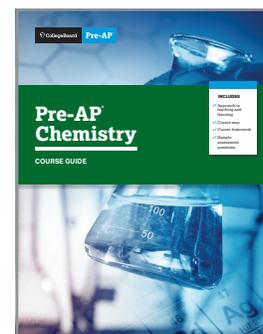




Pre-AP Chemistry and Arkansas K–12 Science Standards: Chemistry–Integrated: Alignment Summary

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 Arkansas K–12 Science Standards: Chemistry–Integrated 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

AR Science Standards: Chemistry–Integrated:



- **Topic 1: Matter and Chemical Reactions**

CI-PS1-1
CI-PS1-2
CI-PS1-3
CI-PS1-7

- **Topic 3: Energy Flow**

CI-PS1-4
CI-PS1-5

Discipline Highlights

- ✓ Overall, the alignment between the Pre-AP Chemistry Course Framework and the AR Science Standards: Chemistry–Integrated is very strong.
- ✓ The AR Science Standards: Chemistry–Integrated and the Pre-AP framework share the deepest alignment within the Topic 1: Matter and Chemical Reactions content strand, particularly for key topics such as atomic structure, chemical reactions, and conservation of mass.
- ✓ There is also a strong alignment between the AR Science Standards: Chemistry–Integrated and the Pre-AP framework within the Topic 3: Energy Flow content strand.



= **Very strong alignment**



= **Partial alignment**

Alignment between the Pre-AP Chemistry Course Framework and the AR Science Standards: Chemistry–Integrated 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

AR Science Standards: Chemistry–Integrated:



- **Topic 1: Matter and Chemical Reactions**
CI-ESS2-5

- **Topic 3: Energy Flow**
CI-PS3-1

Discipline Highlights



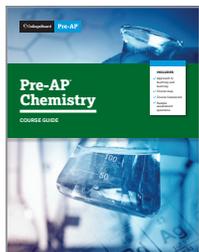
While the overall alignment between the AR Science Standards: Chemistry–Integrated and the Pre-AP Chemistry framework is very strong, there are a few areas of partial alignment due to the more granular nature of some of the AR Science Standards: Chemistry–Integrated. For example, one of the AR Performance Expectations is “Plan and conduct an investigation of the properties of water and its effects on Earth materials and surface processes.” While the Pre-AP curriculum addresses many of the properties of water, it does not explicitly focus on water in surface processes on Earth, thus the alignment is Partial. However, the Pre-AP lessons and embedded science practices provide teachers with multiple opportunities to incorporate examples to fully address the standard within the context of the curriculum.



The AR Science Standards: Chemistry–Integrated include topics about nuclear reactions, waves, and forces that are not directly addressed by the Pre-AP framework. As a result, these areas show little or no alignment. Despite the lack of an explicit match, however, these topics can be addressed using several compelling examples while teaching the Pre-AP Chemistry LOs and EKs.

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 AR Science Standards: Chemistry–Integrated. 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 AR Science Standards: Chemistry–Integrated with confidence throughout this course.**



Learn more about Pre-AP Chemistry at
preap.org