

Instructor

Mrs. Perugini—Wilby High School Science Department

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Course Description

This class is a general course in the study of chemistry. It is designed to follow The City of Waterbury's Chemistry Curriculum and will cover the fundamental topics that an introductory course should.

This is a laboratory course that covers basic principles of chemistry. Topics of study will include atomic structure and isotopes, quantum theory and electron configurations, the Periodic Table of Elements, chemical bonding, nomenclature, chemical formulas and chemical composition, chemical equations and reactions, composition and reaction stoichiometry, gas laws, and solution chemistry. Theoretical concepts, as well as calculated chemical concepts are covered throughout this course.

I hope you will share with me some of the enthusiasm and appreciation I have for the subject of chemistry. I hope you will find this class challenging and realize the importance and/or influence chemistry has in our everyday lives.

Student Responsibilities

1. Each student is expected to be in class, on time and prepared, ready to work.
2. Each student is responsible for keeping a **notebook or binder** that will **include all notes and assignments** given throughout the course.
3. Each student is responsible for keeping up with reading each chapter covered and for completing each assignment given.
4. Each student is responsible for all work missed due to absences.
5. Each student is responsible for handing assignments in when due.

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Course Resources

Text book—Chemistry: Matter and Change Buthelezi, Dingrando, Hainen, et. al.

Class Presentations and Lecture—Instructor presentation will be related to the Chapter readings. **You are expected to complete all readings before material is discussed in class.** The presentation will be focused more on synthesis and expansion of the reading materials, so it is your responsibility to gain a basic understanding of the reading materials first. **Taking notes on the reading and writing down questions is encouraged.**

Periodic Table of Elements—Each student will be given a Periodic Table of Elements which is to be brought to class **daily**.

Scientific Calculator—A scientific calculator is highly recommended for ease in working out calculations.

Progress Book—Students and parents are encouraged to utilize Progress Book to view academic progress throughout the year.

Grading

Marking Period Grades (which account for 75% of the course grade) will be calculated as follows:

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|-----------------------------|-----|
| Test | 35% |
| Quiz | 25% |
| Laboratory | 20% |
| Homework | 10% |
| Disposition Toward Learning | 10% |

There will be **one notebook check per marking period**. Each notebook check will be graded, and will count as a **Test grade**. These checks are to be considered your extra credit for each marking period.

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Course Activities

Readings

Students are expected to read each chapter of the text that will be discussed. Assignments related to the readings will alternate between quizzes and discussion.

Laboratory Activities

Laboratory activities will take place regularly. Students are expected to be in attendance during all lab periods and participate fully in lab activities and experiments.

Presentations

There will be an Instructor presentation related to the readings. **You are expected to complete all readings before the presentation.** The presentation will be focused more on synthesis and expansion of the reading materials, so it is your responsibility to gain a basic understanding of the reading materials first.

Quizzes

Specific topic quizzes will be given regularly on the topics being covered. Students are encouraged to study and prepare for these assessments. In addition, it is advised that pop quizzes may also be given.

Tests

Unit tests will be given at the completion of each unit. Students are again encouraged to study and prepare for these assessments.

Examinations

Mid-Term and Final Examinations will be given. The District will provide a special schedule and bussing to accommodate for these exams. These exams combined will count for 25% of the course grade.

Discussions

Class presentations and lecture will always include students within the discussion.

Students are asked to participate daily to these discussions and are encouraged to ask questions during class time as well.

Assignments

Student assignments will be given regularly. Students are asked to complete all assignments on time. Assignment types will include, but are not limited to, homework, projects, and lab reports.

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Schedule

***Dates given are subject to change ** Assignment dates to be announced**

| Week | Topic/Unit | Coursework and Assignments Due | School-Wide Student Expectation(s) Met |
|---------|---|---|---|
| 1 | <ul style="list-style-type: none"> Welcome Introduction to course and chemistry General review of basic principles | ~ Read and sign letters ~ Read Chapters 1, 2 and 3 ~ Complete Vocabulary ~ Vocabulary Quiz ~ Measurement Laboratory ~ Significant figure and scientific notation quiz | <ul style="list-style-type: none"> Effective Reader Respectful Person Collaborative and Cooperative Worker Self-Directed Learner |
| 2-4 | <ul style="list-style-type: none"> Structure of the Atom | ~ Read Chapter 4 ~ Atomic Theory Timeline Project ~ Complete Vocabulary ~ Atomic Structure Quiz ~ Vegium Lab Activity ~ Pg. 128-131 #s 39, 44, 46, 52, 58, 61, 62, 68, 71, 74 Due 9/16/16 ~ Atomic Structure Test | <ul style="list-style-type: none"> Effective Reader Collaborative and Cooperative Worker Effective Problem Solver Self-Directed Learner |
| 5-7 | <ul style="list-style-type: none"> Electrons in Atoms | ~ Read Chapter 5 ~ Complete Vocabulary ~ Vocabulary Quiz ~ Flame Test Lab Activity ~ Element Poster Project ~ Electron Configuration Quiz ~ Pg. 166-169 #s 59, 61, 63, 70, 77, 78, 86, 87, 90, 97 Due 10/11/16 ~ Electron Configuration Test | <ul style="list-style-type: none"> Effective Reader Collaborative and Cooperative Worker Effective Problem Solver Self-Directed Learner |
| 8-11 | <ul style="list-style-type: none"> The Periodic Table | ~ Read Chapter 6 ~ Complete Vocabulary ~ Vocabulary Quiz ~ Periodic Table Lab Activity ~ Periodic Table Quiz ~ Density Trend on the Periodic Table Lab Activity ~ Pg. 198-201 #s 31, 32, 38, 41, 42, 45, 48, 56, 59, 63, 65, 69 Due 11/10/16 ~ Periodic Table Test | <ul style="list-style-type: none"> Effective Reader Collaborative and Cooperative Worker Effective Problem Solver Self-Directed Learner |
| 12-14.5 | <ul style="list-style-type: none"> Ionic Compounds | ~ Read Chapter 7 ~ Complete Vocabulary ~ Vocabulary Quiz ~ Ionic Bonding Quiz ~ Pg. 232-235 #s 46, 48, 60, 61, 71, 81, 82, 85, 87 Due 12/2/16 ~ Ionic Bonding Test | <ul style="list-style-type: none"> Effective Reader Collaborative and Cooperative Worker Effective Problem Solver Self-Directed Learner |

