

# Earth Systems

## 2015 – 2016

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**Room:** 223

### Organization of the Course

Earth Systems is a full year course which meets every other day for 90 minutes.

### Course Description

Astronomy and Earth Science provide us a context for our existence in a physical world as physical beings. They help us to understand the materials of which we are composed and how we interact with those materials and other phenomena. These disciplines supply us an avenue to exercise one of the most fundamental and characteristic of human behaviors: the act of questioning. Astronomy and Earth Science constitute the examination of our environment by asking questions such as what, why, how, where and when. This human behavior will be the driving force behind this class.

### Learning Outcomes

- Students will understand the scientific evidence that supports theories that explain how the universe and solar system developed.
- Students will understand that the features of Earth's evolving environment affect living systems, and that life on Earth appears to be unique in the solar system but that there is a potential for life within non-terrestrial environments.
- Students will understand that gravity, density, and convection move Earth's plates and this movement causes the plates to impact other Earth systems.
- Students will understand that water cycles through and between reservoirs in the hydrosphere and affects the other spheres of the Earth system.
- Students will understand that Earth's atmosphere interacts with and is altered by the lithosphere, hydrosphere, and biosphere.
- Students will understand the source and distribution of energy on Earth and its effects on Earth systems.

(Learning outcomes are the standards for the Earth Science Core Curriculum of the Utah State Office of Education. <http://www.usoe.org/>)

### Textbook

Earth Science: Geology, the Environment, and the Universe. 2008 McGraw-Hill

Students should supply their own 3-ring binder for use in this class. The student is expected to come to class prepared with notebook and writing utensils.

### Behavior Expectations, Attendance & Classroom Conduct:

It is very important for students to come to class ready to learn and engage in our class activities. Students need to come to class with the necessary tools for learning including their textbook, pencils/pens, Science Notebook, and their planners. Students may only make up work missed due to excused absences. No make-up work will be allowed for unexcused absences.

**Daily Assignments:**

Daily assignments will include reading, working on assignments, labs, lectures, assessments, discussions of current events in science, and research.

**Homework:**

We will try to accomplish as much as possible in class. The student is responsible for completion of unfinished work as homework. The student will also have regular homework involving the textbook. Text book assignments will consist of the student reading the assigned section and writing a complete outline of the relevant information within the section. Homework may also include section and/or chapter assessments. It is important that this homework be finished on the day that it is due as this will facilitate class discussion and student understanding of the material. Assignments and due dates will be posted on the class web page at

<http://amesgeology.weebly.com/>

**Late Work:**

Late work will be accepted if the student has a valid and written excuse for not being able to complete the work on time. Written excuses will be accepted either on or before the due date of the assignment or on the first day that the student returns to class. Email excuses from the parent or guardian is acceptable and encouraged. Due dates are announced regularly and students are responsible for recording due dates in their planners.

Unexcused late work will receive reduced grades. Each class day that the assignment is late will result in a reduced maximum grade for the assignment.

1 day late = 90% maximum score

2 days late = 75% maximum score

3 days late or greater = 50% maximum score (maximum penalty)

**Make-up Work:**

Make-up privileges will be given for validated and excused absences. Students need to make arrangements with me on the first day they return to class from their absence or prior to a planned, extended absence.

**Electronic Devices & Other “Nuisance” Items:**

Items that distract from learning are generally not allowed in class. As per school policy, any electronic devices (cell phones, MP3 players, iPods, hand held games, student laptop computers, etc.) may be confiscated if not turned off and put away during class.

**Caviat:** Occasionally “smart phones” and student computers may be used for class related purposes only if and when specifically authorized by the teacher.

**Controversial Topics**

- **Reproduction** We will be discussing some aspects of reproduction in class this year. This includes reproductive activity and traits of all levels of biology, bacteria to humans.
- **Evolution** We will be exploring the topic of evolution, both microevolution and macroevolution. Evolution is a scientific fact, and will be studied as such.
- **Geologic and Cosmologic Time** We will discuss the idea of time in terms of very large numbers.
- **Pseudo-Science** will be examined, discussed and often debunked.

## **Film**

Numerous film clips will be utilized in the course of instruction. While the majority will be short clips, some will be shown as complete features. All films will be relevant to the course matter and will consist of material which is appropriate for children of High School age.

## **Miscellaneous**

**Snacks and Drinks** will be permitted in class at the discretion of the teacher. Drinks must be in a spill-proof container. Snacks must be already removed from any cellophane or foil wrappers so as to be minimally distracting to the class. Any spills, crumbs and trash must be immediately policed by the student. If this privilege becomes a distraction, it will be revoked.

