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COURSE SYLLABUS 2019/2020

# CHEMISTRY 8

## School: BASIS Chandler

## Instructor: Peter Delannoy

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## Course Description

Students will study the basic principles of atomic structure, elements, compounds, molar quantities, and the periodic table. Students will also be introduced to high school level concepts such as gas laws, stoichiometry, and types of reactions.

## Grading Policy

Each trimester the students will be assessed based on graded labs, quizzes, tests, and lab practicals (written and practical). The breakdown for the trimester grades is as follows:

**Exams, Lab Practical Written Exams, Final Exam Graded Labs - 20%**

**Quizzes, Graded Labs - 80%**

Exams are comprehensive, meaning that each subsequent test may have questions from previous concept areas. The Pre-Comprehensive Exam Score will count as 30% of a student's grade for Trimester 2. The Final Course Grade is the average of the cumulative Course Average after the last grading period (50%) and the Comprehensive Exam Score (50%). The grade for the course is calculated according to the rules established in the Parent-Student Handbook.

## Classroom Policy

*Class Policies:*

**A. Class Organization**

Students should enter the classroom prepared to learn. Each student is responsible for bringing a notebook and binder for handouts and other papers. Students should also bring a dry-erase marker, eraser, pencil, pen, scientific (non-graphing or non-programmable) calculator, periodic table, and good attitude to class every day.

All notes, handouts, lab notes, and old assessments should be saved to review for each exam and lab practicals as well as the comprehensive exams. It may be helpful for students to keep a 3-ring binder or folder at home to file these items for comprehensive exam review. Copies of packets, videos, and other types of documents will be housed at www.chemdoctor.org [http://www.chemdoctor.org] under the link Chemistry 8 (2019-2020).

**B. Missed Exams, Quizzes, and Labs**

It is the student’s responsibility to schedule make-up exams, quizzes and labs with the teacher. Exams, quizzes, and labs can be made up after school during the student hour--Mondays, 3:40-4:40 p.m. Exams and quizzes not made up by the end of the trimester will be entered as a zero. Students will be given at least five days written advanced notice on exams and lab practicals. Quizzes are meant to frequently test student knowledge and may be announced or unannounced and may also occur prior to laboratories or prior to lessons.

Students should make every effort to attend class when a lab is being conducted. Students who miss a lab may make up the lab after school during student hours.

**C. Student Responsibilities Regarding Assignments**

It is the student's responsibility to keep track of assignments and assessments in their communication journal and are required to check Chemistry 8 (2019-2020) on www.chemdoctor.org [http://www.chemdoctor.org] everyday to confirm the assignments in their CJ, or locate handouts, video assignments, white board problems and answers, reminders of test dates etc.

It is the students responsibility to arrange retakes of quizzes, tests, graded labs, etc. **Retakes CANNOT be arranged by email!** The student must come to my room and make the arrangement with me directly.

**D. Honor Code**

Unless otherwise instructed by the teacher, students may work together in groups but must turn in their own work. See BASIS SCHOOL Handbook. Students should be aware that by working with one another closely on assignments they run the risk of unintentionally cheating or plagiarizing another student's work. Students must do their own work and will be penalized for cheating if their work is discovered to be extraordinarily similar to another student's. A student who is caught cheating on a test, quiz, lab write-up, or other assignment will earn a zero on the assignment or assessment.

Students are expected to work in such a way as to minimize distractions to other students. Students who feel that their learning is hindered by another student's behavior are encouraged to talk to the teacher. Students are required to behave in a manner that is respectful to both the teacher and other students. Any behavior that is considered offensive, belittling, rude, or crass will not be tolerated as stated in the Parent-Student Handbook. The teacher reserves the right, on the first offence, to send the student to the office for disciplinary action or to remove the offending students from any group work.

A teacher's classroom relies on student involvement and collaboration. Behavior which hinders the creation of an environment where all students are respected and listened to will not be tolerated.

**E. Calculator**

A scientific calculator is required. I recommend the TI-30XIIS or similar. Programmable or graphing calculators are **not allowed**. Calculators will not be provided for students who arrive ill-prepared for activities or assessments requiring calculators.

**F. Cell Phones**

Cell phones are not allowed in any chemistry class. They must remain stowed inside the student's locker. If a cell phone rings during class or becomes visible, the cell phone will be confiscated. Parents can reach students during an emergency through the school office. Cell phones are not allowed as calculators.

**G. Syllabi Changes**

The order of content may change and non-mandatory topics (those not covered on the pre-comprehensive or comprehensive exams) may be omitted due to time constraints. New content related to the course may be introduced at any time. New rules may be introduced as well. New rules may be announced verbally, written on the board, and/or provided as a written supplement. Rules for laboratories will be presented prior to the laboratory.

