PBS Lesson Series

Math: Grade 4, Lesson 1, Multi-Digit Whole Number Addition

Lesson Objective: Addition using like units
Practice Focus: Multi-digit whole number addition using like units
TN Standard: 4.NBT.B.4
Teacher Materials:

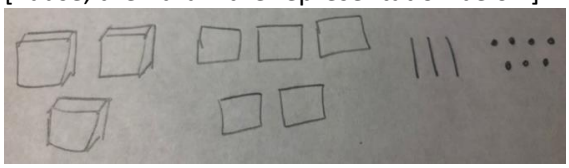
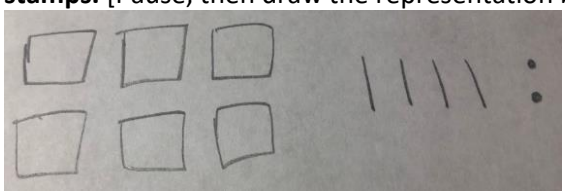
- White board and markers

Student Materials:

- paper and pencil, and a surface to write on
- the student packet for Math, Grade 4, Lesson 1 which can be found at **www.tn.gov/education**

Teacher Do	Student Do
Opening **Hello! Welcome to Tennessee's At Home Learning Series for math! Today's lessons is for all our 4th graders out there, though all children are welcome to tune in. This lesson is the first in our series on this topic.** **My name is ___ and I'm a _____ grade teacher in Tennessee schools! I'm so excited to be your teacher for this lessons. Welcome to my virtual classroom!** **Today we will be learning about adding multi-digit whole numbers using a place value chart Before we get started, to participate fully in our lesson today you will need:** • **paper and pencil, and a surface to write on** • **the student packet for Math, Grade 4, Lesson 1 which can be found at www.tn.gov/education** **Ok, let's begin!**	Students get materials ready for the lesson.
Intro [Write 303.] **Can you say the number in unit form?** [Pause] **That's right, 3 hundreds and 3 ones**. [Write 303 + 202 = ____.] **Say the addition sentence, and answer in unit form.** [Pause] **Good Job! 3 hundreds 3 ones + 2 hundreds 2 ones = 5 hundreds 5 ones.** **Write the addition sentence on your paper.** Repeat the process and sequence for 505 + 404; 5,005 + 5,004; 7,007 + 4,004; and 8,008 + 5,005.	Students answer. Students answer.
Teacher Model **Today we are going to use drawings of base ten blocks to represent numbers. Let's practice how to draw base ten blocks. Draw these with me.** **To represent 1, draw a single dot.** (Model this)	Students draw the base ten blocks as the teacher models.

To represent 1 ten, draw a vertical line, or a rod. (Model this) **To represent 1 hundred, draw a square, also called a flat.** (Model this) **To represent 1 thousand, you will draw a 3D square like this.** [Model this] [Draw this example shown below. Point and explain how this example shows 2 ones, 5 tens, 3 hundreds and 2 thousands.] **This drawing represents the number 2,362.**  **Now, Ms. Cole and Ms. Dowling want to know the largest number they can represent with their base ten blocks**. **Ms. Dowling has 3 thousands, 1 hundred, 3 tens, and 4 ones.** **Ms. Cole has 2 thousands, 4 hundreds, 9 tens, and 3 ones.** **Let's draw our base ten blocks to help us solve this problem.** [Draw a representation of each teacher's base ten blocks using 3D squares, flats, rods and circles for students to view.]	
How many thousands blocks do they have altogether? [Pause] **That's right – 5 thousands because Ms. Dowling has 3 thousands and Ms. Cole has 2 thousands.**	Students answer.
How many hundreds? [Pause] **That's right – 5 hundreds because Ms. Dowling has 1 hundred and Ms. Cole has 4 hundreds.**	Students answer.
How many tens? [Pause] **That's right – 12 tens because Ms. Dowling has 3 hundreds and Ms. Cole has 9 hundreds.**	Students answer.
How many ones? [Pause] **That's right – 7 ones because Ms. Dowling has 4 ones and Ms. Cole has 3 ones.**	Students answer.
Let's write this number in standard form. Are there any units you need to regroup to be able to write it in standard form? [Pause] **That's right! The 12 tens can be written as 1 hundred and 2 tens because both are equal to 120. That means all together there are 6 hundreds and 2 tens.**	Students answer.

How many total blocks do they have altogether? [Pause] **That's right! 5,627** **Let's write this in standard form.** [Draw the base ten blocks. Point and explain how they show 7 ones, 2 tens, 6 hundreds and 5 thousands.]	Students answer.
<u>Guided Practice</u> **Katie has 3,537 stamps in her collection and Steve has 642 stamps in his collection. How many stamps do Katie and Steve have in all?** [Pause] **That's right! 4,179** **Let's draw base ten blocks to represent this situation**. **Try drawing base ten blocks to show Katie's 3,537 stamps.** [Pause, then draw the representation below]  **Now, try drawing base ten blocks to show Steve's 642 stamps.** [Pause, then draw the representation below]  **Great Job! Now let's think about what it would look like to combine these drawings to find out how many stamps Katie and Steve have in all.** [Reference base ten blocks drawing as you ask and answer the following questions]	Students answer.
What is the sum of the digits in the ones place? [Pause] **That's right - 9**	Students answer.
What is the sum of the digits in the tens place? [Pause] **That's right - 7**	Students answer.
What is the sum of the digits in the hundreds place? [Pause] **That's right - 11**	Students answer.
What is the sum of the digits in the thousands place? [Pause] **That's right- 3**	Students answer.
Which place value has a sum of digits greater than 10? [Pause]	Students answer.

That's right – the hundreds **How can you find the total number of stamps Katie and Steve have in all?** [Pause and provide a possible answer] **You can think of the 11 as 1 thousand and 1 hundred. Then add the thousands, hundreds, tens and ones. So, Katie and Steve have 4,179 stamps in all.** **How can you use this method to add 1,145 and 1,225? Draw the base ten blocks if it helps you. Otherwise, you may just try to combine like units: ones with ones, tens with tens, hundreds with hundreds, and thousands with thousands.** [Pause and provide time for student to work, then model adding using like units] **How did it go?** [Pause] **Great! I knew you could do it! The sum of these numbers is 2,370.**	Students answer.
<u>Independent Practice</u> **Great work, boys and girls! Today we have worked really hard together to explore addition with base ten drawings! You did amazing work! After the video, you will have some problems to practice on your own. Good luck and do your best!**	
<u>Closing</u> **I enjoyed learning about math with you today! Thank you for inviting me into your home. I look forward to seeing you in our next lesson in Tennessee's At Home Learning series.** **Bye!**	

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