Grade 3	Lesson: 3-7 Models for Subtracting 3-Digit Numbers	Reference to English

Math Standard(s): 3.NBT.2 also 3.OA.8 **Domain: Numbers and Operations in Base Ten**

Content objective(s):	**Language Objective(s):**
Students will subtract 3-digit numbers using place-value blocks or pictures and record the results using the standard subtraction algorithm. *I can subtract 3-digit numbers using models and record them using standard subtraction algorithm.*	Students will explain the steps of 3-digit subtraction to their neighbor. *I can explain the steps of 3-digit subtraction to their neighbor.*
Essential Understanding: Models and the standard algorithm for subtracting 3-digit numbers are just an extension to the hundreds place of the models and standard algorithm for subtracting 2-digit numbers.	**Required Academic Vocabulary for Word Wall:** **Listen:** **Read:** **Write:** **Speak:** **Sentence Frame:**
Materials: • Place-value blocks or teaching tool 18 • Guide Practice page 80 • Whiteboards, erasers and markers	**Additional Lesson Vocabulary:** Regroup, subtraction,

Lesson: **Instructional Time: 35 minutes**

Opening: (5 minutes)

- Pass out whiteboards, erasers and markers.
- Draw a $100 bill on the board.

T: "You have learned how to regroup to subtract 2-digit numbers. Today, you will regroup to subtract hundreds, tens, and ones."
T: "Look at this $100 bill. That is a lot of money and that is all the money you have and you owe your friend $10. What could we do?"
S: *will respond, "break it up."*
T: "Break it up into what. Please draw on your whiteboard one way you could break up a $100 bill."
S: *will draw how they can break up a $100 bill.*
T: "Please show me your boards. I can see that you chose both similar and different methods to break up the $100 bill."

- Go through the different ways the students chose to break up the $100 bill. – 10 tens, 4 twenties and 2 tens, 100 ones, 20 fives…
- Ask a couple of students to come up and explain how they broke up the $100 bill.

Introduction to New Material (Direct Instruction): (5 minutes)
T: "Let me tell you a story. You have 2 hundreds, 4 tens, and 6 ones and you need to take away 1 hundred, 5 tens, and 3 ones. Please draw a picture of how you could solve this problem."

- Draw the problem on the board without solving it.

S: *will draw 2 hundreds, 4 tens, and 6 ones one their board. Then they will subtract 1 hundred, 5 tens and 3 ones.*
T: "Please show me your boards."

Guided Practice: (12 minutes)
Use the modeling cycle:
Teacher Does:
T: "Let's work together to solve the problem. I have draw 2 hundreds, 4 tens, and 6 ones or 246 on the board. I will now show you 2 hundreds using place-value blocks."

- Show the students 2 hundred flats.

T: "Now I will show you 4 ten rods and 6 ones units."

- Show the students 4 ten rods and 6 ones units.

T: "We want to subtract 1 hundred, 5 tens and 3 ones. We will start by subtracting the ones. Who wants to come up and take away 3 ones units?"
S: *will come up and take 3 of the 5 ones units away.*
T: "First we subtracted the ones, next we subtract the tens or the hundreds?"
S: *will say, "we will subtract the tens next."*
T: "We are going to subtract 5 tens from 4 tens. How can you subtract 5 tens?"

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S: *will say, "we need to regroup, 1 hundred into 10 tens."*
T: "Who can come up and regroup 1 hundred into 10 tens?"
S: *will come up and regroup 1 hundred into 10 tens.*
T: "Now, how many tens do we have? Tell your neighbor and write it on your board."
S: *will count the tens and tell their neighbor that there are 14 tens. They will also write it on their board.*
T: "Count with me, 1,2,3,4,5,6,7,8,9,10,11,12,13,14 tens. Let's take 5 tens away. Now how many tens are left?"
S: *will say, "there are 9 tens left."*
T: "Tell your neighbor how many hundreds, tens and ones do we have now and write it on your board."
S: *will turn to their neighbor and say, "there are 0 hundreds, 9 tens and 3 ones, or 93." Then they will write it on their whiteboards.*
T: "Please show me your boards."
T: "Review time…what did we do first?"
S: *will say, "subtract the ones."*
T: "First we subtracted the ones. Then what?"
S: *will say, "subtract the tens, and or regroup."*
T: "Second we subtract the tens and sometimes regroup. We did we do next?"
S: *will say, "subtract the hundreds."*
T: "You are right. First we subtract the ones, second we subtract the tens and when needed regroup, third we subtract the hundreds."
T: "I am now going to show you how to do it in standard form."
T: "We have 246 – 153. What do We do first?"
S: *will say, "subtract the ones" or "subtract 6 minus 3."*
T: "Yes, we subtract 6 minus 3. That equals 3. I will write 3 underneath."
T: "What is the next step?"
S: *will say, "subtract the tens" or "subtract 4 minus 5."*
T: "Can we subtract 4 minus 5? What do we need to do?"
S: *will say, "we need to regroup."*
T: "I will take 1 one hundred from the hundreds and add it to the tens. Now we have 14 minus 5. What is 14 minus 5?"
S: *will say, "14 minus 5 equals 9."*
T: "I will write 9 underneath the tens column."
T: "Is there anything else we need to do?"
S: *will respond, "no."*