**H. Lab Safety**

Because safety is paramount in the lab, each student MUST arrive for lab days fully prepared. The student will have a baggy T-shirt to put on over nice clothes and may want to have a preferred set of safety glasses stored in their locker for labs. I reserve the right to remove students from the lab for violations of safety practices.

**I. Individual Work**

It is the student's responsibility to turn in their own unique work for individual assignments – even assignments (such as labs) that are part of a group project.

**J. Classroom Expectations**

Students are expected to follow the classroom expectations for chemistry each day. These expectations are 1) Be honest and kind, 2) Be safe, 3) Do your best.

**K. Statement of Assurance**

This course has been aligned to the Arizona Academic Standards.

# Instructional Materials

The chemistry 8 class has a link called Chemistry 8 (2019-2020) found at www.chemdoctor.org [http://www.chemdoctor.org]

All class materials are found at the above link. Students are required to visit this link everyday to get the most recent updates regarding chemistry 8. Updates can include new assignments at the beginning of the week, new video assignments, white board uploads with answers, laboratory notes, etc.

# School Supplies

baggy T-shirt

pencils and pens

non-programmable calculator

white board markers

binder

dedicated notebook for chemistry

# Other Information

Instructor email: peter.delannoy@basised.com [mailto:peter.delannoy@basised.com]

Email communication is preferred over written communication.

Student Hours: Monday 3:40-4:40 pm

Parent Hours: Fridays 2:00-2:50 pm

Parent hours must be scheduled at least 24 hours in advance via email.

# Syllabus Outline Lesson Units

**Unit 1 - Laboratory**

In this unit, students will review basic concepts on laboratory safety and measurements. Students will also review and expand their knowledge of significant figures.

**Unit 2 - Properties of Matter**

In this unit, students will review how to identify elements, compounds, and different types of mixtures using descriptions and particle diagrams. Students will also learn techniques for separating mixtures and learn about thermal transfers from one substance to another.

**Unit 3 - Periodic Table**

In this unit, students will review the basic set-up of the periodic table and review the periodic trends they learned in 7th grade. Students will also learn the underlying explanations for the periodic trends and how the trends impact one another.

**Unit 4 - Chemical Bonding**

In this unit, students will review the basics of ionic and covalent bonding. Students will practice nomenclature of ionic and covalent compounds, draw Lewis structures for covalent molecules and identify their molecular geometries, and learn how metallic bonding gives metals some of their unique properties.

**Unit 5 - Molar Mass**

In this unit, students will review how to calculate the molar mass of a compound and use molar mass to convert between grams and moles of a substance. Students will learn how to calculate the percent composition of an element in a compound and learn how to use percent composition data to find the empirical and molecular formulas of a substance.

**Unit 6 - Chemical Reaction Types**

In this unit, students will review how to identify and predict the products for neutralization, precipitation, oxidation-reduction, combustion, synthesis, and decomposition reactions. Students will also learn solubility rules for ionic compounds and will learn how to calculate the initial concentration of an acid or base in a neutralization reaction.

**Unit 7 - Stoichiometry**

In this unit, students will review the basics of stoichiometry, such as mole ratios and conversions between grams of one substance and grams of another. Additionally, students will learn about solution stoichiometry, which involves converting between reactants and products using molarity and volume. Students will also learn how to calculate limiting reactants and review how to calculate theoretical and percent yields.

**Pre-Comprehensive Review Week**

Students will review for their Chemistry Pre-Comprehensive Exam.

**Pre-Comprehensive**

Students will take their Pre-Comprehensive Exams.

**Unit 8 - Gas Laws and Gas Stoichiometry**

In this unit, students will learn about kinetic molecular theory and the relationships between the volume, pressure, temperature, and number of moles of a gas. Students will also learn how to use the ideal gas law to solve for any variable in the equation. Once students have mastered the ideal gas law, they will use it within the context of a reaction to solve for the mass, volume, or number of moles of a product or reactant.

**Unit 9 - Energy and Change**

In this unit, students will review energy transfers and learn how to draw and label energy diagrams for endothermic and exothermic reactions. Students will also learn how to identify endothermic and exothermic reactions from descriptions and identify if a reaction is endothermic or exothermic based on its energy graph.

**Unit 10 - Teacher Topics and Review**

This unit is up to teacher discretion, but may involve beginning review for the Comprehensive Exam or learning new chemistry topics for enrichment.

**Comprehensive Review Week**

Students will review for their Chemistry Comprehensive Exam.

**Comprehensive**

Students will take their Comprehensive Exams.