

Class Syllabus for 8th Grade Science

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Content: *Earth and Space Science*

8th graders will study the following units and topics in order over the course of the school year.

The Earth in Space: Earth, moon, day and year length, seasons, tides, axis tilt.

Exploring Space: space explorations, telescopes, space objects, Sun, solar system, gravity, planetary motion, remote sensing.

Rocks and Minerals: rock cycle, rock formation, minerals.

Weather and Atmosphere: weather, climate, atmosphere, water cycle, oceans, clouds, Sun as a source of energy.

Erosion and Deposition: topography, erosion, deposition, landforms.

Plate Tectonics: Earth's history, earthquakes, volcanoes, plate tectonics, Earth's structure.

Next Generation Science Standards

In the spring of 2014, Oregon adopted NGSS as the science standards for Oregon. We are in the process of implementing those standards. In addition to content standards, the NGSS require students be taught Science and Engineering Practices and Crosscutting Concepts.

Crosscutting concepts: "Crosscutting concepts have application across all domains of science.

As such, they are a way of linking the different domains of science." (NGSS website) They include:

1. Patterns
2. Cause and effect
3. Scale, proportion and quantity
4. Systems and system models
5. Energy and matter: flows, cycles and conservation
6. Structure and function
7. Stability and change

Science and Engineering Practices: "The practices describe behaviors that scientists engage in as they investigate and build models and theories about the natural world and the key set of engineering practices as they design and build models and systems." (NGSS website) These practices are:

1. Asking questions and defining problems
2. Developing and using models
3. Planning and carrying out investigations
4. Analyzing and interpreting data
5. Using mathematics and computational thinking
6. Constructing explanations and designing solutions
7. Engaging in argument from evidence
8. Obtaining, evaluating and communicating information

We will learn and be assessed on content and practices through tests, quizzes and analysis questions.

Classwork

Science Journal: I will provide each student with a science notebook. It will need to come to class every day. Journals may be stored in the classroom on the appropriate shelf or may be taken home nightly to review concepts from the previous days. If students lose the journal there is a \$5 replacement fee. Students' science journals will be critical to their success in science this year. Each day we will write in our journals about what we do and learn as well as questions, vocabulary and reflections. The journal will be graded for effort and will be an important resource for tests and quizzes.

Textbook: There is a textbook that goes along with this course, but it will not be checked out to students. Students may check out a copy from the school library for one night at a time. They will be used as a resource in class and on occasion students may receive pages photocopied for an assignment. Therefore, it is important that students keep their science journals up to date and complete. The student textbook is available online-

Website: <http://ebooks.lab-aids.com/student-resources>

USERNAME: **science**

PASSWORD: **inspires**

Homework

Analysis Questions: I will periodically assign analysis questions for students to complete as homework. Sometimes it will be due the next day and sometimes later. Students will be given the due date when it is assigned and provided with time to record the homework in their planner at that time.

Lab write-ups: Occasionally students will be asked to write up their lab work more formally than just in the science notebook. I will provide the due date when I give that assignment.

Nature Journaling: At some point during the school year we will create nature journals. Students will spend 5-10 minutes nightly on these assignments. More information will be given on that later. At the start of the school year this will be in the form of 'moon observations.'

Studying

Studying is not something that only happens the night before a quiz or test. It is something that successful students do every night. Daily studying is far more effective in helping students to store knowledge. Study strategies that correlate with AVID and are effective across disciplines include:

- Reviewing and clarifying notes from the day.
- Using notes to guide homework completion.
- Writing short summaries of learning.
- Generating questions for the teacher.
- Generating study questions based on the learning goals for that day.
- Review vocabulary by rewriting terms, drawing pictures, creating flashcards, teaching a parent, or writing a song with your words.

Success in Science

Throughout middle school, students are asked to take more responsibility for their learning. This means the focus shifts toward teaching and reinforcing what the student is capable of doing by him/herself. The following lays out what students can do to be successful in my class and in all classes as well as what supports I will provide to assist students in becoming self-reliant.

Student Responsibilities	Teacher Responsibilities
<ul style="list-style-type: none"> ▪ Stay engaged ▪ Share your ideas ▪ Set goals for growth ▪ Bring supplies to class ▪ Look over notebook and study every night ▪ Ask for help when you need it ▪ Complete all assignments on time ▪ Work productively both alone and in groups ▪ Regularly keep track of daily assignments and due dates in student planner ▪ Manage your time so that you complete schoolwork in addition to your extracurricular activities ▪ Maintain an open mind ▪ Believe you can learn through hard work and perseverance 	<ul style="list-style-type: none"> ▪ Post assignments on board daily ▪ Model planner use ▪ Give clear, written directions for all major assignments with due dates ▪ Give dedicated time for writing in planner daily ▪ Provide a system to get missing work when students are absent or have lost handouts ▪ Model skills students are expected to learn ▪ Provide opportunities for students to work together ▪ Create and maintain a physically and emotionally safe environment ▪ Give detailed feedback through grades and rubrics to students on their progress in content, skills and effort

Behavioral Expectations

Rules: The following rules apply to all people in our class at all times. They are necessary for everyone to feel safe and to learn as much as possible.

