'll be creating 2-digit numbers and adding them today. Let's add a simple pair of numbers.

Comprehensible Input, Math
Please use the base ten blocks to represent the number 15. (*Pause before you demo by showing the digits 15 and saying, "That would be 1 ten and 5 units, placing the blocks as you describe them."*)

Now, I want to add 12 to that. How would you represent 12 using the fewest number of base ten blocks? (*Pause, then write the digits 12 on the board, placing the appropriate blocks while you say, "that would be 1 ten and 2 ones."*)

Let's combine the two sets. I like to start with the ones. How many ones or unit cubes do we have? (*Response time; then add them aloud: five add two equals seven units.)*

Do we need to trade?

AZULITO: You could have also asked if you need to regroup or exchange.

Yes, that is correct, Azulito. Trade, regroup and exchange are the same names for taking 10 of the smaller place value and exchanging them for one of the next larger place value. Here we are taking ten ones and trading them for one ten. *(physically do so)*

Now, do we have enough ones to trade, exchange, regroup for a ten?

Unit 3, Lesson 1 — 1st – 2nd

TV Lesson - continued

AZULITO: No we don't. We need 10 units to trade for one ten. We don't have enough.

TEACHER: Excellent. So we now have seven units. How many tens do we have when we combine the two sets? (*pause, then count 1 ten add 1 ten equals 2 tens*)

So when we add 15 and 12, our answer or sum is 27.

AZULITO: That was easy! Can we try a harder one?

TEACHER: Of course. Let's find the sum of 27 and 15. What are the fewest number of base ten blocks you can use to make 27? Please tell your teacher, girls and boys. *(pause, then say and demo 2 tens and 7 ones)* And what are the fewest number of blocks we can use to make 15? *(same process)*

Let's combine the two sets. What is the sum of 7 and 5? *(pause)*

AZULITO: I know – the sum of 7 and 5 is 12! I counted on *(demo)*.

TEACHER: Do we have enough to regroup? (*response time*) Yes we do. We have more than 10 units. Let's take 10 of these units and regroup them for one ten. (*Do so physically, counting out the 10 units, and physically "trading" them in for the one ten which you put in the row of tens and tell students to do so.)*

Now, how many ones do we have? *(pause)* We have 2 ones.
And how many tens do we have? *(pause)* We have 4 tens 10, 20, 30 and the exchanged 10 makes 40. Our number is 4 tens and 2 ones or 42.

You have a record sheet, **BLM** Combining Tens and Ones. Let's write what we just modeled.

First, you see that we have our number sentence 27 add 15 equals.

Now, we modeled that with base ten blocks. Let's draw the base ten blocks, but instead of rectangles and squares, let's just draw lines for tens and dots for ones. We have 2 tens (*draw 2 lines horizontally*) and we have 7 ones. (*Draw 7 dots, in rows of 5.*) I like to draw my units in sets of five so I can easily see when I have ten.

Reminder:
Use the terms Regroup, Trade and Exchange interchangeably. These are common terms being used in curriculum today across the USA. We need to promote flexibility in our students' thinking so that they can see that the action is much more important than the verbal label we put on it. As long as we are mathematical in our verbiage so the word describes what we are mathematically accomplishing, the word is acceptable.

Unit 3, Lesson 1 — 1st – 2nd

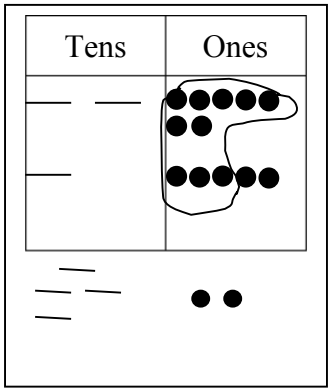
TV Lesson - continued

Now, let's draw the second number we modeled. (*Demonstrate the same way, telling students to do the same.*)

Now, when we combine, let's draw circles around all of the units that make ten. *(do so)* We exchanged these 10 units for 1 ten. What did we do with that ten?

AZULITO: We put it over the rest of the tens.

TEACHER: Yes we did. So let's draw our little ten line here so we can combine it with the other tens *(do so as per the model)*.



How many ones do we have left in the ones? *(2)*
How many tens do we have now? *(4)*
What is the sum of 27 and 15? 42

Now let's show what we did using numbers to represent the quantities.

We had 2 tens *(write 2 in tens column)* and 7 ones *(write 7 in the ones column)*; and we had 1 ten *(write as demonstrated)* and 5 ones *(write as demonstrated)*. We found that we had 12 ones *(write in the cloud),* which is 2 ones and 1 ten *(write as demonstrated)*.

Once we finished all of our trading, we have a total of 4 tens and 2 ones.

Tens	Ones
1	
2	7
1	5
4	2

1

AZULITO: Now I see what my older brother is doing when he adds big numbers. I understand that now!

TEACHER: Very good, Azulito, very good! Why don't we try a couple more problems to help you and the boys and girls have a picture in your mind of the base ten blocks. We'll be using the blocks for awhile, but once you have a picture of the blocks, and can really see what you are doing when you trade, regroup, exchange, AND you learn your basic addition and subtraction facts, you'll be solving problems more quickly and easily!

