**10th Grade Chemistry**

**with Lesley Anderson**

landerson@hightechhigh.org

Course Objectives

My first main objective is to foster a classroom of *critical thinkers*. I hope to teach my students more about the importance of science in the world around them and how they can make an impact as the next generation of scientists. I hope to teach each student to ask questions, but furthermore, to develop as a *collaborative learner* who approaches problems analytically and independently seeks out resources to find answers. In addition, I expect each student to become an *effective communicator* of her/his ideas. Through in-depth projects, students are encouraged to *apply the knowledge* learned in the classroom to the outside world, making connections between past and present, school and community, classroom and outside world.

Course Content Schedule

We will begin the year with an interdisciplinary humanities/chemistry project called *Chocolate Covered Truth* (more information to follow). The second half of the semester, we will look at how chemistry and art are connected (more information to follow).

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| **Chocolate Covered Truth** (8/25-9/12) | **Art of Chemistry** (9/15-12/12) |
| Measurement* Introduction to lab safety
 | Chemical Bonds* Bond strength, bond type
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| Unit Conversions* Exploring the metric system
 | Reaction Rates/Stoichiometry* Catalysts/activation energy
* Balancing chemical equations
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| States of Matter* Phases and phase changes
 | Chemical Equilibrium* Le Chatelier's Principle
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| Atomic and Molecular Structure* Periodic table
* Atomic mass, atomic number, electron configuration
 | Nuclear Chemistry* Isotopes
* Reactivity
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 \*\*\*Subject to change

Course Philosophy & Expectations

* We will function as a community of learners, helping one another to improve as writers, researchers, scientists and overall scholars.
* Each member of the class will have a voice. We expect every student to be involved in class and be respectful of others’ opinions.
* As active participants of the class, every student is expected to pitch in and help keep the class clean and organized. Each student will be a class monitor at some point during the school year.
* Lastly, group work is the key to success in class, and each student is expected to be open to the ideas of others and put in their full effort in helping the group succeed.

Behavioral Expectations for 10th Grade

* Each member of the class must be in their seats before class starts with their materials out on their desks and their backpacks under their tables.. (Binder, writing utensil and calendar). Failure to be in class on time or be prepared will result in clean up duty.
* All cell phones, iPods, mp3 players and other such electronics will be put away before class starts and will not be used in class unless the teacher gives permission otherwise. If your electronic is seen in class, Lesley has the right to take it away and have your parents come pick it up after school.
* Food and drinks must be finished and thrown away before the start of class, with the exception of water.
* Gum is not allowed at school. If caught with gum, you will be put on clean up duty.
* Laptops will only be used in class when permitted. You may not come into to class and grab a computer unless instructed by the teacher.
* Every student that uses a laptop must make sure to charge it after using so that the computers will have battery life for projects.
* Because our school is project-based, you are given a lot of freedom to complete your tasks. With much freedom comes great responsibility. Therefore, we expect you to stay on task during class (i.e. no gchat!!)
* Students are expected to be in class at all times, unless given permission to work elsewhere by Lesley. In order to leave class during project work time, students must first ask for permission and then sign out on the white board.
* Since our school does not have bells, we expect all students to stay in their seats until they are dismissed by Lesley.

Academic Honesty

All students are expected to use their own voice and brain when completing assignments (projects, essays, lab reports, PowerPoint presentations, homework, etc.). Therefore, plagiarism and cheating are taken very seriously. Examples of plagiarism include copying someone else’s homework/essay/lab report/test, talking during tests, copying and pasting words from the internet without putting into your own words, not giving credit for someone else’s words and ideas and not using MLA format citations (Brooke/Natalie will explain later in class).

Consequence for the first offense is meeting with Ray and a zero on the assignment. After the second offense, a student will be in danger of failing the class.

Classroom Supplies and Equipment

During the course of the year, you will be using various supplies and equipment provided by the school. These will include books, lab equipment, and laptops, among other things. We expect you to responsibly care for any items you use and to use them properly for school related purposes. You will be held accountable for misuse, damage or loss. Consequences will depend on specific situations but can range from suspension of privileges, withholding of grades or repayment of costs.

Grading

*SCALE:*

90-100% A

80-89% B

70-79% C

<69% F

\*D+ and below are failing grades

*GRADING BREAKDOWN:*

 100% Projects, tests, quizzes, labs homework, class work, etc.

Challenge Projects

Even though we do not have honors classes at High Tech High schools in tenth grade, we want students to feel challenged! We will offer challenge projects throughout our courses, which are optional and can help to improve your grade.

Field Trips and Exhibition

At High Tech High, part of our curriculum includes field trips and exhibitions, so we expect all students to participate. Field trips will enhance the learning of our content, and help students connect it to the outside world.

Late Policy

All work must be turned in on time to receive full credit. Any work turned in late will only receive up to half credit. All work (late or otherwise) must be submitted *before* the end of the project.

Communication

* It is incredibly important for each of you to be open about your daily experience and anything that is preventing you from performing at your optimum.
* Be proactive (**come see Lesley *before*** what is happening outside the classroom begins to affect your success); either face to face or via email
* Lastly, keep your parents/guardians informed about your progress on a *daily* basis.
* Your parents and guardians are welcome to email or call if they have any concerns or questions; Lesley will contact home whenever the need arises.

Learning Contract

Please complete and sign the following document and return it to Lesley for entry into your student file.

*For students:*

I, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (*student*) fully understand the classroom expectations and agree to do my best to follow them in order to create an environment conducive to the learning of others and myself.

Signed,

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*For parents/guardians:*

I, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(*parent/guardian)* fully understand the classroom expectations and agree to do my best to support my student in following them. I also agree to communicate with Lesley Anderson if I have any questions or concerns.

Signed,

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Parent Questionnaire

1) What do you do for a living?

2) Is there anything that you want us to know about your family and your student?

3) How can I best support your student?