Physical Science

Google Classroom Code 3rd hour:vmzlih

Google Classroom Code 6th and 7th hour: 8bz13f

Topics Covered

Science toolbox

- Bloom's Taxonomy of learning
- Scientific Process
- Experimental design
- Conversions and rates
- Accuracy vs precision
- Significant figures
- Scientific notation

Motion

- Types of Forces
- Force diagrams
- Newton's Laws of Motion
- Speed, velocity, and acceleration

Energy

- Types of energy
- Representing energy
- Energy transfer
- Absorption of energy by matter
- Magnetic Fields

Periodic table

- Properties of matter
- Structure of an atom
- Reading the periodic table
- Groups and periodic trends

Reactions

- Balancing reactions
- Types of interactions

Chemistry

Google Classroom Code:e9oyys

Topics Covered

Science toolbox

- Bloom's Taxonomy of learning
- Scientific Process
- Experimental design
- Conversions and rates
- Accuracy vs precision
- Significant figures
- Scientific notation

Periodic table

- Properties of matter
- Structure of an atom
- Reading the periodic table
- Groups and periodic trends

Reactions

- Balancing reactions
- Types of interactions
- Inferring energy needed to break differer bonds
- Rates of reactions
- Equilibrium

Nuclear chemistry

- Fission
- Fusion
- Radioactive Decay

Energy

- Types of energy
- Representing energy
- Energy transfer

Welcome to Ms. Sims' Science!

This year we will be taking a whirlwind tour of the stuff that makes up everything, how things move or how bodies work--and you get to choose which tour we take. I am excited to take this journey with you!

This sheet is a reference that will help prepare you for success this year as a young scientist. It contains important information about your new workplace and your responsibilities as a team member.

Looking forward to working with you,

Ms. Sims

My Expectations For All Team Members

1. Be Safe.
2. Respect everyone's right to learn.
3. Be professional.
4. Have good timing.

Meet Ms. Sims!

Ms. Sims has a BA in Biology and English from the University of North Carolina at Chapel Hill and a Masters of Arts in Teaching from NC State University. She is passionate about cultivating science literacy and bringing real-world science problems into the classroom. Before going into education, Ms. Sims worked in the sciences and has a robust biological research background featuring 4+ years working with the USDA, the National Park Service, and universities in multiple fields. She spent this past summer whitewater rafting and hiking with kids while working for an adventure program in Wyoming.

Ms. Sims Likes:

Video games: The Last of Us, Ultimate Chicken Horse, Gang Beasts, Just Dance, Super Smash Bros., Overcooked, Laser League, VR The Diner Duo, Tetris Effect, Don't Starve, Rocket League, Snipperclips, Yoshi's Woolly World, LittleBigPlanet, Project Zomboid, Civilization V, and Katamari Damacy Reroll
Books: *Night Watch* by Terry Pratchett, *Pride and Prejudice* by Jane Austen, and Harry Potter
Movies: *Groundhog Day, Shaun of the Dead, Hot Fuzz, What We Do in the Shadows,* and *Black Panther*
TV: *The Good Place, The Dragon Prince, Avatar: The Last Air Bender,* and *Lost in Space*
Theatre: *Hamilton: An American Musical*

Class Procedures

Starting Class

Be prepared with your notes, paper, and pencil. Quietly enter the classroom, sit at your assigned seat, and start on the bellwork. Remember **PPPAWS**
Permission **P**repared **P**hones Away
Assigned Seat **W**ork on bellwork **S**ilently

Absences

You are responsible for finding out what you missed and making up work if you are absent. See **Make Up Work.**

Leaving to go to the bathroom

1. Raise a three and point to bathroom pass.
2. You and Ms. Sims make intense eye contact and she acknowledges your need to eliminate with a thumbs-up, nod or verbal yes.
3. Unsnap the bathroom pass. Put it on or put it in your pocket.
4. Sign out with Name, Date and Time Out (time you left).
5. Take care of your nature business.
6. Replace pass and sign back in with Time In.

Hand Raising

If you need my attention, please silently raise your hand. In order for me to better serve your needs, I have come up with a code so you can communicate what you need with the number of fingers you hold up.

	*Index finger:* **Participate** Whenever I ask a question or ask for volunteers, you indicate that you want me to call on you by raising just your index finger
	*Two Fingers:* **Question** If you have a question or need help understanding something we are talking about right now, please raise two fingers. If I am giving directions, I will wait until I have finished giving instructions before I take questions. If it is group work time, make sure that you have consulted your team first.
	*Three Fingers:* **Other needs** Raise three fingers if you have any other needs not related to what we are going over right now. This could be getting something from the office, a request for help on something we covered last week, or to tell me you need to use the bathroom. See **Leaving to go to the bathroom**.

Texts, Materials, and Supplies

We have a classroom set of textbooks. The textbook is largely used as a reference.Students are free to checkout a copy of the chemistry text to take home if they choose.

Students will need a notebook or binder for notes and something to write with. A calculator is strongly recommended in physical science and chemistry. Most labs will have all the necessary materials provided, but students will sometimes have the option to bring additional materials from home if they choose.

Grading

The grading in this course is designed to prepare students for the independence of college-level sciences.In college-level science it is extremely common to have only 3-5 grades (several midterms and a final). It is uncommon to have more than 15 grades (tests, a final, some problems sets, and a research paper or two). Even in courses with more graded assignments, midterms and tests still make up the majority of the grade.

This course provides a transition to the high-stakes grading of college science. The majority of the grade is based on student's mastery of the materials. As some students in high school still struggle with high-stakes testing this is split evenly between tests and projects/labs. As in college, students will not be successful in this course if they do not put time outside of class into preparing for tests. Classwork is sometimes taken up for a grade to reward student engagement and effort but only makes up a small portion of the grade.

Grading Breakdown

- **10% Classwork and homework**

  This category is intended to support students in practicing concepts. As students are still learning concepts, this category is frequently graded for completion. Low grades in this category aid in identifying students who are struggling because they are not doing what is expected of them.

- **10% Quizzes**

  This category is intended to let students know which concepts they know and which they need to study further. Quizzes are always graded for accuracy. Quizzes should always reflect the individual student's current mastery. Quizzes are frequently graded on a curve, so a student may receive a good score on a quiz but still need considerable practice with some topics covered. Students should make sure to review which problems they missed as a study guide for tests, regardless of quiz score.

If references or outside resources are allowed on the quiz, it will be explicitly stated at the beginning of the quiz. If no announcement is made regarding references, assume any and all outside resources are not permitted. Students who use unpermitted resources or who share answers may be given a zero without warning.

- **40% Projects and Labs**

  Projects and labs are designed as an opportunity for students to explore ideas and demonstrate their understanding of core concepts. Labs are normally completed in class, but lab write-ups may require work outside of class. Projects are graded based on how well they communicate a students understanding of class concepts. Projects may require students to work on them outside of class time.

- **40% Tests**

  Tests are graded for accuracy and measure a student's understanding of the materials. Students should make sure to study outside of class or they may not be successful on tests.

- **Make Up Work**

Students are responsible for making up work that they miss outside of class. Students who have excused absences will be given seven schooldays to makeup work. Students who have excused absences in excess of seven consecutive school days should see me to make arrangements for missed work.

Unexcused absences may be given the opportunity to make up work at the teacher's discretion. Generally work that is more than seven class days late will not be accepted. Quizzes and tests may always be made up, even if the absence is unexcused. Quizzes and tests are normally online on google classroom. The seven class day deadline also applies to quizzes and tests. Students should plan on making up quizzes and tests outside of class time.