NEWSLETTER

4 Module I

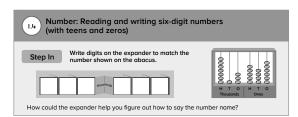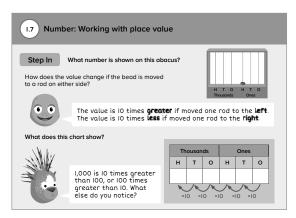**ORIGO STEPPING STONES 2.0**

Core Focus

- Number: Reading and writing six-digit numbers and working with place value
- Multiplication: Extending the twos, fours, eights, and tens facts and exploring patterns

Number

- Number sense strategies from previous grades now extend to six-digit numbers. Students learn to read, write, draw, compare, and order these numbers using familiar and new models.

- Six-digit numbers are read in groups of three digits (starting from the left). Use of the **numeral expander** in all these lessons help students make sense of reading and ordering these numbers. The **abacus** also helps students visualize place value.

In this lesson, students use a numeral expander to read and write six-digit numbers. An abacus is used to represent these numbers.

In this lesson, students consider the role of place value to write six-digit numbers. They use an abacus model and place-value chart to assist in creating new numbers.

Ideas for Home

- Find six-digit numbers like city populations, or make up your own, and ask your child to read them out loud.

- Compare six-digit numbers and ask your child to explain why one number is greater or less than another.

Glossary

‣ **Numeral expanders** show how the position of each digit in a number represents a designated place value.
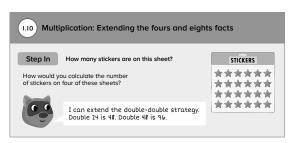

‣ An **abacus** is a calculation tool that excels at demonstrating place value. For example, this model shows how *3 ten-thousands* is the same as *3 × 10,000*, and so on.

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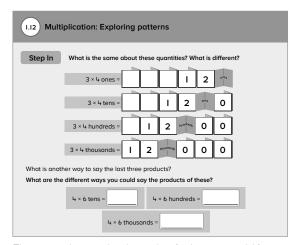
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(4) Module I

Multiplication

- Students extend multiplication strategies that were explained in earlier grade levels to multiply one- and two-digit numbers, including the **double-double strategy** and the **double-double-double strategy**.

In this lesson, students extend strategies to multiply one- and two-digit numbers.

- Students explore patterns involving place value in multiplication. The numeral expander provides a place-value model that discourages inaccurate explanations like *I add zeros when I multiply by multiples of 10.*

The numeral expander shows that 3 × 4 tens equal 12 tens, which is the same as 120, etc. Accurate place-value language supports deep understanding of multiplying and dividing by magnitudes of ten.

Ideas for Home

- Practice the doubles strategy with household items. Three pairs of shoes is double double the total number of shoes, or double double 6 would describe the total number of eggs in two full cartons.

Glossary

▸ The **doubles strategy** is a method of mental multiplication. If a number is multiplied by a power of two, the calculation can be performed by repeatedly doubling the numbers. For example, $4 \times 8 = 32$ is the same as $4 \times 2 \times 2 \times 2$, or *double double double 4*.