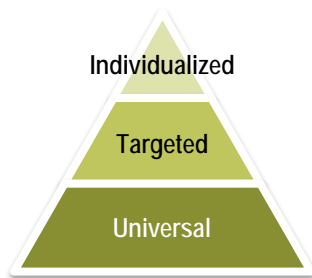


## Place Value Sentence Strips



Place value sentence strips are pieces of paper that are unfolded to reveal the value of digits in large numbers. They are used to create a visual representation of place value and the expanded form of numbers.



A teacher's understanding of their students' learning needs helps determine when to provide universal, targeted, or individualized instructional strategies. For some students, universal instructional strategies may be enough to meet their learning needs. For others, more targeted instructional strategies are the starting point for implementing the curriculum. The strategy described is a guideline that teachers can use depending on the learning context.

### Why use this strategy in an inclusive learning environment

- Extends students' understanding of place value (320 is 3 hundreds, 2 tens and 0 ones or 32 tens).
- Helps students relate place value to the expanded form of a number.
- Supports the development of number sense.
- Provides a visual representation for numbers.

### How this strategy could be used in an inclusive learning environment

1. Write a large number in expanded form on a strip of paper.

$$7000 + 400 + 30 + 5$$

2. Fold the strip over like an accordion so that the **four** touches the **seven**. Cover all but the first digit of the first number.

$$7000 + 400 + 30 + 5$$

$$7400 + 30 + 5$$



3. Now do the same for the **three** and the **five**, placing one on top of the other to reveal the sum.

$$\begin{array}{|c|c|c|c|} \hline 7 & 4 & 3 & 0 \\ \hline \end{array} + 5$$

$$\begin{array}{|c|c|c|c|} \hline 7 & 4 & 3 & 5 \\ \hline \end{array}$$

4. Ask students to unfold a different part of the strip to discover different ways to express the large number as an addition sentence.
5. Explore number composition with students using different expanded form sentence strips (e.g., add 74 hundreds and 3 tens and 5 ones to make 7435). Include sums in which 0 is one of the interior digits such as 4035 to highlight that 4035 is  $4000 + 0 + 30 + 5$ .
6. Have students create their own expanded form sentence strips. This will allow students to stretch a standard form number out into expanded form and back again.

$$7400 + 30 + 5$$

$$7000 + 400 + 30 + 5$$

$$7000 + 435$$

$$7430 + 5$$

### Tips for individualized supports

- Have students build each addition sentence using concrete base-ten materials.
- Start with numbers that students are familiar with, ensuring understanding of the concept before moving on to larger numbers.
- Colour code each number place so that students can see how each section fits together when the sentence strip is folded.
- Encourage students to keep their sentence strips in math folders or journals for future reference.

