

## Mathematics

### 5<sup>th</sup> Grade Student Profile

By June, math students should be able to understand the purpose and patterns of the place value system. Additionally, they should be able to formulate, represent, and use algorithms with multi-digit whole numbers, decimals, and fractions with flexibility, accuracy, and efficiency.

Students will apply their understanding of fractions and fraction models to represent the addition and subtraction of fractions with unlike denominators and develop fluency in calculating sums and differences of fractions. They will also apply the concepts of multiplication and division to multiply and divide fractions through the hundredths place.

Fifth grade students will apply their understandings of models of decimals, decimal notation, and properties of operations to add and subtract decimals to the hundredths. They will develop fluency in these computations, and make reasonable estimates of their results.

Students should make sound predictions and generalizations based on patterns and relationships that arise from numbers, shapes, symbols, and data. Students will also interpret data using visuals including charts, tables, and graphs.

In geometry, students will describe figures by their attributes and specific locations in the plane. Students will recognize volume as an attribute of three-dimensional space. They will also use the attributes of shapes as well as appropriate units, strategies, and tools in order to determine volumes to solve real world and mathematical problems.

Fifth grade students will demonstrate how to make sense of problems and persevere in solving them. They will also reason abstractly and quantitatively. They will construct viable arguments and be able to critic the reasoning of other students. They will model their mathematics and choose appropriate math tools. They will be aware of the need for precision in their mathematics work and use strategies to look for patterns and repeated reasoning.

