MA.2.NSO.2.2

Overarching Standard: *MA.NSO.2 Add and subtract two- and three-digit whole numbers.*

Benchmark of Focus

MA.2.NSO.2.2: Identify the number that is ten more, ten less, one hundred more and one hundred less than a given three-digit number.

> *Example:* The number 236 is one hundred more than 136 because both numbers have the same digit in the ones and tens place but differ in the hundreds place by one.

Related Benchmark/Horizontal Alignment

- MA.2.NSO.1.1/1.3/1.4

Vertical Alignment

Previous Benchmarks
- MA.1.NSO.2.3

Next Benchmarks
- MA.3.NSO.1.4
- MA.4.NSO.1.1
- MA.4.NSO.2.6

Purpose and Instructional Strategies

The purpose of this benchmark is to extend the work done in grade 1 with two-digit numbers to find the number that is 10 more or 10 less, 100 more or 100 less than a given three-digit number.

- Instruction includes encouraging students to use additive reasoning to determine patterns for identifying a number that is 10 more, 10 less, 100 more or 100 less.

- Instruction supports helping students make a connection to the position of a digit within a multi-digit number.

- Instruction includes the use of a hundreds and thousands chart or a number line.

- Instruction is not intended to focus on addition and subtraction strategies.


Common Misconceptions or Errors

- Students may incorrectly assume ten more, ten less, one hundred more and one hundred less can only be applied to multiples of ten.

- Students may have difficulty determining 10 more or 10 less than a three-digit number, especially when combining tens to make a hundred or decomposing a hundred into tens.

  - For example, students may not be able to determine that 10 more than 192 is 202. Utilizing a number line or chart may be helpful in visualizing this.

Strategies to Support Tiered Instruction

- Instruction includes the use of place value cards, base-ten blocks, and/or a place value chart. Students build a three-digit number using the place value cards and identifies numbers that are 10 more, 10 less, 100 more, and 100 less. Then, students relate the base ten manipulatives to the place value cards.
    - For example, using the place value cards for the number 428, build the number. Then, separate your number into expanded form showing 400, 20, and 8. Then, the teacher asks students which value would you change if we were making a number 10 more or 10 less? [20]. The teacher asks, "Which value would you change if we were making a number 100 more or 100 less?" [400]. Create the different numbers that are 10 more, 10 less, 100 more, or 100 less with 428.

$$400 \quad 20 \quad 8$$
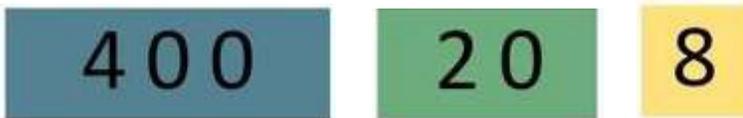
- Instruction includes the use of place value cards and base ten blocks, and/or a place value chart. Students build a three-digit number using the cards that has a value of 9 in the tens place. Then, students identify the values of 10 more, 10 less, 100 more, and 100 less. They may have difficulty knowing how to exchange the 10 tens to the next hundred.
    - For example, using base ten blocks and place value cards have students build 293. Have students represent 10 more, 10 less, 100 more, and 100 less. Students will need to exchange the 10 tens for 1 hundred when creating 10 more. If students have difficulty, the teacher asks, "How many tens are in 100?" "How many tens in 200?"

$$200 \quad 90 \quad 3$$
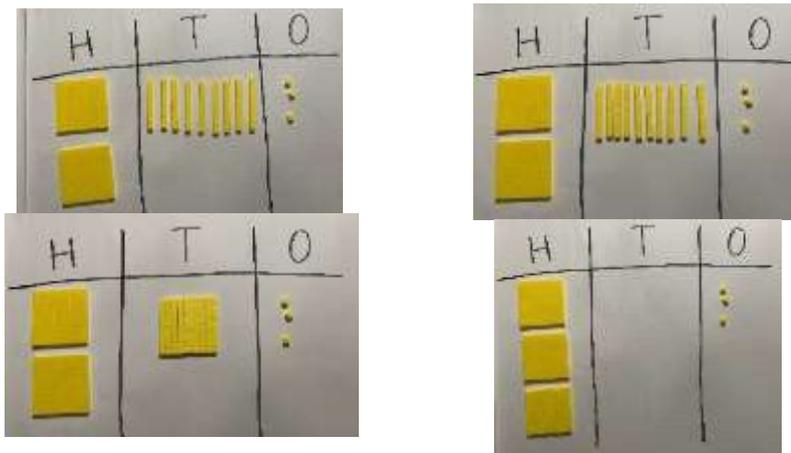
Questions to ask students:

Ask: What number is 100 less than 643? Explain your thinking.

- o Sample answer that indicates understanding: *100 less is 543 because in the hundreds place the value decreases by 1.*

Ask: How can you use a number line to show your thinking of 10 more than 295 (or any other given number)?

- o Sample answer that indicates understanding: *I start at 295 then make 10 jumps forward to the number 305.*

Ask: Explain the pattern you can use to add or subtract 10 and 100 from any number.

- o Sample answer that indicates understanding: *If I'm adding or subtracting 10 then I can add or subtract one from the number in the tens place. If I'm adding or subtracting 100, then I can add or subtract one from the number in the hundreds place.*

Instructional Tasks

Instructional Task 1 (MTR.2.1)

Melanie is thinking of a number. Her number is one hundred more than 456. One student found the solution by adding 100 + 456. Use place value cards to show another way to find Melanie's number.

Enrichment Task 1

A series of numbers is written below. What is the missing number? Complete the statement to identify how each number changes.

234, 244, 254, ___

Each number in the series is _____ more than the previous number.

Enrichment Task 2

Repeat the previous task with the following series of numbers:

766, 776, 786, ___, ___

Instructional Items

Instructional Item 1

Determine whether the number in column A is 10 more, 10 less, 100 more or 100 less than the number in column B. Write your response in column C.

A	B	C
546	536	
465	565	
91	101	
183	83	

Additional Resources:

[CPALMS Resources](#)

Khan Academy Video: [Adding 10 or 100](#)

Resources/Tasks to Support Your Child at Home:

Give your child a 3-digit number to represent using [virtual base ten blocks](#). Then ask your child to show 10 or 100 more, or 10 or 100 less. Repeat with different numbers in the range of 100-900.

Use the [1-1000 chart](#) to find and discuss patterns when adding or subtracting 10 or 100. Ask your child if they notice which digits stay the same and which digits change when adding and subtracting 10 or 100.

Play 'Guess my Number' – say to your child "My number is 100 less than 458. What number is it?" Continue playing with different 3-digit numbers and include: 10 more, 10 less, 100 more, 100 less.