



Rockridge Secondary School
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Mission Statement

Students will strive to achieve success in the face of challenges.

Chemistry 12

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Mr. Aaron Anthony

Room: W208

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What will we be learning?

In this course, through laboratory activities and problem solving, you will be given opportunities to learn the following skills:

- Knowledge and Understanding
- Questioning, Procedures, and Evidence
- Analyzing and Evaluating
- Communication, Perspectives & Ethics

Those skills will be developed through the exploration of several chemistry topics as noted in the table below.

Course Organization:

Unit	Topics
1	Reaction Kinetics: – measurement & calculation – rate of reaction and factors affecting reaction rate – collision theory and reaction rate – reaction mechanisms – catalysis
2	Chemical Equilibrium: – reversible and irreversible reaction – concept of Dynamic Equilibrium – characteristics of equilibrium – factors which determine equilibrium – Entropy – factors affecting equilibrium shifts, and Equilibrium Constant (K_{eq}) – Le Chatelier's Principle – Equilibrium versus Steady State – closed versus open systems – laws of thermodynamics
3	Equilibrium and Solubility: – solubility and solubility product – dissociation and precipitation – factors affecting solubility – Common ion effect – calculations involving equilibrium in solutions
4	Acid-Base Equilibrium: - Acid/Base definitions (Arrhenius, Bronsted-Lowry, Lewis) – pH calculations – strong acids vs. weak acids – strong bases vs. weak bases – acidic, basic or neutral salts (hydrolysis) – K_w , K_a and K_b
5	Applications of Acids & Bases: - Titration – Indicators – Buffers
6	Oxidation/Reduction: - redox applications – oxidizing and reducing agents – oxidation numbers – balancing redox equations – balancing half-cell equations – E^0 tables and calculations – corrosion and industrial applications – fuel cells and batteries

What are the Expectations?

You are expected to take an **active role** in this class. This means thinking, asking questions, contributing to class discussions, making connections, planning for improvement, and taking ownership over your own learning. You are also expected to collaborate with your peers in order to help everyone achieve their learning goals. This will come in the form of peer feedback and group discussions.

Each student is expected to:

- 1) Come to class, on time, every time, prepared to work.
- 2) Act safely and maturely in class.
- 3) Respect the rights of other students to obtain an education, and the rights of the teacher to do their job.

With the help of Mr. Anthony and your peers, you will develop the ability to understand what you have already learned, determine what you have yet to learn, and decide how you can best improve. Throughout the course, you should always be able to answer the following questions:

What am I learning? How's it going? Where to next? Why does it matter?

Chemistry 12 is a demanding course. You should be prepared to do homework every day to keep up with labs, assignments and readings. Daily review of course material at home is essential for success. You need to bring all necessary classroom supplies including the workbook to class every day. It may be helpful to get the contact information of your colleagues in class to help with your learning and review.

What materials are needed for each class?

1. Internet device and charger
2. 3-ring binder – with dividers
3. Paper
4. Agenda to record homework and due dates and exam dates
5. Pens (Blue or black and red ~ *for assessing*), pencils, ruler, Calculator
6. *Hebden: Chemistry 12: A Workbook for Students (assigned by Mr. Anthony)*
7. Your creative, inquisitive, and beautiful mind

Absences:

All absences from the class must be excused by a phone call to the office **on/before** the day you are absent (604-981-1300). **YOU** are responsible for getting peer notes, handouts, due dates and catching up with the material missed. Please DO NOT ask the following question: "I was away last class what did I miss?"

If you are absent from a class because of illness, it is up to YOU to arrange a method to get the notes/handouts that you missed. YOU will be responsible for learning the topics that are taught while you are away.

You are more than welcome to see Mr. Anthony with *prepared questions*. This means you have attempted the homework after reading through the class notes (from a friend, Google Classroom, or the website) and the related section in the workbook.

Work Habits:

In order to achieve a Work Habits level of "G," you must be *consistently* on time, do all assignments and be productive in class. **Be aware that you do NOT automatically deserve a "G"; you must earn it.**

Deadlines:

It is expected that you are ready to hand in your completed assignments by the due date **at the beginning of class**. In extenuating circumstances, any extension of deadlines must be discussed with Mr. Anthony well in advance of the due date.

Quiz and Test Policy:

Unit tests are weighted heavily. There will be **NO** rewrites. However, there will be ample opportunity to improve on past results.

Extra help?

Email Mr. Anthony with a suggestion of a date and time to meet for extra help (during X Block). Then Mr. Anthony will let you know if that will work or not.