Pre-AP Geometry with Statistics and Colorado Academic Standards for Mathematics: Alignment Summary

Pre-AP courses focus deeply on a limited number of concepts and skills with the broadest relevance for high school coursework and college and career success. The course framework serves as the foundation of the course and defines these prioritized concepts and skills.

When teaching a Pre-AP course, teachers have purposeful time and space to bring their own voice and lessons into each unit to best meet the needs of their students and address the full range of state standards. This alignment summary demonstrates the deep connections between the Pre-AP Geometry with Statistics Course Framework and the Colorado Academic Standards for Mathematics to support teachers and schools in their planning. Along with the corresponding standards crosswalk, teachers and schools can use this alignment summary when planning and preparing to implement Pre-AP Geometry with Statistics.

Alignment at a Glance: Very Strong

**Colorado Academic Standards for Mathematics:**
- Circles
- Congruence
- Interpreting Categorical and Quantitative Data

**Discipline Highlights**
- Overall, the alignment between the Pre-AP Geometry with Statistics Course Framework and the Colorado Academic Standards for Mathematics is very strong.
- Across all six strands of the Colorado Academic Standards for Mathematics, the majority of standards are addressed in part or in full by the Pre-AP course framework.
- The alignment between the Pre-AP course framework and the Colorado Academic Standards for Mathematics is strongest in the Circles content strand.
- The Pre-AP framework extends beyond Geometry and addresses some statistics and probability concepts from the Colorado Academic Standards for Mathematics.

= Very strong alignment
= Partial alignment

Alignment between the Pre-AP Geometry with Statistics Course Framework and the Colorado Academic Standards for Mathematics is described as very strong or partial. A very strong alignment is one in which the majority of the standards are fully addressed by the mapped Pre-AP Learning Objectives (LOs). A partial alignment is one in which the standards are partially addressed by the corresponding Pre-AP Learning Objectives. Partial alignment can occur when one framework includes greater specificity or extends beyond the scope of the other framework. Given the focused nature of the Pre-AP course framework, some partial alignments are to be expected.
## Alignment at a Glance: Partial

### Colorado Academic Standards for Mathematics:
- Geometric Measurement and Dimension
- Expressing Geometric Properties with Equations
- Modeling with Geometry
- Similarity, Right Triangles, and Trigonometry
- Making Inferences and Justifying Conclusions

## Discipline Highlights

- While the overall alignment between the Colorado Academic Standards for Mathematics and the Pre-AP Geometry with Statistics framework is very strong, there are a few areas of partial alignment due to the more granular nature of some of the Colorado Academic Standards for Mathematics.

- The Colorado Academic Standards for Mathematics include more specific statements than the Pre-AP learning objectives. For example, HSG-CO.C.9 includes a number of specific theorems that are not listed explicitly within the Pre-AP learning objectives. However, there are natural opportunities to address those theorems within the framework.

- The Pre-AP framework has a more intentionally narrow focus on a prioritized set of concepts, so certain topics are considered outside of the scope of the Pre-AP framework. For example, while the Pre-AP framework does include an introduction to right triangle trigonometry, it does not fully cover some of the specific applications that are included in the Colorado Academic Standards for Mathematics.

## Summary

Beyond alignments to the Pre-AP course framework, it is also important for educators to turn to the Pre-AP Shared Principles and Pre-AP Mathematics Areas of Focus to understand the full picture of alignment between Pre-AP Geometry with Statistics and Colorado Academic Standards for Mathematics. The shared principles and areas of focus represent the Pre-AP approach to teaching and learning, and these principles deeply address skill development and disciplinary practices that cannot be easily captured within a standards crosswalk. In summary, there are ample opportunities for teachers to address the Colorado Academic Standards for Mathematics with confidence throughout this course.

Learn more about Pre-AP Geometry with Statistics at preap.org