

Castle View High School

5254 Meadows Dr.
Castle Rock, CO 80109
Principal: Lisle Gates

Castle View High School (CVHS) operates an academy model to support the vision of Relationships, Relevance, and Rigor. The five academies (Leadership, Global Studies, and Communication; E-Media/Business; Mathematics, Science, and Engineering; Visual and Performing Arts; and Biotechnology and Health Sciences) are each designed to provide smaller learning communities where students can choose an instructional pathway most relevant to their learning interests. The mathematics teachers operate across all five academies within the school, thus allowing them to be a content team as well as contributors to their academies to allow for integration of mathematics into the real-world applications.

- ◆ High (9-12)
- ◆ 85% White
- ◆ 9% Hispanic
- ◆ 2% Black
- ◆ 2% Asian
- ◆ 1% Native American
- ◆ 7% Free or Reduced-Price Lunch
- ◆ 2% English Language Learners
- ◆ 9% Special Education

The Mathematics, Science, and Engineering (MSE) Academy offers innovative courses in science, technology, engineering, and mathematics. Students study related concepts at a deep level with teachers dedicated to helping them gain and apply skills, leading to a variety of opportunities in engineering, computer science, research, and related fields.

The *Douglas County School District Essential Learnings of Algebra* serve as the mathematics curriculum guide. The mathematics teachers at CVHS strive to make each lesson relevant and meaningful to their students, with topics of algebra an important part of each student's curriculum. A supportive staff helps all students reach their potential and motivates them to perform at high levels of achievement in mathematics. The school uses an integrated mathematics program across all academies with appropriate technology implemented into the instructional design. Success of the program is measured through three district formative assessments as well as each academy's assessments. Forty-two percent of the ninth- and tenth-grade students score as proficient and advanced on the state mathematics assessment.

One key to mathematical success at CVHS has been the emphasis on problem solving to learning mathematics. Knowing that students have difficulties applying the skills of algebra, the mathematics curriculum centers on developing proficiency in problem solving. Technology, instructional modeling, and varied contexts are used to build persistence and self-confidence in students' ability to solve problems. Integration of mathematics topics also allows students to see that mathematics is not a set of isolated skills to practice, but the skills are what make students more efficient in problem solving.

Struggling learners have access to algebra through the teachers' use of technology to overcome any foundational skills they might be lacking. Questioning strategies, group work, and contextual problems are instructional strategies that allow students to be successful in the algebra class.