

Port Townsend High School

Course Title: Intro to Chemistry/ Earth and Space Science

Credit Awarded: 1.0 credit (science lab credit, 0.5 credits per semester)

Teacher Name and Email: Judy Cowling jcowling@ptschools.org
Teacher Name and Email: David Kelley dkelley@ptschools.org
Teacher Name and Email: Brandi Hageman bhageman@ptschools.org

School Phone: 360-379-4520 (You may leave a message with the main office.)

Teacher Webpage: <https://classroom.google.com/u/1/c/NDA4MDI3NzIwMzBa>

School Webpage: Search in the Staff Directory <https://highschool.ptschools.org>

Resources: POGIL Activities for Chemistry, Flinn Scientific © 2012
Argument-Driven Inquiry in Chemistry, NSTA Press © 2015
Argument-Driven Inquiry in Earth and Space Science, NSTA Press © 2018

Course Description/Course Overview:

This freshman course is an introduction to Chemistry through the exploration of Earth and Space Science. It is designed to build student understanding of the chemical and physical processes that take place with stars, the Earth, and the world around us. Throughout the course of this year we will be learning about the formation of the galaxy, the stars, and the Earth. Since no one was around to observe these events, we will rely on evidence to construct arguments and to support or refute current theories. As we study the different processes that take place within stars or the Earth, we will build an understanding of basic chemistry principles on both a micro scale, atoms and molecules, and macro scale, materials that we can observe and interact with.

My goal as the instructor for this class is to act as a facilitator and guide, rather than a repository of information. Students will be required to think deeply about the material we are working with and develop some of their own conclusions and analysis of the information or ideas we are processing.

Honors Designation:

Students have the option of earning an Honors designation for this class. This means that the student has shown a deeper understanding of the content than is expected from the rest of the class. To earn this designation, students must share with me at the beginning of the year that they are interested, and then consistently work throughout the year to achieve this goal. To achieve the honors designation, a student must:

- Maintain a B+ average consistently throughout the year, 87% or higher.
- Adequately complete the “Honors” designated coursework options that will be part of most classroom work.
- Complete a total of 2 (two) research assignments on a topic within the Earth and Space or Chemistry field.
 - The topic choice for these research assignments should be approved by the instructor prior to beginning the project.
 - 1 (one) per semester, shared with the instructor in a format chosen by the student (presentation, paper, video, diorama, etc)
 - At least 1 (one) of these research projects must be shared with the class.

Course Outline:

1st Semester

Unit 1: Universe Timeline

Unit 2: Waves (EM Spectrum, Light)

Unit 3: Atoms and the Periodic Table

Unit 4: Stars

2nd Semester

Unit 5: Ice Cream (Types of Bonds)

Unit 6: Earth Processes

Unit 7: Climate Change (Ocean Acidification)

Place Based Learning/Project:**Title:** Climate Summit**Essential Question:** What are the various aspects of climate change?**Project Overview:** Student will investigate pH and water chemistry as it relates to ocean acidification due to climate change. Research groups will then present posters of their work at the Climate Summit in June 2020.**Community Partner(s):** Port Townsend Marine Science Center**Timeframe:** May - June**Classroom Expectations for Success:**

1. **Be Prepared** – Bring Interactive Science Notebook and a pencil or pen to class EVERYDAY.
2. **Be Prompt** – You should be seated, quiet, and ready to work when the bell rings. The Port Townsend High School Tardy policy will be enforced.
3. **Be Polite** – Respect yourself and others through your words and actions.
4. **Be Positive** – Attitude is a little thing that makes a BIG difference. You can do it!
5. **Be Productive** – Work the entire class period and stay on-task without distracting others.

Grading:

Grading in this course will mostly be based on mastery of the content. It is expected that students receive an overall score of 75% or higher on tests, labs and projects. If students do not initially show this level of mastery, they will be strongly encouraged by the teacher to increase their understanding through remedial work. This remedial work can include redoing classwork or completing supplemental material at home, during lunch or before or after school. After students have shown that they have made an effort to increase their understanding, they may have the opportunity to show mastery by retaking a test or lab, or resubmitting a project.

A student's grade will be weighted with the following categories:

25% Interactive Science Notebook

25% Laboratory Experiments/ Laboratory Reports

50% Unit Tests/ Culminating Projects

Class Materials/ Required Supplies:

The following list of supplies will help students stay organized and prepared for class every day:

- **Two 100 page College-Ruled Composition Notebooks** ***Will be provided***
- **Chemical Splash Safety Goggles** ***Will be provided***
- Pen and pencil (daily)
- Headphones or earbuds (used 1-2 times per week, bring daily)
- *Suggested: colored pencils, highlighters, post-it notes, glue stick, scotch tape*

Work Completion/Work Habits:

There are three possible types of homework in this class. One type of homework is to finish the work that was not completed in class. If students use their time wisely, they are unlikely to have much of this type of homework. The second type of homework is specific practice or a task that will help to prepare them for class and is assigned by the teacher. These tasks will be designed to take 20-30 minutes to complete. If a student finds that they are spending more than 30 minutes on a practice assignment, speak to the teacher about helpful study strategies.

