

Middle School

Using National Sciences Foundation rationale, our middle school mathematics curriculum makes important real life connections to math and science applications beyond the classroom. Students learn the importance of mathematics in various careers and understand the interdisciplinary connections between mathematics they are studying and the arts, sciences, and even history and language arts through the cross-curricular connections that are made throughout the year. Whether a student is beginning middle school mathematics, working in a regular Algebra or Geometry class or taking honors classes, mathematics courses help him learn to think logically, critically, and analytically while preparing for the rigors of the advanced mathematics courses of high school.

All middle school mathematics courses meet and exceed the **Common Core State Standards for Mathematics (CCSSM)**. The CCSSM consists of two sets of standards, the **Standards for Mathematical Practice** and the **Standards for Mathematical Content**. The Standards for Mathematical Practice describe the process, practices, and dispositions of mathematicians. These eight Standards for Mathematical Practice are the same across all grade levels, K-12 to emphasize that students are developing these processes, practices, and dispositions throughout their school career. The Standards for Mathematical practice are shown below.

1. Make sense of mathematics and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriately tools strategically.
6. Attend to precision
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

The Standards for Mathematical Content outline the concepts and skills that are important at each grade level. For example, at grade 6, these standards focus on these areas:

- Ratios and Proportional Relationships.
- The Number System.
- Expressions and Equations
- Geometry
- Statistics and Probability.

One big difference between the CA Mathematical standards and the CCSSM mathematical content is that CCSSM contain fewer standards and fewer topics to study at each grade level. With fewer topics, you can spend more time on concepts and achieve greater mastery of these concepts.

To assure our mathematics courses build on student learning, all incoming students take a computer based mathematics placement test and are placed in an appropriate course to assure success in either regular or accelerated classes. Individualized placement assures all students will have an excellent foundation for high school mathematics. (See our course descriptions and prerequisites for additional information.)

Apple Ipads are used to promote mastery over foundational math skills and to reinforce concepts and enhance the curriculum. On-line technology such as video tutors and practice tests and additional practices are also made available.