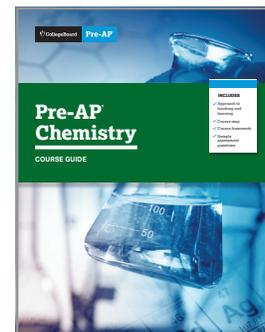




Pre-AP Chemistry and Science Standards of Learning for Virginia Public Schools: Chemistry: Alignment Summary

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 Science Standards of Learning for Virginia Public Schools: Chemistry 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

Virginia Science Standards of Learning: Chemistry



- CH.3: Chemical Reactions and Interactions
- CH.4: Molar Relations
- CH.6: Phases of Matter
- CH.7: Thermodynamics

Discipline Highlights

- ✓ Overall, the alignment between the Pre-AP Chemistry Course Framework and the VA Science Standards of Learning: Chemistry is very strong.
- ✓ The majority of the VA Science Standards of Learning: Chemistry are covered in full or in part by the Pre-AP framework.
- ✓ The VA Science Standards of Learning: Chemistry and the Pre-AP framework share the strongest alignment within the CH.3: Chemical Reactions and Interactions and CH.4: Molar Relations standards.
- ✓ The Pre-AP Chemistry Course Framework addresses additional topics beyond the requirements of the VA Science Standards of Learning: Chemistry. These topics include, density, mixtures, and isomers.



= **Very strong alignment**



= **Partial alignment**

Alignment between the Pre-AP Chemistry Course Framework and the Virginia Science Standards of Learning: Chemistry 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

Virginia Science Standards of Learning: Chemistry



- CH.1: Scientific and Engineering Practices
- CH.2: Elements and the Periodic Table
- CH.5: Solutions

Discipline Highlights



While the overall alignment between the VA Science Standards of Learning: Chemistry and the Pre-AP Chemistry Course Framework is very strong, there are a few areas of partial alignment due to the more granular nature of some of the VA Science Standards of Learning: Chemistry.



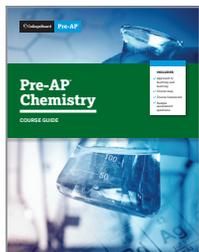
The Pre-AP Chemistry Course Framework has a more intentionally narrow focus on a prioritized set of concepts, so certain topics are considered outside the scope of the Pre-AP course. For example, the topic of nuclear decay, covered in standard CH.2.b, is considered outside the purview of Pre-AP Chemistry and is not explicitly covered by the Pre-AP learning objectives.



Science and engineering practices are integrated in the Pre-AP learning objectives. As a result, some standards within CH.1: Scientific and Engineering Practices are not explicitly covered by the Pre-AP framework. However, the Pre-AP Chemistry model lessons provide frequent opportunities to address and develop these skills.

Summary

Beyond alignments to the course framework, it is also important for educators to turn to the Pre-AP Shared Principles and Pre-AP Science Areas of Focus to understand the full picture of alignment between Pre-AP Chemistry and the Virginia Science Standards of Learning: Chemistry. 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 Virginia Science Standards of Learning: Chemistry with confidence throughout this course.**



Learn more about Pre-AP Chemistry at preap.org