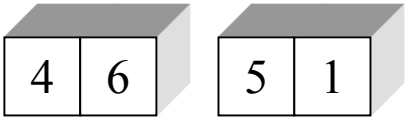
Unit 3, Lesson 1 — 1st – 2nd

TV Lesson - continued

AZULITO: OK, I'm ready! Are you ready boys and girls? But, I see that you have four dice. What are you going to do with the dice?

TEACHER: In the next two problems, we are going to throw the four dice and make two 2-digit numbers to add together. The girls and boys are going to play a game in their follow-up activity, so we can practice that part of the game now.

We're going to throw the four dice at the same time. *(do so)*
Make any two 2-digit numbers using them (*just take two dice and put them side by side so you see the 2-digit number; then do the same for the other pair* – here's an example).



Now we'll follow the steps we did in our first problem.

Process:

1. Model with base tens to the side of the record sheet, making sure you ask if you have enough units to trade, then doing so if necessary. WARNING: you are working with dice, so you might need to trade ten 10s for a hundred. That's OK – make it a natural progression. You can make a ten in a column, therefore you need to trade.
2. Draw a picture of the model in the first table.
3. Ask if there are enough units to trade, if so, do so.
4. Look at the tens column. If you had to regroup, simply do so by circling the 10 tens, then drawing a small square to the left of the tens column.
5. Work through the numerical representation. If you had to exchange for 10 tens, just draw a little cloud out to the left of the addition sign. Count by TENS when you add up the tens column so you actually get to 100. You want to write the actual sum in the cloud. Students need to see that we take short cuts when writing numbers.

AZULITO: I get it! I get it! And you can teach me the game after we leave. Before we go, I want to tell the girls and boys about my Azulito's Corner task for today. It's going to be fun!

TEACHER: Thank you, Azulito. It sounds like you and I will learn new strategies from our students! And now, let's see what we learned today and how we learned it!

Objectives: And now before we go, let's review what we have learned today! *(do so)*

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Azulito's Corner
Lesson 1
Talk about your strategy for finding the missing number in What's Missing. Please post all of the different strategies used in your class.

BLM Unit 3, TV Lesson 1 **Combining Tens and Ones**

One per student

Tens	Ones

$$\begin{array}{r} 27 \\ +\ 15 \\ \hline \end{array}$$

Tens	Ones

Tens	Ones

$$\begin{array}{r} \_\_ \\ +\ \_\_ \\ \hline \end{array}$$

Tens	Ones

Tens	Ones

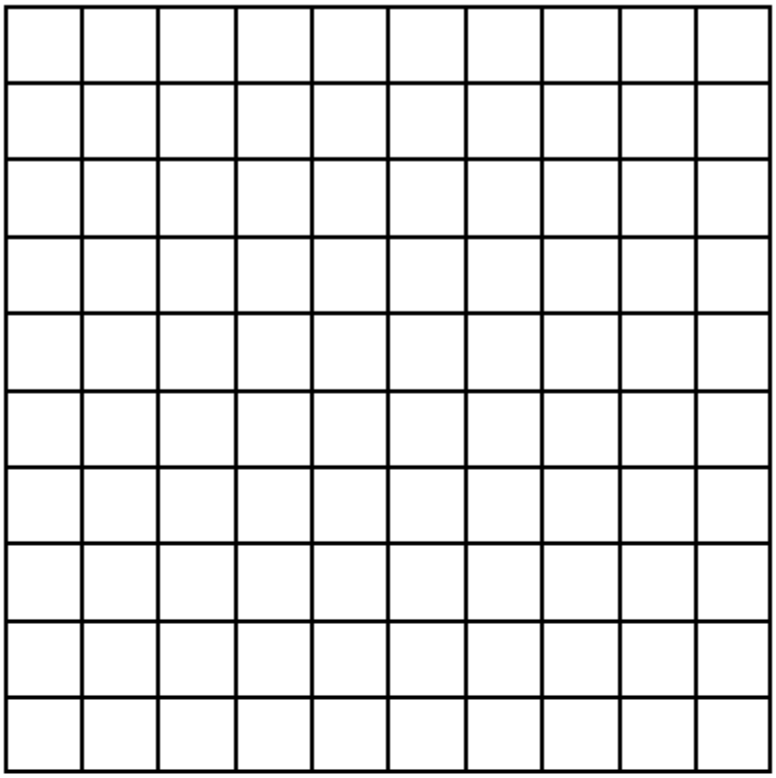
$$\begin{array}{r} \_\_ \\ +\ \_\_ \\ \hline \end{array}$$

Tens	Ones

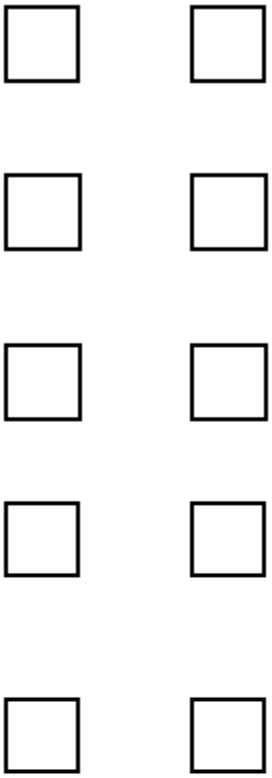
Tens	Ones

Paper Base Ten blocks

Hundreds flat



Ones



Tens