

Chemistry Honors Syllabus
Rumson-Fair Haven Regional High School
2025-2026

I. Instructor and contact information:

Ms. Jaclyn Toner

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732-842-1597

Ext: 885

II. Meeting time and location:

Period 1

Room 601

III. Office Hours:

Day 2 - before school 7:22-7:40

Day 3 - before school 7:22-7:40 & second half of lunch 11:11-11:41

Day 4 - first half of lunch 10:45-11:15

IV. Course description:

The *Chemistry Honors* course is a Chemistry study central to all sciences. It is not only a basis for all other sciences but a link to investigations into natural processes in our world. Students will develop skills and utilize tools that increase knowledge and allow students to think critically about personal and societal issues and needs. Students will have an opportunity to construct scientific explanations and design evidence-based solutions. Students can then contribute meaningfully to decision-making processes, such as discussions about climate change, new approaches to health care, and innovative solutions to local and global problems. This course encourages the development of higher-level thinking and problem-solving skills via self-directed activities and assignments. Additionally, there is a laboratory component to this course in which students are required to question, observe, collect data, experiment, and analyze results. Throughout this course a broad range of topics are presented in depth enabling students to gain a strong knowledge of course concepts and prepare for further challenges. These include, but are not limited to: organization of the periodic table, periodicity, ionization energy, basic atomic structure, electron configuration, electromagnetic radiation, nomenclature, chemical bonding, chemical reactions, stoichiometry, kinetic molecular theory, properties of gasses and gas laws, solutions, acid and base properties, equilibrium and the pH scale, reaction rates, thermochemistry, and nuclear chemistry. Because of the rigor and expectations of this course, it is intended for students with strong backgrounds in both mathematics and science. Students should note that formula sheets will not be provided, but a periodic table and scientific calculator may be used to solidify their understanding. As such, it is strongly recommended that students who take this course are currently enrolled in *Algebra II Honors*. Labs will run once every four-day schedule rotation.

V. Major Units of Study: (refer to curriculum guides)

Unit I: Fundamentals of Chemistry

Unit II: Organization of Matter

Unit III: Matter in Action

Unit IV: Applications in Chemistry

VI. Classroom Rules:

1. **Arrive to class on time** and with the necessary materials.
 - Arrive to class at the designated start time for your class.
 - **No phones allowed during class, place them in the phone caddy at the start of class**
 - Review and Follow the schedule sent home for quarter 1.

Chemistry Honors Syllabus
Rumson-Fair Haven Regional High School
2025-2026

2. Come to class prepared with a fully charged chromebook and course materials.
 - Be prepared each day with assignments, a fully charged chromebook device (no personal devices or hotspots, no exceptions), **calculator**, notebook, writing implement & any other required course materials.
3. Be mindful and respectful of everyone in class at all times.
 - Participate in a respectful manner on a daily basis and bring a positive attitude to class.
 - Cooperate with class rules, instructions and instructor.
 - Keep all communication course-related and school appropriate.
4. Follow safety rules for the classroom and in the laboratory.
 - All safety rules **MUST** be followed at all times while in the classroom and laboratory.
 - If you need to get up from your seat or leave class, you must raise your hand and get permission before doing so. Students are not permitted to roam around the classroom.
5. **No food or drink is permitted in the classroom at any time.**
 - Any student who cannot follow these rules will be removed from class.
 - Be responsible for your own learning.
 - Take notes during instruction, ask questions, and participate regularly to enhance your learning.
 - Be prepared to engage in the daily lessons and have your homework completed and available.
 - Be consistent in your preparation for activities and assessments
 - Implement good study habits and review class notes daily.
 - Be sure to ask for help when needed, ask for LRC passes and/or set up extra help sessions.
 - Be sure to check google classroom daily for assignments and missed work.
 - Be sure to follow up and ask for missed work when absent from class.
 - Only school approved AI and lesson designated AI, may be used. Please do your own work.

VII. Grading Breakdown:

Quarterly grades in Honors *Chemistry* are determined via a percentage weighting model that is part of an established sequence for Honors *Chemistry* that consists of specific grading categories. See below for the breakdown of grade weighting per quarter.

Grade Breakdown.

