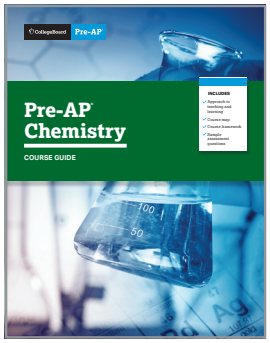
CollegeBoard Pre-AP®

Pre-AP Chemistry and Next Generation Science Standards for California Public Schools: 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 Chemistry Course Framework and the Next Generation Science Standards for California Public Schools 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 Chemistry.



Alignment at a Glance: Very Strong

NGSS for CA:

- **Matter and Its Interactions**
  HS-PS1-1
  HS-PS1-2
  HS-PS1-4
  HS-PS1-5
  HS-PS1-7
- **Energy**
  HS-PS3-1

Discipline Highlights

- Overall, the alignment between the Pre-AP Chemistry Course Framework and the NGSS for CA is very strong, with full alignment on six out of nine of the chemistry performance expectations in the CA framework.
- Across both strands of the NGSS for CA, there are strong matches to the standards and the performance expectations within the Pre-AP framework.
- The NGSS for CA and the Pre-AP framework share the deepest alignment within the Matter and Its Interactions content strand, particularly for key topics such as atomic structure, chemical reactions, intermolecular forces, thermochemistry and stoichiometry.

= Very strong alignment

= Partial alignment

Alignment between the Pre-AP Chemistry Course Framework and the NGSS for CA is described as *very strong* or *partial*. A *very strong* alignment is one in which the majority of 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

NGSS for CA:

- **Matter and Its Interactions**
  HS-PS1-3

Discipline Highlights

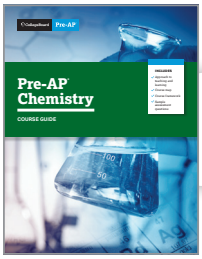
While the overall alignment between the NGSS for CA and the Pre-AP Chemistry framework is very strong, there are a few areas of partial alignment due to the more granular nature of some of the NGSS for CA.

The NGSS for CA may contain more specific language than the Pre-AP learning objectives. Some standards in the NGSS for CA lead strongly with the language of science. For example, HS-PS1-3, begins with "Plan and conduct an investigation. . ." Since this does not precisely match the wording of the Pre-AP learning objectives, the match is listed as partial. However, these science practices are deeply embedded in the Pre-AP course framework, as evidenced in the instructional material and performance tasks.

The Pre-AP is focused on a prioritized set of concepts, so certain topics covered in the NGSS for CA are considered outside of the scope of the Pre-AP. For example, standard HS-PS3-4, which focuses on planning and conducting an investigation related to the second law of thermodynamics. Although the Pre-AP framework provides opportunities to address this concept, it is not specifically covered by the Pre-AP learning objectives.

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 Chemistry Areas of Focus to understand the full picture of alignment between Pre-AP Chemistry and the NGSS for CA. 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 NGSS for CA with confidence throughout this course.**



Learn more about Pre-AP Chemistry at
preap.org

© 2021 The College Board.