

# Number and Operations in Base Ten

Students in third grade continue developing place value understanding as they work within the base ten number system. They extend their knowledge of place value and number sense beyond procedures and algorithms as they work to explain and reason about the answers they get—for example, when they perform rounding and multi-digit arithmetic.

Students will apply their understanding of place value and algorithms to fluently add and subtract within 1,000. *Fluency* is applying accuracy, efficiency (using a reasonable number of steps and amount of time), and flexibility (adjusting strategy to suit the situation) to solve problems. Students will use strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

## The Grade 3 Common Core State Standards for Number and Operations in Base Ten specify that students should—

- Use place value understanding and properties of operations to perform multi-digit arithmetic.

The following hands-on activities support students' understanding of place value. Tools and models, such as numbers lines and place value charts, will help students develop rich understanding of the base ten number system. Mathematically proficient third graders communicate precisely by engaging in discussion about their reasoning using appropriate mathematical language. They should be given opportunities to explain their thinking, show and explain their work by using strategies and algorithms, and verify that their answers are reasonable.