Category	Weight
Coursework (classwork, homework, participation)	10%
Labs/Activities	30%
Assessments (quizzes, tests, summatives)	60%

Coursework

Weekly classwork, participation, and homework assignments will be available in the classroom and online via Google Classroom each day. Coursework includes active engagement in lessons, daily communication, lesson-tasks such as worksheets, interactive lessons, videos, class discussions, interactive investigations, survey tasks, and homework. Homework will be assigned to emphasize the material covered in class. It may include questions, problems, videos, labs and/or handouts. Doing these assignments is an important part of the learning process, for what each problem is really asking is, do you genuinely understand the concept? If you can do the homework then you should understand the material. Coursework will be due within the timeframe of your designated class meeting time and will always be specified via google classroom. Sometimes it will be checked for completeness and other times it will be graded for accuracy. All work must be shown in order to receive full credit. Since you will not know

Chemistry Honors Syllabus
Rumson-Fair Haven Regional High School
2025-2026

ahead of time which grading method will be used for a particular assignment, it is to your advantage to do all the problems all the time. If your coursework is complete and all work is shown, you will receive full credit. If your work is somewhat incomplete but at least half has been completed, you will receive half credit. If you do not have your work, you will receive no credit or a zero for the assignment.

Coursework tasks and homework assignments are meant for you to monitor your own understanding of the material, your ability to give clear and lucid answers, and to apply all you have learned in a logical and rational manner. There will be approximately 10-12 coursework assignments graded per marking period.

Assessments

Major quizzes and tests will be announced and will include information learned through classwork, homework, and laboratory experiments. They reflect the ability of the student to comprehend the material and concepts learned in an integrated way. Quizzes and tests can be given any day during the week and may take the form of a standard test, google form, project, or other varied activity. There will be 2-4 total quizzes and tests per marking period not including a summative assessment. There will be a total of 3 summative assessments per school year.

Labs/Activities

Honors Chemistry includes a series of laboratory activities that may take place virtually or in the lab. Safety rules and guidelines for lab write-ups and expectations will be distributed during the first week of school. There will be approximately 7-9 labs and/or activities graded per marking period.

Your individual laboratory grade will be based on the following:

- your engagement in the activity
- pre-lab preparation (when specified)
- your ability to keep record of your labs and write lab reports
- your understanding of the concepts explored in the experiments
- correct responses to analysis questions

Class Participation is Coursework!

Class participation is based on class involvement, willingness to complete class assignments, and behavior in class. Your grade will also be based on cooperation with other students. You are expected to come prepared to class, having reviewed the material to be covered, and ready to submit all assignments on time, which will be a contributing factor with your overall coursework grade. Attendance in class is most important for progress and engagement.

VIII. Class Preparedness:

Students must have their charged school-issued Chromebook devices with them every day in school. Students must also have their notebooks, pens, pencils, and calculators every day. Students are expected to be ready to participate, answer, and interact with other students when prompted. *If students are unprepared, including missing their school-issued Chromebook when it is necessary for an assignment or assessment, they are subject to receiving a zero for that assignment.*

IX. Important RFH Procedures, Policies, and Guidelines:

→ Cell phones in class:

- ◆ All devices must be turned off and put away in classroom caddies when class begins. Cell phones must be placed in the classroom cell phone caddy for the entire block/period.
 - **First Offense:** Teacher conference and confiscation of device (returned at the end of the day).
 - **Second Offense:** After-school detention and confiscation of devices (returned at the end of the day).

Chemistry Honors Syllabus
Rumson-Fair Haven Regional High School
2025-2026

- **Third Offense:** Saturday detention and confiscation of the device, which must be picked up by a parent/guardian.
- **Additional Offenses:** May result in further restrictions of student privileges.

→ **Use of Artificial Intelligence (AI):**

- ◆ *At RFH, we approach this moment with both hope and caution. We believe Artificial Intelligence has the potential to transform learning in powerful ways by enhancing understanding of course material, promoting student-centered and problem-based learning, and fostering digital literacy, creativity, critical thinking, and problem-solving skills. However, students must be active decision-makers, consistently evaluating and using these tools ethically and responsibly, without compromising academic integrity. We expect our use of AI in the classroom to evolve as the school year goes on. **Your teacher will provide guidance on the appropriate and acceptable use of AI for this class, but it is your responsibility to adhere to their instructions.** Should you have any questions or concerns, please speak with your teacher.*

→ **Laptop Devices**

- ◆ No student shall use another student's district-issued log-on credentials.
- ◆ No privately owned electronic device may be attached to any Rumson Fair Haven Regional High School network.
- ◆ Violation of school or district policies, local, state, and/or federal laws while using a personal electronic device on the RFH wireless network will result in appropriate disciplinary and/or legal action as specified in the Student Handbook and Conduct Code, School Board policy

→ **Attendance Policy and Assessments**

- ◆ A student may be dropped from or denied course credit when absent 14 or more classes for a full-year course; the change from 18 to 14 absences aligns with the rotating drop schedule.
- ◆ *If a student comes in late or leaves early and misses a class during which an assessment is administered or due, the student may only retake the evaluation or turn the assessment in late if they have a doctor's note or an absence excused by the state; otherwise, the student receives a zero for that assignment.*