1. Use caring and empathetic language with others.
2. Be fully present and actively engaged.
3. Follow directions the first time.
4. Keep hands, feet and objects to yourself.
5. Follow classroom routines.

Tardiness: When a student is tardy they miss instruction and set up for the days' work. If you are tardy please come in quietly and get started on getting caught up so as not to disturb the class.

Gum: Gum chewing is not allowed. You will be asked to spit out your gum if you have any.

If a rule is violated, the following consequence may occur: warning, seat change, time out (reflection sheet), parent contact, lunch detention, referral to administrator.

Meeting the Needs of Diverse Learners

Students with learning disabilities:

- Hands-on activities provide concrete experiences.
- Optional student sheets provide step-by-step procedures of open-inquiry labs.
- Literacy strategies support improvement of reading comprehension and writing skills.
- Discussion strategies facilitate communication.
- Scoring guides state clear assessment goals.

English-language learners:

- Vocabulary is introduced with operational definitions that connect concepts to learning experiences.
- 4-2-1 cooperative groupings encourage student interactions in an unthreatening environment.
- Discussion strategies enhance speaking and listening skills.
- Literacy strategies strengthen reading and writing skills.

Academically gifted students:

- Issues stimulate evaluation of problems in real-world contexts.
- Lab-activities encourage students to design complex investigations.
- Scoring guides challenge students to demonstrate their depth of understanding.
- Extension activities encourage in-depth inquiry into related topics.

If you feel like your needs as a learner are not being met, please email or talk to me in person outside of class. You should feel challenged and capable of success. Please be an advocate for your success as a learner.

Grading

This year students will receive a proficiency grade for science on the report card. Progress reports and assignments will be available through the district online grade book.

Please note- The grade percentages on synergy are not correct. Please ignore them. Look at the proficiency marks.

Overall Grade Breakdown: 2% Personal Management--This is your effort and preparedness grade. 98% Science and Engineering Practices--These are the skills scientists and engineers use regularly and Knowledge and Understanding—This is the content and concepts we learn in class.

Personal Management – Effort 2%

Personal management is a students' ability to plan for and begin working on tasks, complete work correctly and on time, take responsibility for their actions, attend class on time, and interact

with all members of our learning community with respect. Most homework and science notebook work will contribute to the students' grade in this area.

Knowledge and Understanding and Science and Engineering Practices - 98%

Assignments that may be graded for achievement include: tests, quizzes, some analysis questions assigned as essay questions and some labs. In most cases students will be given an opportunity to correct their original assignment or if it was a quiz or test, to retake it for a revised grade. Some assessments are closed-notebook and some are not. Students will be notified in advance of any test or quiz as to the content what will be on it and what the policies will be for it. Science and Engineering Practices will be assessed primarily through assignments that will be accompanied by a rubric with detailed descriptors of different levels of achievement.

Other Assignment Information

Late work: Work that is turned in late will result in a students' grade in Personal Management being reduced.

Dishonesty: Cheating and plagiarism are not OK. You will not receive credit for work that is not your own.

Absences: If you are absent, you are responsible for checking to find out what you missed and collecting any papers that you may need in order to get caught up. You will have one week from your first day back to complete missed work.

Correcting graded work: Students are encouraged to continue working on a graded assignment to improve it. The most important reason for doing this is to increase the understanding of the skill or concept. If they are unsure of how or what to do for this please ask before or after school. Students will be allowed to redo all assessments for increased credit until the unit test.

Grade updates: I will update grades into Synergy as quickly as I can after work has been turned in. You can expect that this will usually be completed within a week.

Getting help: If you need help, it is your responsibility for getting that help. Do not wait until the unit test. You need help if:

- You do not understand the learning targets at the end of the lessons.
- You are getting a rubric score of 2 or less on analysis questions.
- You are getting less than 70% on quizzes.
- You don't understand what we're learning in class.

To get help, consider doing the following:

- Email me with a question or concern.
- Arrange a time to meet with me before or after school.
- Ask a friend for help.
- Try to find an answer online.

I am looking forward to the year ahead of us and I hope that you are too!

-Ms. Van Dam