

Naperville North High School Principles of Chemistry Syllabus 2026/2027



Teacher: Mr. Peterson

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Department Chair: Adam Hansen, Jennifer Hervey

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D203 Profile of A Learner	Profile of a Learner guides our efforts in creating educational experiences that are relevant, engaging, and impactful and outlines the key competencies and descriptors our community has identified as essential for our students: Adaptability, Communication, Critical Thinking, Learner's Mindset, Global Citizen.
Department Mission	To ensure every student has the services and supports necessary to make meaningful progress within the core curriculum and be full participants within the general education classroom and school.
Course Description	This course is a study of fundamental chemical concepts based on the Next Generation Science Standards. Students will evaluate evidence from experiments and technology used by scientists to understand the nature of chemistry
Course Textbook & Resources	There is no assigned textbook. All resources are provided through Google Classroom.
Course Standards & Weights	The following standards guide instruction, but are not weighted in the gradebook HS-PS1-7 Use mathematical representations to support the claim that atoms, and therefore mass, are conserved during a chemical reaction HS-PS1-1 Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms. HS-PS1-2 Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the periodic table, and knowledge of the patterns of chemical properties. HS-PS1-3 Plan and investigate to gather evidence to compare the structure of substances at the bulk scale to infer the strength of electrical forces between particles. HS-PS2-6 Communicate scientific and technical information about why the molecular-level structure is important in the functioning of designed materials. HS-PS3-1 Create a computational model to calculate the change in the energy of one component in a system when the change in energy of the other component(s) and energy flows in and out of the system are known HS-PS3-2 Develop and use models to illustrate that energy at the macroscopic scale can be accounted for as a combination of energy associated with the motions of particles (objects) and energy associated with the relative positions of particles (objects). HS-PS3-4 Plan and investigate to provide evidence that the transfer of thermal energy when two components of different temperatures are combined within a closed system results in a more uniform energy distribution among the components in the system (second law of thermodynamics). HS-PS1-4 Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy. HS-PS1-8 Develop models to illustrate the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay. HS-ESS1-6 Apply scientific reasoning and evidence from ancient Earth materials, meteorites, and other planetary surfaces to construct an account of Earth's formation and early history. HS-ESS1-1 Develop a model based on evidence to illustrate the life span of the sun and the role of nuclear fusion in the sun's core to release energy in the form of radiation. HS-ESS1-3 Communicate scientific ideas about the way stars, over their life cycle, produce elements.

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Units of Study:

The units we will cover this year include:

Scientific Method
Properties of Matter
Light and Matter
The Periodic Table
Chemical Processes
Thermal Energy
Wave Lengths
Stars and Planets

Grade Calculation Definitions

Students will be provided with multiple and varied opportunities to demonstrate mastery of learning standards. Although varied in content, all courses will include examples of practice and evidence of learning:

- **Evidence of Learning:** Tasks or assessments where feedback is provided to the student and considered evidence of a student's level of proficiency on a given standard or skill. This may include, but is not limited to formative tasks that provide insights on areas for growth as well as summative tests, projects and/or performances.
- **Practice:** Tasks that are connected to course standards and learning targets that promote the development of skills and/or knowledge that will be assessed, but where feedback is not provided. This may include, but is not limited to daily readings, note taking, practice exercises and tasks essential to the learning process.

Grading Disbursement

Semester grades for all classes (prior to the final exam) will be calculated by a weighted average. As part of the calculation for the overall semester grade, final exams/projects will not exceed 15% of the semester grade.

A = 100-90%, B = 89-80%, C = 79-70%, D = 69-60%, F = 59-0%

Semester Grade:

- Coursework = 85% (Evidence of Learning = 90%, Practice = 10%)
- Final Exam = 15%

Grading Practices

Grades communicate each student's progress toward mastery of goals/standards for the course.

- Infinite Campus Symbols/Comments:
 - A score of "Missing" (M) will indicate an assessment has not been turned in and the comments section will include a specific date by which students can still submit. After that date, a zero (0) will be recorded.
 - Any score may also have a comment indicating the due date, turned in, late, reassessment eligibility including the timeline and/or reassessment final scores.
 - A zero indicates that no attempt was made by the student. If a legitimate attempt is made on an assessment and practice work has been completed in a consistent and timely manner (*completing 85% of practice listed in Infinite Campus.*), a score of 50% will be the lowest possible grade.
- Late Work:
 - Evidence of Learning work submitted after the original due date cannot be penalized more than a total of 10% and can be submitted for credit within 5 school days after the original due date.
 - Practice Work is not accepted for credit after the due date.
- Other:
 - No extra credit will be issued.



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D203 AI Belief Statement

At Naperville North High School, we strive to build a learner's mindset in all students, developing qualities such as adaptability, communication, critical thinking, and global citizenship. Generative Artificial Intelligence (AI), offers new opportunities to engage with important technology relevant to the future that also raises significant educational considerations. AI tools provide unique ways to engage students in the learning process, hence we encourage our staff to guide students in using AI responsibly. Teachers have the authority to establish guidelines for AI use in their classrooms, setting clear expectations for how AI can be used on learning tasks. Concurrently, we recognize that reliance on AI risks replacing genuine student engagement and original thought, undermining the attributes we aim to cultivate. Striking a balance between leveraging AI tools effectively and maintaining educational standards is crucial to the learning experience of each student.

Academic Integrity Code

District 203 students are challenged to address the academic process enthusiastically, diligently, and most importantly, honestly. It is the responsibility of our students, teachers, and administration to uphold the fundamental academic values of honesty, responsibility, fairness, respect and trust. The integrity of our district's academic programs is built upon these principles.

Academic integrity violations include cheating, plagiarism, self-plagiarism or copy infringement, obtaining or providing an unfair advantage, using a writing service and/or AI in place of original work unless specifically authorized by staff, falsification of documents, unauthorized access to records, and inappropriate collaboration, whether intentional or unintentional. The classroom teacher and administration will collaborate and exercise professional judgment in determining academic integrity violations.

Please refer to the NNHS Handbook for more information.

Technology Expectations

- **Cell phones:** Students will be expected to store their cell phones in a phone holder or designated classroom location throughout each class period as communicated by each teacher. Cell phones should not be seen or heard in the classroom setting. Appropriate use of cell phones is allowed during passing periods, during study halls, at lunch, before and after school. Please note that cell phone use is strictly prohibited in locker rooms and restrooms at all times.
- **Ear buds and headphones:** The use of ear buds and headphones is strictly prohibited in the classroom unless permission has been granted by the teacher. Ear buds and headphones should not be seen or heard in the classroom setting. For safety reasons, students should also be able to hear announcements, alerts, etc. at all times and, therefore, students are permitted to use one ear bud or headphone during passing periods, at lunch, before and after school.
- **District issued Chromebooks:** Students are required to use their District issued Chromebook and will not be permitted to use personal laptops or devices in the classroom setting. Student personal devices are not protected by district systems and put student safety and the safety of our network at risk. Additionally, student personal devices are not enabled with applications and programs necessary for administration of state and AP assessments.

Reassessment Policy

The purpose of reassessment is to allow students to demonstrate mastery of course standards in which they remain deficient. Higher reassessment grades will replace the original assessment score, but will not exceed 85%.

- Practice work is not eligible for reassessment.

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