→ **Short Term Assignments and Major Assessment Information**

- ◆ Homework will be due at the beginning of the class period the next time the class meets. Assignment dates will be posted in Google Classroom. Students are encouraged to upload their work.
- ◆ **Short-Term Homework Assignments** - Short-term homework assignments are given on an ongoing basis in all academic courses. Credit for short-term homework assignments will only be given if they are submitted on the due date at the designated time. Students are expected to follow the guidelines established in the RFH Student Handbook for the submission of work if they are absent on the due date for the entire school day. Specific IEP stipulations and 504 Plan modifications are exceptions to this policy.
- ◆ **Major Assessments** - Major assessments are required course components in all academic courses, and they will be evaluated using corresponding rubrics. Failure to complete any of the designated criteria for a major assessment or minimal demonstration of effort on any facet of a major assessment will have a negative impact on student performance. Students are strongly advised to develop their projects beyond the minimum passing levels as determined by the instructor, and they are encouraged to confer with the instructor on ways in which they can develop their final products. Timely completion is a fundamental criterion for all major assessments: late assignments will be penalized according to the established policy:
 - 10% grade reduction off of the final grade if the major assessment is not submitted on the due date at the designated time. Additional 10% reductions will be given for two days subsequent to the due date. After this time has passed, the grade is reduced to no credit (0).If a student is in school on the day in which a major assessment is due and is absent from class, the assignment must be e-mailed or submitted to the instructor by the end of the school day. Failure to do so will result in the established late penalty. Exceptions to this policy will be up to the discretion of the instructor and/or the department supervisor if there are extenuating circumstances. Specific IEP stipulations and 504 Plan modifications are also exceptions.

→ **The consequences for a violation of academic integrity on a major assessment will correspond to the penalties outlined in the RFH Student Handbook.**

Chemistry Honors Syllabus
Rumson-Fair Haven Regional High School
2025-2026

→ Students are expected to follow the guidelines established in the RFH Student Handbook for the submission of work if they are absent on the due date for the entire school day.

X. Materials:

Required Daily Class Materials:

- Fully charged Chromebook
- Binder or a notebook and folder
- Scientific Calculator (TI 30XIIS) is recommended
- Periodic Table and Reference Tables
- Pens/Pencils/Highlighters

Optional Textbook: Modern Chemistry. Jerry L. Sarquis, Ph.D., Mickey Sarquis, Holt McDougal, 2015.

XI. Tentative Schedule:

Quarter # 1 Big Ideas:	Timeline	Topics/Themes/Concepts	Assessments
Safety -lab safety lab safety rules -school drill procedures -class rules, expectations?	Week #1 Sept.2-9 Safety	Safety in the classroom, school rules & safety, lab apparatus and procedures	-Lab contract -Lab safety test -Lab safety project -Review & HW
Unit 1A-Matter/Periodic table/Isotopes -chemistry? -periodic table, historical significance & organization - element, matter, energy, -mixture, pure substance, -heterogeneous, homogeneous -compound -chemical property/change -metal, non-metal, semi-metal -mass number, average atomic mass	Weeks #2-5 Sept 10-Oct. 1 Unit 1A-Chemistry & Matter	Matter & organization, physical & chemical properties/change, periodic table history & organization, isotopes, average atomic mass, mass number	-Unit 1A test -Review & HW -physical/chemical changes lab -mixtures lab -periodic table lab Pogils edpuzzle

Chemistry Honors Syllabus
Rumson-Fair Haven Regional High School
2025-2026

-calculate mass number and average atomic mass -designate isotopes Unit 1B-Naming/Formula writing & Matter-Metal/Non-metal/Metalloid -properties of metals, nonmetals, metalloids -ionic and covalent compounds naming & formula writing -polyatomic ions and transition metals -binary and oxyacids? Unit 1C-Scientific measurements -units of measurement in chemistry? -sig figs -using a TI30XIIS calculator for scientific notation calculations. - rounding rules			
	Weeks #6-7 Oct. 3-15 Unit 1B Naming/ & Formula writing, types of elements	Naming & Formula writing Matter, Metals, Non-metals, Metalloids	-Unit 1B test -Review & HW -metals, nonmetals lab -naming and formula writing activity Pogils edpuzzle
	Weeks #8-9 Oct. 16-Nov. 5 Unit 1C Scientific measurements	Density, Sig figs, rounding, scientific notation, scientific calculators, units of measurement, dimensional analysis, Accuracy & precision, Direct & Inverse relationships, calculating error in measurement	-Unit 1C test -Review & HW -accuracy & precision lab -density lab -Pogil -Edpuzzle

Chemistry Honors Syllabus
Rumson-Fair Haven Regional High School
2025-2026

-converting between units of measurement -accuracy & precision -errors in measurement -direct and inverse proportions -density & calculations			