

Course Title: Physical Science 1

Department: Science

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Course Description: Physical Science 1 is a foundational course where students learn the basics in foundations of chemistry, earth science, and climate. Class will involve laboratory investigations, data collection and analysis, modeling activities, whole-class and small group learning activities, and student presentations. Students seeking honors recognition will need to meet all required course standards as well as complete additional assessments outside of class (one per standard).

Units of Study: Foundations of Physical Science, Geologic History, Plate Tectonics, and Climate

Optional Honors Credit:

Honors designation is centered on students striving for greater breadth and complexity into the course material, and demonstrating greater commitment and rigor in doing so. In order to achieve "Honors" status for the course, a student must:

- Complete an additional, advanced assignment for each unit/standard of the course.
- Pass all honors assignments. Each will be graded as pass/fail.
- Complete all honors assignments by the required deadline.
- Be proficient in all performance indicators.
- Turn in all assignments and assessments in a timely manner

Materials: Please get a standard **three ring binder** for class and bring it every day. Your binder will be required to remain organized. Please bring in **4 binder dividers**. These can be store-bought or homemade. I will help you stay organized. It is highly recommended that you bring your own **pencil, pen, highlighter, colored pencils** and a calculator as well.

Learning Tasks: Students are expected to participate in all "Learning Tasks" which include: class discussions, online labs/activities, lecture/notes, projects, investigations, practice sheets, and review sessions. All Learning Tasks are NOT assessed, although feedback is routinely provided. If Learning Tasks are not finished during class time, then they are expected to be completed for homework.

Assessments: Assessments will be used to determine if you have met a standard or not. Once an assessment has been returned, you have the opportunity to reassess for a higher grade. Prior to reassessing all Learning tasks for that topic must be completed proficiently and corrections will need to be made to the original assessment. Contact me and we will create a plan to help you be successful in your reassessment

Progress Reports: Every 3-weeks, you will receive a progress grade (Unsatisfactory, Below, or Meeting). To earn the progress grade of "Meeting," you need to be: caught up with work/assignments, meeting current due dates, and on track to pass the course. If you are not meeting these academic expectations, then you will be required to attend Office Hours where we will sit down and discuss what you need to do to get back on track.

- **Extra Help:** Help is available by appointment. I am available every day during Advisory Bands B & C.
- **Absences:** It is 100% YOUR responsibility to get Learning Tasks and assessments that you missed due to your absence or tardiness. You are to come see me during Advisory or Morning Block (Room 18) to get missed work. Asking me before or during class will not be accepted. I will provide reminders, but it is solely up to you to get the work you missed and turn in assignments that were collected.
- **Call Back Day:** At the end of the semester during Call Back Day, students who are close to passing will be allowed to make up no more than 2 performance indicators. If students did not consistently complete PAS tasks and meet PAS expectations, then they may be ineligible for Call Back.

Expectations: My expectations for you this year in both the quality of work that you submit and the manner that you conduct yourselves on a personal level in this classroom are very high. My expectation is that you will arrive to class with an open mind and help maintain a respectful learning environment, where people feel safe to ask questions and try new things.

- **Food in the Classroom:** There will be absolutely no food or drink allowed in class on days when we are using computers or doing lab work. Because of food allergies, clear all eating with a teacher and wipe down your desk afterwards.
- **Tardiness:** Students are expected to arrive to class on time and be active every day. Students are prepared if they have the above materials and all their class work completed by the due date.
- **Cell Phone Policy:** You may not have your cell phone out in the classroom. Put it away and turn it off. The only exception to this rule is when I allow students to listen to music during individual work time. When this is the case, your cell phone or device needs to be placed face down on the desk and cannot be touched (a playlist will need to be made if you want to choose your songs). **You may not use youtube to listen to music.** Cell phones are not to be used for social media; this

includes pictures and videos. If these expectations cannot be followed I will hold on to your cell phone for the duration of the class and make sure your parent or guardian is aware of the distraction it has caused. If the cell phone turns into a constant distraction then disciplinary action will follow.

- **Chromebook Policy:** Your chromebook should be brought to class and sufficiently charged. If, for whatever reason, your Chromebook is not ready for class, it is your responsibility to sign out a back-up in the library before class begins.
*Chromebooks are to be used for classwork only; **no exceptions.**
- **Substitutes:** When I am absent from class I expect you will conduct yourself in the same manner as you would if I were there teaching. Any student whose name is brought to my attention for misbehavior with a substitute will have consequences. If you do not complete the assigned work while I am away you are expected to complete it for homework.

