Class Syllabus for STEM Chemistry

2016-2017 School Year

**Welcome to the 2016-2017 school year here at Southridge High School and STEM Chemistry.**  I hope you will find this class syllabus helpful in understanding what we will be learning and how your child's achievement will be determined and reported, both academically and behaviorally.

**Teacher:**

Denise Farrell

**Email Address:**

Denise\_Farrell@beaverton.k12.or.us

**Room:**

**D104**

**Class Website:**

<http://farrellchemistry.weebly.com>

**Join Remind:**

Text @4af18 to 81010

**District Goal:**

*WE empower all students to achieve post-high school success.*

Academic Learning Targets (ALT) for Chemistry 1: This is what we will be learning and how I will evaluate student progress. These targets are consistent across the Beaverton School District.

**ALT1 - Classify matter in terms of physical properties, chemical properties, phase, and bonding type.**

**ALT2 - Develop and use models to describe the subatomic structure of the atom.**

**ALT3 - Develop models to illustrate the changes in the composition of the nucleus of the atom and the energy released during the processes of fission, fusion, and radioactive decay.**

**ALT4 - Use the Periodic Table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy levels of atoms.**

**ALT5 - Use data and models to describe the types and properties of chemical bonds and to inform the naming and formulas of substances.**

**ALT6 - Use VSEPR models to predict intermolecular forces and to explain macro-level physical properties of substances.**

**ALT7 - Construct and revise an explanation for the outcome of a simple chemical reaction based on the outermost electron states of atoms, trends in the Periodic Table, and knowledge of the patterns of chemical properties.**

**ALT8 - Use mathematical representations to support the claim that atoms, and therefore mass, are conserved during a chemical reaction.**

**ALT9 - Develop and use models to explain how energy is transferred between systems and surroundings in physical and chemical thermodynamic processes.**

**ALT10 - Apply scientific principles and evidence to explain the effects of changing reaction conditions on reaction rates and equilibria**

**ALT11 - I can use the inquiry process as a controlled and data-driven means to investigate scientific questions.**

**ALT12 - I can use the engineering design process as an iterative and productive means of problem solving.**

**Rubrics:** This is one tool I use to assess student progress on the learning targets and provide feedback to students on what must be done to improve their proficiency or mastery of the learning. Rubrics will be provided to students as we progress through the academic learning targets.

**Behavior Learning Targets (BLT):** I believe that the following behaviors are critical to academic success. I will teach and give feedback on some of the behaviors listed below during this school year.

 **I can manage my responsibilities as a student.**

 **I can self-direct my learning.**

 **I can communicate and work effectively within a team or group.**

**Course Description:** This is a foundational Chemistry course designed for students who may be interested in careers in Science, Technology, Engineering and Math (STEM). Through extensive scientific inquiry and critical thinking, students will discover and apply patterns in major Chemistry topics such as atoms, periodic trends, energy, chemical reactions, and chemical bonding. An important aim of the course is to challenge and further develop students’ math abilities, performance in problem solving, scientific literacy and technical communication skills that will be useful in STEM careers.

**Supplies needed:**

# Textbook: Pearson Chemistry

Notebook or section in your binder dedicated to chemistry with notebook paper.

Pen and pencil

Scientific Calculator (not your phone)

**Cheating/Academic Integrity Policy:**

* Cheating is absolutely unacceptable and will not be tolerated by anyone.
* Cheating is considered to be copying work from another individual or letting another individual copy your work. Copying a lab partner’s work other than the data table is considered cheating.
* Cheating will earn a grade of **ZERO** by all individuals involved with no opportunity to make up.
* Cheating will be reported to administration and documented in Synergy.

**Extra Help:**

The most important skill your child can learn is to ask questions. Especially in chemistry! I have encouraged, and will continue to encourage, them to do this. If they are struggling or have a question that they are unable to answer while doing their homework, please encourage them to ask questions in class the next time we meet or make arrangements with me to work with them. **I will be available Tuesday afternoons from 2:45-3:30pm. I will also be able to work with students by appointment.**

**Grading:**

As in any situation that one is learning something new, practice and guidance from someone who is knowledgeable is critical. Practice in chemistry comes in many forms including in-class practice, both alone and with others, and daily homework. Many formal opportunities to show proficiency will be offered.