<u>All Students Do:</u>
T: "Now I want you to work with a partner and solve 1 more problem. I will write 249 minus 187 on the board."
- Write the problem on the board.

T: "As you work with your partner, please tell your partner the steps of subtracting 3 digit numbers.
1. **Subtract the ones – and regroup when needed.**
2. **Subtract the tens – and regroup when needed.**
3. **Subtract the hundreds."**

T: "Please show your work on your board. I will check your work. I will now separate you into pairs. You will have 3 minutes."
S: *will work with a partner and solve the subtraction problem and will state the steps used to solve the problem to their partner.*
- Teacher will walk around helping students as needed and keeping the students on task.

T: "10,9,8,7,6,5,4,3,2,1. Time is up. Please show me your boards."
S: *will show the teacher their boards.*

Independent Practice: (8 minutes)
T: "Now I need to work independently on 5 more problems. You need to solve problems 3, 6, 9, 12, and 15 from your textbook on page 80. You will have 7 minutes."
- Write problems 3, 6, 9, 12, 15 on the board to help the students remember their assignment.

S: *will return to their desks and solve the subtraction problems on a white piece of paper.*

Closing: (4 minutes)
- Pass out whiteboards, erasers and markers.

T: "Let's do one more problem together. I will read you the story and you will need to write down the important information on your whiteboards."
T: "The Miller family is driving from Washington DC to Cleveland and then to Cincinnati (show a map and look at the mileage chart)**. So far the Millers have traveled 127 miles. How many miles are left in their trip. What should we do first?"**
S: *will say, "add Washington DC to Cleveland and Cincinnati to Cleveland."*

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T: "Good, on your whiteboard add 249 plus 372."
S: *will add 249 plus 372 on their whiteboards.*
T: "Please show me your boards."
T: "Please read the addition sentence to your partner."
S: *will read, "249 plus 372 equals 621" to their neighbor.*
T: "Awesome, first we added our mileage together. But the question is asking how many miles are left in the trip. What do we do next? Tell your neighbor."
S: *will say, "next we subtract 127 miles from 621."*
T: "Please write the next step on your board."
S: *will write 621 – 127 on their boards.*
T: "Please turn to your neighbor and explain the steps you will use as you solve the problem."
S: *will turn to their and explain the steps they will take to solve the problem as they solve the problem.*
T: "When we subtract 621 minus 127 what is the first thing we do?"
S: *will say, "first we subtract the ones."*
T: "Can we subtract 1 minus 7?"
S: *will say, "no, we need to regroup."*
T: "I will take one of the tens and add it to the ones."
T: "What is 11 minus 7? Write it on your board."
S: *will write 4 on their board.*
T: "What do we do next?"
S: *will respond, "we subtract the tens."*
T: "Can we subtract 1 minus 2?"
S: *will respond, "no, we to regroup."*
T: "Okay, I will take one of the hundreds and add it to the tens."
T: "What is 11 take away 2?"
S: *will say, "11 take away 2 equals 9."*
T: "Yes, I will write that on the board."
T: "Now, let's subtract the hundreds. What is 5 hundred minus 100? Please write in on your whiteboard."
S: *will write 500 - 100 = 400 on their boards.*
T: "Please read the subtraction sentence to your neighbor."
S: *will turn to their neighbor and say, "621 minus 127 equals 594."*
T: "Let's read it together."
T: "Good job! They still have 549 miles left."

Assessment:

Guided and Independent Practice problem 3, 6, 9, 12, 15

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