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| 14.5-18 | <ul style="list-style-type: none"> Covalent Bonding | ~ Read Chapter 8 ~ Complete Vocabulary ~ Vocabulary Quiz ~ Nomenclature Quiz ~ Pg. 274-277 #s 78, 84, 91, 93, 95a-c, 114, 120, 121130, 134 Due 1/5/17 ~ Covalent Bonding Test | <ul style="list-style-type: none"> Effective Reader Collaborative and Cooperative Worker Effective Problem Solver Self-Directed Learner |
| 19-22 | <ul style="list-style-type: none"> Chemical Reactions | ~ Read Chapter 9 ~ Complete Vocabulary ~ Vocabulary Quiz ~ Balancing Equations Quiz ~ Classifying Reactions Quiz ~ Precipitation in Double Replacement Reactions Lab ~ React and Balance Quiz ~ Pg. 312-315 #s 59, 64, 72, 74, 76, 80 Due 2/10/17 ~ Chemical Equations and Reactions Test | <ul style="list-style-type: none"> Effective Reader Collaborative and Cooperative Worker Effective Problem Solver Self-Directed Learner |
| 23-27 | <ul style="list-style-type: none"> The Mole | ~Read Chapter 10 ~Complete Vocabulary ~Vocabulary Quiz ~ Percentage Oxygen in $KClO_3$ Lab ~ Empirical Formula of a Compound Lab ~ Percentage Composition Quiz ~ Determining Empirical and Molecular Formulas Quiz ~Pg. 358-363 #s 83, 84, 103, 104, 108, 122, 133, 156, 168, 172, 175, 185 Due 3/10/17 ~The Mole Test | <ul style="list-style-type: none"> Effective Reader Collaborative and Cooperative Worker Effective Problem Solver Self-Directed Learner |
| 28-32 | <ul style="list-style-type: none"> Stoichiometry | ~ Read Chapter 11 ~ Complete Vocabulary ~ Vocabulary Quiz ~ Mass and Mole Relationships in Chemical Reactions Lab ~ Stoichiometry Quiz ~ Pg. 392-397 #s 36, 37, 53, 54, 55, 60, 67, 77, 81, 83, 92 Due 4/21/17 ~ Stoichiometry Test | <ul style="list-style-type: none"> Effective Reader Collaborative and Cooperative Worker Effective Problem Solver Self-Directed Learner |
| 33-35 | <ul style="list-style-type: none"> States of Matter | ~Read Chapter 12 ~Complete Vocabulary ~Vocabulary Quiz ~States of Matter Quiz ~Pg. 434-437 #s 34, 35, 36, 45, 52, 53, 76, 79 Due 5/5/17 ~States of Matter Test | <ul style="list-style-type: none"> Effective Reader Collaborative and Cooperative Worker Effective Problem Solver Self-Directed Learner |
| 36-38.5 | <ul style="list-style-type: none"> Gases | ~ Read Chapter 13 ~ Complete Vocabulary ~ Vocabulary Quiz ~ Boyle's Law Lab Activity ~ Charles' Law Lab Activity ~ Gas Laws Quiz ~ Pg. 468-471 #s 50, 51, 52, 58, 59, 62, 63, 69, 71, 84, 89, 90 Due 5/26/17 ~ Gas Laws Test | <ul style="list-style-type: none"> Effective Reader Collaborative and Cooperative Worker Effective Problem Solver Self-Directed Learner |

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| TBA if time permits | <ul style="list-style-type: none"> • Mixtures and Solutions | ~Read Chapter 14 ~Complete Vocabulary ~Vocabulary Quiz ~Separating a Mixture Lab ~Kool-Aid Lab Activity ~Mixtures and Solutions Quiz Pg. 508-511 #s 54, 63, 64, 65, 71, 74, 77, 86, 87, 89, 95, 101 TBA ~Mixtures and Solutions Test | ❖ Effective Reader ❖ Collaborative and Cooperative Worker ❖ Effective Problem Solver ❖ Self-Directed Learner |
| TBA | TBA | TBA | |

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