

Riverdale Kingsbridge Academy
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Course Syllabus: Chemistry
Instructor: Mr. Spengler

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Course Description

This is a Regents level introductory chemistry course designed to make chemistry interesting, accessible and understandable. Learning chemistry can be very rewarding because it provides explanations for real world observations. The goal of this course is to provide you with the ability to apply scientific concepts, principles and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.

Course Content

The following is a list of units and their topics that we will cover throughout the course of this year:

I. Atomic Concepts Models for Atoms Electron Excitation Structure of the Atom Arrangement of Electrons	VI. Kinetics / Equilibrium Kinetics Equilibrium Equilibrium in Solutions Equilibrium in Gaseous Systems
II. Periodic Table Origins of the Periodic Table Structure of the Periodic Table Trends in the Periodic Table Chemical Properties within Groups Other	VII. Organic Chemistry Characteristics of Organic Compounds IUPAC and Functional Groups Alcohols and Organic Acids Kinds of Organic Compounds Reactions of Organic Compounds
III. Moles / Stoichiometry The Mole Concept Stoichiometry Predicting the mass of a chemical product	VIII. Oxidation - Reduction Changes in Charge Balancing Simple Redox Reactions Electrochemistry Voltaic and Electrolytic Cells
IV. Chemical Bonding Nature of Chemical bonding Bonds between Atoms Attractions between atoms and molecules Chemical Formulas	IX. Acids, Bases and Salts Electrolytes Acid- Base Reactions pH and Water Solutions Amphoteric Substances and Buffers
V. Physical Behavior of Matter Classifications of Matter Solutions Energy Phases of Matter and Phase Change Gas Phase Liquid Phase Solid Phase	X. Nuclear Chemistry Radioactivity Transmutation Balancing Nuclear Reactions Fission and Fusion Benefits and Hazards of Nuclear Chemistry

Classroom Policies and Procedures

Methods

- We will do this by having class discussions and presentations following a "Do Now" for part of the class, often on PowerPoint. Sometimes it will be Mr. Spengler presenting material, sometimes it will be you, the students, doing presentations
- The class also does frequent observations of chemistry phenomena, either in class or in the lab. These observations match up with what you are supposed to be learning very closely, and as such *are taken very seriously*. These labs and

observations have a major impact on your grade and on your ability to take the Regents Examination. A total of 20 labs (1200 minutes of lab time) are required in order to take the Regent's Examination.

- We also do in class and out of class projects and activities that you will hopefully find fun and interesting.

Materials

There are several materials that you will be given or need to acquire for the class.

- Review Barons Regent's Review
- Chemistry Textbook: Holt Chemistry, Visualizing Matter (Technology Edition)
- We will be using a wide variety of different apparatus and chemicals in the lab
- We will also be using technology in the lessons, including simulations of atomic models, molecular modeling on the computer, and sketching molecules using computer programs.

Class Expectations: This is an advanced level science class, and my expectations of you will be very high. You have already passed at least two Regent's Examinations, so you know how things work.

Preparation: you are expected to be prepared for class every time you enter. This means that you are

- Arriving on time. Go directly to your assigned seats. If you are late, you must sign the late log. Late log entries will be followed up by a parent phone call or a referral to the dean.
- Arriving with something to write on and something to write with. Again, any deviation from this will be followed up by a parent phone call or a referral to the dean.
- You must have a Science section clearly defined in your loose-leaf binder or notebook.
- All lessons must be numbered, dated, properly ordered and the aim clearly defined.
- As a Science student at Riverdale/Kingsbridge Academy, you are responsible for having your binder, two pens, two pencils and a **Scientific Calculator** in class daily.
- Open your binder to the science section, and **copy** the **Aim, Homework** and begin the **Do Now**.

Use of Bathroom:

- You will be allowed to use the bathroom between 10 minutes after the late bell sounds and 10 minutes before the end of the period.
- Before leaving the room, you must first obtain a **bathroom pass** then sign the **bathroom log**.
- You will not be allowed to go to the bathroom when the teacher is giving instructions or discussing a topic.

Before leaving the classroom/Lab:

- Be sure to turn in all assignments
- Clear your tables of trash/mess
- Return the books to their storage place.
- Return all other materials you used during the session.
- Pick up all your trash off the floor and dispose of it in the trash bin.

Grading Policy:

Grades will be calculated according to the following formula:

1. **Exams: 50%**
2. **Quizzes: 10%**
3. **Homework/Projects: 20%**
4. **Lab Reports: 10%**
5. **Class work/Class Participation: 5%**
6. **Notebook: 5%**

There are 3 marking periods in each semester. The final grade for each semester will be a weighted average of the three marking periods and a final exam (1st marking period 30%, 2nd marking period 30%, 3rd marking period 30%, Final Exam 10%. The Regents Exam will contribute 10% of the final grade for the second semester). In a single marking period, all included exams, quizzes, projects, homework, notebooks, and classwork/participation will be averaged as listed in the above grading policy.

Homework: Homework must be put in the class "inbox" at the beginning of the period—no exceptions!

I do not accept late homework. The RKA late policy (-10% per day) applies to projects, papers, labs, and other long term assignments. Parents will be notified about all missed work.

If you are absent on the day an assignment is due, you *must* turn it in the day after you return to school. **Homework turned in later will be considered late—see above.** No exceptions!

Tests and Quizzes: There will be a quiz **every 5 to 7 school days** on the week's material. These are pop quizzes, so take notes and be prepared. Yes, they have a significant impact on your grade. Tests will occur at the end of a unit, and you will be given a review sheet 5-7 days before the test. Because of this advance notice of all tests, you must be prepared to make up the test the day you return to school if you are absent. No exceptions!

Labs: Your labs will be completed during your scheduled lab class, but I will be grading them. If you turn in two copies of your lab, then you will get to keep your graded copy. Otherwise, I will hold your copy on file in order to verify you have enough labs to take the Regent's.

Projects: There will be at least one project or independent research paper assigned per unit. These are given several days, if not weeks, in advance of their due date. The RKA late work policy will be **strictly** enforced. Make sure that everything you hand in has your name, teacher's name, date, and topic in the heading. Credit will not be given for work handed in without a name.

jupitergrades: Is our online grading system. It allows students' to monitor their progress throughout the school year. It is highly recommended that parents/students logon to jupitergrades frequently to monitor progress. Information on how to access jupitergrades will be given to you during the first week of classes.

The above grading policy is in effect provided that students pass **at least one exam** per marking period and **satisfactorily completed 65%** of their labs. Riverdale/Kingsbridge Academy hold our students to high standards as result, if any student obtains a grade on the Regents exam of less than 65 or does not take the Regents he/she will not pass the course.

PLEASE RETURN THIS PORTION TO YOUR TEACHER

I have read the attached course outline, goals, expectations, and evaluation criteria for REGENTS CHEMISTRY and have discussed these requirements and responsibilities with my parents/guardians.

In a Regent's level class every student is expected to complete a minimum of 1200 minutes of satisfactory laboratory time in order to be admitted into the Regents Examination. Failure to complete the required 1200 minutes will result in the student being barred from taking the Regents Examination and subsequent failure of the class. Every student must take the Regents Examination.

Student Signature _____ Date _____ Class _____

Parent/Guardian Signature _____ Date _____ Phone Number: _____