The final type of homework students will have will be ongoing project work. There will be a few large projects that students work on throughout the year. These large projects are designed to make classroom content more meaningful and engaging to students. These projects will take anywhere from one week up to a month. The timeline for each project will be shared with the introduction to each project. It is important for students to stay organized and spread their work throughout the timeline, rather than waiting until the end to do everything.

It is expected that all assignments and projects are turned in on time. To help encourage this, there is a 50% grade deduction for assignments turned in late. No assignments will be accepted more than 2 weeks after the due date. If you have questions or extenuating circumstances speak to the teacher.

Standards Covered in this Class:

This course is aligned to [Common Core State Standards in Mathematics and English Language Arts](#) and [Next Generation Science Standards](#), with a particular focus on including Science and Engineering Practices.

Cell Phone:

This class adheres to the PTHS Cell Phone/Personal Communication Device Rules. A cell phone holding device will be available in my classroom. Upon entering my classroom, students are required to silence their ringers and place their phones in the holding device, or secure them in their backpacks, daily. Students who are caught with their cell phones on their person (i.e. in a pocket) or using them during class time (including in the hallway or other spaces) will have them removed per the school's cell phone policy. They will be turned in to the office, and appropriate consequences will be applied.

Academic Integrity:

You are expected to do your own work at all times. Each of you understands the difference between working on homework in a group, and cheating by copying. Similarly, you are expected to show what you know and can do on all tests. Anyone caught cheating will receive a zero for that assignment or test and will be reported to administration and your parent or guardian will be contacted.

Communication:

Students – The emphasis in this class, and in your grades, is *to improve upon where you started from and continually grow*. You are only limited by the effort you are willing to put forth to earn the grade you want. *You will succeed in Science if you try*. Succeeding in this class isn't just about your scientific reasoning and mathematical knowledge. It's also about your ability to try, **ask for help** when you need it, and developing the skills necessary to analyze something critically. Please email us if you are stuck on something while you

are doing your homework. I will either send you a message back, or address the question in class the next day (others will most likely have a question similar to yours). Can't get your project or assignment to print? E-mail it to me! It is acceptable to hand in assignments this way, and avoid them being late!

Need face-to-face help?

- Before school 7:50am – 8:20am
- During lunch time
- After school until 4:00-ish

Parents – I know that keeping up with your student's progress is extremely important to you. The best tool to keep you informed is the Skyward online program that can be accessed through the school's website <http://www.ptschools.org>. I work very hard to keep grades current and anticipate that you will be checking online on a regular basis. I am always very happy to speak with you. *If you have any questions or concerns, please feel free to send us an email anytime jcowling@ptschools.org, dkelley@ptschools.org, bhageman@ptschools.org.*

Remind 101 –Remind 101 is a safe way for teachers to text message students and stay in touch with parents for free. I'll use this tool to send updated homework information and reminders about upcoming labs, quizzes, and tests. Please give me feedback on how you think this system is working.

STUDENTS

To receive messages via text, text **@scipths** to **81010**.

Trouble using 81010? Try texting **@scipths** to **(509) 822-6876** instead.

Or to receive messages via email, send an email to **scipths@mail.remind.com**.

PARENTS

Follow the same directions as above, but use **@ptsciparen** to join the parent group and receive less frequent reminders.

Google Classroom – Feeling similar to Facebook in the way that it functions with posts and quick links to content videos, short quizzes and documents, I use the Google Classroom frequently when supporting student content knowledge acquisition. We also use this platform for completing and submitting assignments using Google Docs.

Join ***Intro to Chemistry/Earth and Space Science Google Classroom***

Class Code: **5it77d4**

Go Redhawks!

Mrs. Cowling, Mr. Kelley, and Mrs. Hageman

STUDENT INFORMATION SHEET

INTRO TO CHEMISTRY/EARTH/SPACE

Students should complete this form (please print). Have your guardians read all the classroom policies, read and sign the Safety Contract. **Return to your science teacher A.S.A.P. This is worth points!**

Student Name: _____
(last) (first) (nickname)

Preferred Pronouns: _____

Guardian #1 Name: _____ Relationship _____

Day Phone (____)____ - ____ email _____

Guardian #2 Name: _____ Relationship _____

Day Phone (____)____ - ____ email _____

I am considering a career in: _____

Sports, extracurricular, or recreational activities: _____

Do you have a computer at home? Yes No

Do you have Internet access at home? Yes No

Do you have a cell phone Yes (smartphone) Yes (text only) No

Do you need to sit in a special location in the room? _____ Where? _____

What grade do you expect to earn in science this year? _____

Anything else that you would like me to know about you? _____

I strive to bring in as many quality experts from the local community as possible into my science classes. Occasionally, I am also able to arrange special field trips affording my students the opportunity to experience various aspects of science in a more meaningful way than I could provide in the classroom alone. If you know of someone (possibly yourself) that is in a field connected to science and might be interested in coming to speak to our class or hosting us for a field trip experience, please list below **name, email address, and science related field.** Thank you for sharing your community connections. Together, we can make this an amazing course for our students.