The scale for academic feedback is 1(Developing Proficiency), 2(Nearing Proficiency), 3(Proficient), 4(Highly Proficient), N = No Evidence (the assignment/test was not turned in and counts as a 1 in the gradebook) and for behavior feedback the scale is R(Rarely), G(Generally, and C/I(Consistently and Independently).

Frequent feedback will be given to your son/daughter about where they fall on these scales. Students will have multiple opportunities per long term learning target to show their understanding. The overall grade for the class will be calculated from the average of summary judgments from each long term learning target and the following scale will be used to decide the overall grade:

 A—3.4-4.0 B—2.7-3.4 C—2.0-2.7 D—1.6-2.0 F—less than 1.6.

Our best line of communication is through your child. Please encourage them to approach me with any questions or concerns. If you have any questions, please ask your son/daughter, and do not hesitate to contact me at the above contact information. I look forward to a great year working with you and your son/daughter.

**Test Retakes and Homework:**

Homework is assigned each class period out of the unit packet. One test retake per unit will be allowed if all homework assignments are completed on-time, thoroughly and accurately. The test retake needs to be completed within one week after the original test scores are posted.

**Expectations for Chemistry:**

**You can expect that I will….**

1. be proficient in the subject matter.

2. be available to answer your questions or discuss anything pertaining to this course.

3. be on time and prepared for class daily.

4. manage and control the class to provide the best learning environment for everyone.

5. provide timely feedback pertaining to grades in the course.

6. fairly apply district, school and class policies and procedures.

7. support you as you learn how to become a more independent learner.

**I will expect that you……**

1. be present and on time for class every day. Students will be given 2 tardies per semester before being assigned a consequence.

2. accept personal responsibility for your learning. You will read and follow all written and verbal instructions. You bear the responsibility for your own learning. Your instructor serves as a guide, mentor and resource.

3. are here to learn and will participate in **ALL** class activities

4. understand that you will ask questions and ask for help when you need it.

5. understand that grades are earned by consistent effort, hard work, perseverance and learning.

6. will **RESPECT** everyone including yourself

7. come to class prepared with your notebook, textbook, calculator, pen/pencil and ready to engage in and discuss each day's activities.

8. follow all SRHS attendance and electronics policies

9. Learn more than you thought possible and feel the pride associated with your success!

**Specific Chemistry lab procedures:**

* All lab safety rules must be followed
* All electronic devices need to be OFF and AWAY during class time. Any devices that are on or visible will be subject to the consequences outlined in the student handbook.
* Misusing, damaging or defacing of computers or classroom equipment will result in your not being allowed to use these supplies. The extent of the damage will determine how long you will be unable to use them.
* No student is allowed to leave the room during the first or last twenty minutes of class.
* You must ask to leave class in order to use the bathroom pass. **You have 5 for the semester.**
* **Do not** bring food or drink to class. For your safety, they are not allowed in the science classroom. The only exception is bottled water.

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**Confirmation of Expectations**

As a student in Ms. Farrell’s Chemistry class, I agree to fulfill all of the stated expectations as I continue to mature as a student and a person.

Student Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

Parent Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**STEM Chemistry**

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grade \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What grades did you earn in science the last year? (List the class and grade) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What math are you in this year? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**For the following questions, use a scale of 1-5 (1 = least agree 5 = most agree)**

1. Science is hard for me \_\_\_\_\_\_\_\_

2. I think that some people are good in science and others are not \_\_\_\_\_\_\_\_\_

3. I think that if you are bad at something there is little you can do to change it \_\_\_\_\_\_\_\_

4. Hard work determines whether or not you are good at something \_\_\_\_\_\_\_\_

5. I usually give up when something is hard or doesn’t go my way \_\_\_\_\_\_\_\_\_

**Complete the following:**

1. A few things that I would want a teacher to know about me as a person are:

2. A few things that I value being praised for:

3. I am worried about this class because ….. (or) I feel very comfortable about this class because ……..

4. Sports/activities that I am (or will be) involved in this year are:

6. The one thing that is **the most important thing** in the world to me is………..

7. Most of my **time at home** is spent doing……….

8. My **strong points** are……..

9. My **weak points** are……….

10. You will know that I am happy, positive or understand things when I:

11. You will know that I am unhappy, frustrated or confused when I:

12. I have lived in Beaverton for \_\_\_\_\_\_\_\_ years. Other places I have lived are……..

13. **After high school** I plan to………..

14. In order for me to work with others in a productive way, the members of my group must:

15. I prefer to sit ……………………………… in the classroom. Why?