# **EXPECTATIONS & CONSEQUENCES**

## **EXPECTATIONS:**

1. **RESPECT**—Be respectful of other people's property, opinions, and feelings, as well as your own.
2. **ON TIME & PREPARED**—Come to class on time and have all materials you will need for the day (pen/pencil, notebook, text, binder, paper).
3. **HONESTY**—Being a good citizen in my class means knowing that I can trust you. Be honest when answering questions and when reporting on your projects and experiments.
4. **SAFETY** —Laboratory materials and processes are safe when approached in a careful and deliberate manner. When the students are performing a lab activity, they will be expected to observe all safety rules described by the teacher. They will also be expected to behave in a careful and deliberate manner and to exercise common sense. Students must not handle laboratory materials or perform processes without the explicit instruction of the teacher. Students will be expected to report any unsafe materials or situations to the teacher as soon as it is identified.
5. **ACADEMIC INTENT** —It is assumed that every student in the class desires to learn the content of the curriculum. Students, therefore, will be expected to make an honest effort to learn and to avoid behaviors which might inhibit their own ability or the ability of their classmates to learn.

## **CONSEQUENCES:**

- Disrespect will NOT be tolerated. Your parents will be called and a conference will be set up to discuss the problem. If it becomes continuous, you will be referred to the principal for further intervention.
- If you are late to class, excused or not, you may not be able to earn the points associated with attendance on that day. You need to provide your own class materials each day, I may not be loaning them out. If you do not have your materials and cannot borrow any, you may miss out on any participation points given for the day.

- If you are caught cheating, you will receive an immediate zero on the assignment or test in question. Your parents will be contacted immediately and you will explain to them why you are receiving a zero. If it is a continuous problem, you will be referred to the principal for further action.
- Unsafe behavior will not be tolerated. No student may behave in a manner which will compromise their own safety or that of others. Where the behavior is clearly unintentional, corrective instructions will be given. Repeated unsafe behavior may result in the student “sitting out” the laboratory exercise or possibly even longer-term consequences. Intentional or malicious unsafe behavior may result in a permanent exclusion of the student from lab experiences. The student will be responsible for performing alternative assignments or lose credit for the lab.

## **Grading for Learning**

Recent scholarship has emphasized the importance of student’s effort, involvement, commitment and responsibility for their learning and success. Student responsibility is key to all development and learning. Students receiving the following grades demonstrate these characteristics most of the time:

**A:** Exhibits novel and creative ways to show learning. Enjoys the challenge of learning and successfully completes open-ended tasks with high quality work. Assignments are complete, high quality, well organized and show a high level of commitment. Almost all the learning outcomes are fully or consistently met and extended.

**B:** Exhibits standard ways to show learning. Enjoys open-ended tasks, but needs support in dealing with ambiguity. Assignments are generally complete, thorough, and organized. Most of the learning outcomes are fully or consistently met.

**C:** Needs some encouragement to show learning. Needs support to complete open-ended tasks. Assignments are generally complete, but quality, thoroughness, and organization varies. More than half of the learning outcomes are fully or consistently met.

**Late Homework Penalties:**

One day late	=	90% maximum grade
Two days late	=	75% maximum grade
Three days late	=	50% maximum grade (maximum penalty)

## Tentative Course Schedule

Term	Major Topics
1	Units of Measurement Ch. 1 – The Nature of Science Ch. 3 – Matter and Change Ch. 30 – Galaxies and the Universe Ch. 29 – Stars Ch. 28 – Our Solar System Ch. 27 – The Sun-Earth-Moon System
2	Ch. 17 – Plate Tectonics Ch. 18 – Volcanism Ch. 20 – Mountain Building Ch. 19 – Earthquakes Ch. 15 – Earth's Oceans Ch. 11 – Atmosphere
3	Ch. 12 – Meteorology Ch. 13 – The Nature of Storms Ch. 14 – Climate Ch. 9 – Surface Water Ch. 10 – Groundwater Ch. 8 – Mass Movements, Wind, and Glaciers
4	Ch. 7 – Weathering, Erosion, and Soil Ch. 6 – Sedimentary and Metamorphic Rocks Ch. 5 – Igneous Rocks Ch. 4 – Minerals <i>To be announced</i>

I want each of you to do the very best that you can this year. If you reach that goal, no person can ask more of you. Let's have a successful year and accomplish as much as we can! I want you to have an enjoyable time and LEARN at the same time.

“If you aim at nothing, you will hit it every time.”

Have some things in mind that you want to accomplish in class and give it everything you have to get the job done. Acknowledge that curiosity is a basic human trait and exercise your curiosity in an appropriate manner. Ask lots of questions to both me and to yourself. Have pride in your work and I will too!

Welcome to AMES!



**Please return this portion**  
Earth Systems

Student Name (Please Print legibaly): \_\_\_\_\_

I have read and I understand the syllabus:

\_\_\_\_\_  
(Print Parent Name) (Parent Signature) (Date)

\_\_\_\_\_  
(Print Student Name) (Student Signature) (Date)

Parent Contact Information

The best way to reach me is by:

Telephone : \_\_\_\_\_

E-mail: \_\_\_\_\_

Other: \_\_\_\_\_