Earth & Space Science Syllabus

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Office Hours: M,T,W,Th - After school by appointment
Grade Level(s): 9,10

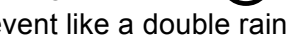
Course Description

In Earth and Space Science students use science and engineering **practices** to deepen their understanding of **crosscutting concepts** that are fundamental to all science and engineering fields. Students will also develop their understanding of the **core ideas** in earth and space science by trying to figure out answers to the following questions:

- What is the universe, and what is Earth's place in it?
- How and why is Earth constantly changing?
- How do Earth's surface processes and human activities affect each other?

What will we be doing this year?

The goal of this class is to have you *figure out* how the world works by participating in science **practices**. In doing so, you will perform various **tasks**. Here is a sample flow of student **tasks** for a **topic**. Each **topic** is based on an Oregon adopted Next Generation Science Standard (NGSS). Each icon indicates a NGSS science **practice**.

1. Each **topic** begins with students developing **questions**  about a phenomenon. A phenomenon is an observable fact or event like a double rainbow or a solar eclipse.
2. Students create an **initial explanation**  **or model**  of *how* or *why* they think the phenomenon occurred.
3. Students **design and conduct investigations**  and/or **research relevant information** to help answer their questions.
4. Students **analyze their data**  and/or **evaluate information**  to inform their explanation.
5. Students **revise their explanation**  **or model**  based on the patterns or principles that emerged from their data and/or research.
6. Students share their revised *how* or *why* explanations by **communicating information** using a variety of media.
7. Students compare and critique each other's *how* or *why* explanations using **argumentation from evidence**  **.**
8. Students work together toward developing a **consensus explanation**  **or model**  based on evidence of *how* or *why* the phenomenon occurred.

Your grade	
1. "**Task"** scores	Each topic will have multiple **tasks** like those previously shown. Tasks are scored and recorded online through Google Classroom as follows: • **1** = Meeting, **0.5** = Progressing, **0** = Not attempted/missing
2. **"Topic"** scores	Topic scores are recorded online through Synergy (StudentVUE and ParentVUE). • Your task score/total tasks = **Topic** score (%)
3. **Final letter grade**	Your final class grade is the average of all **topic** scores you earn during the semester.

How do I do well in this class?

- Complete all **tasks** throughout the semester and turn them in, on time through Google Classroom.
- Be curious. Participate. Science is a process. Ditch perfectionism and simply do stuff.
- Have a willingness to test your ideas and correct your errors as you go.
- Contribute ideas and encourage others to do so. Argue from evidence, going hard on the *ideas*, but easy on the *people*.

What materials will you need?

- Writing utensil – blue/black pen or pencil
- Spiral notebook – This is to be used just for this class. It will be used to record your observations, questions, explanations, models, investigations, research, data, etc.

Other things you should know	
Use your passing time	Use your passing time to socialize, go to the bathroom, get needed items and *get to class on time before the bell rings.* Once you come into the room, stay and focus your attention on what you need to do to be completely involved in class and avoid all distractions.
Leaving Class	Please avoid leaving class during teacher instruction. If you know you must leave and it is an appropriate time*, take the hall pass and leave without asking*. Leaving class often to go to the bathroom, get a drink, text, make phone calls etc. is not mature behavior.
Cell phones, etc.	Please *silence* your cell phones and put them *away* as well as iPods, headphones and other electronic devices before entering the classroom. I will let you know when appropriate exceptions can be made for planning and research.
Food & beverages etc.	Because we work with chemicals and microscopic organisms, *keep food and all beverages outside of the classroom.*
Equipment	Keep your lab table and chair clean and free from any marks. Return equipment clean and dry.

"The two greatest states to be in if you are a scientist
is either wrong or confused.
Because that means there is more to **learn**."
– Lawrence Krauss, theoretical physicist