Physical Science 1 Assessed Course Standards

Use the [Course Performance Grading Outline](#) to determine your overall grade and GPA for the course.

→ **Side Note:** To earn *Partial Exemplary* or *Exemplary* for the course, you cannot have any Beginnings on performance indicators

→ You can always go back and retake assessments, but after the end of the first 9 weeks, you may not go back to assess for Exemplary on those assessments.

To earn credit for the course you must earn **Proficient** in the **majority** of the standards

→ To earn **Proficient** (P) in a standard the majority of the performance indicators need to be Proficient (P) or Exemplary (E) and there cannot be any no Insufficient Evidence (IE).

→ To earn **Exemplary** in a standard the majority of the performance indicators need to be Exemplary (E) and no performance indicators are below Proficient (P).

Standard #1: Foundations of Physical Science→ Students will be able to utilize and apply the foundations of physical science

Performance Indicators: Student's will be able to...

- 1.1 ... use measurements tools to quantify and explain density
- 1.2 ... model the structure of atoms and isotopes
- 1.3 ...explain the organization of the periodic table and describe the trends

Standard #2: Geologic History → Students will be able to use evidence to explain the geologic history of Earth

Performance Indicators: Student's will be able to...

- 2.1 ... explain Earth's history and formation using the Geologic Time Scale
- 2.2 ... utilize relative age laws to distinguish older and younger rocks
- 2.3 ... use relative age & radiometric dating to determine when past geologic events took place

Standard #3: Plate Tectonics→ Students will be able to explain how plate tectonics can be viewed as the surface expression of mantle convection

Performance Indicators: Student's will be able to explain...

- 3.1 ... how analyzing seismic data gives evidence for Earth's interior & composition
- 3.2 ... the evidence that supports the theory of plate tectonics
- 3.3 ... the mechanisms that drives plate tectonics

Standard #4: Climate → Students will be able to use data to explain climate trends.

Performance Indicators: Student's will be able to ...

- 4.1 ...describe how abiotic and biotic factors contribute to long and short term trends in climate
- 4.2 ... explain how human activities are altering Earth's carbon cycle and Greenhouse effect
- 4.3 ... explain how albedo and warming ocean temperatures affect feedback loops
- 4.4 ... describe the ecological impacts caused by anthropogenic climate change

Spaulding High School Science Safety Contract

Science investigations allow students to learn science through discovery. Many investigations utilize equipment and chemicals that must be used safely and responsibly. Science teachers will assure that you have a safe laboratory experience, but you must also do your part. Read the following safety contract. Signing the contract signifies you understand and will follow it.

1. Follow all written and verbal instructions as directed by the teacher.
2. Never attempt unauthorized experiments. Do laboratory work only when the teacher is present.
3. Keep the work area clear of everything except laboratory materials.
4. Food and drink is not allowed in the laboratory area. Do not chew gum. When using chemicals or preserved specimens, keep hands away from face, eyes, mouth, and body.
5. Students are not permitted in any chemical storage room.
6. Never run in the laboratory. To prevent accidents, be aware of your environment at all times.
7. Your teacher will describe the location of exits and all safety equipment. Know where the closest fire alarm is located.
8. Use equipment (balances, Bunsen burner, etc.) in the correct way, as instructed by the teacher.
9. Properly dispose of broken glassware and other sharp objects in designated areas.
10. Any time chemicals, heat or glassware are used, students, teachers, and visitors will use laboratory goggles. Lab aprons must be used when there is danger of chemical spills or biological contamination.
11. Long hair must be tied back and dangling jewelry and baggy clothing are not appropriate. Shoelaces must be tied and sandals are not allowed.
12. Immediately report any spills, accidents, or injuries to the teacher.
13. If a chemical splashes in your eye(s) or on your skin, flush with water. Inform the teacher immediately.
14. Never touch, taste, or smell chemicals or other substances unless directed to do so.
15. Follow all provided instructions when handling chemicals.
16. Follow all provided instructions when handling glassware, equipment, and when heating substances.
17. Never point the open end of a test tube containing any substance at yourself or others.
18. Dispose of all chemical and biological waste properly. The teacher will tell what materials can be poured down the drain and what materials must be placed in a waste container.
19. Clean all work surfaces and equipment at the end of laboratory work and return all equipment to the proper storage area.
20. Wash your hands with soap and water after performing all investigations and before you leave the laboratory area.
21. If you are unclear or confused about proper safety procedures and/or laboratory instructions, ask the teacher before proceeding.

ADDITIONAL, SPECIFIC INSTRUCTIONS WILL BE GIVEN PRIOR TO LABORATORY ACTIVITIES.