

EARTH SCIENCE Course Requirements

Length: 1 Trimester: 12 exciting weeks !
Value: .5 Credits and valuable life experience !

Instructor: Zenisek, aka: mr. z
Home, Sweet Home: 8-C

Course Description: This elective course is designed to continue the development of students' *scientific literacy* - the ability to critically read, write and speak on science content and processes. This is a hands-on course with labs and project activities. The course content will include 1) the origin and formation of the earth; 2) the earth-sun-moon system, motions, relationships, and effects; 3) the dynamics of earth's layers; 4) geologic time, rocks and minerals; 5) atmosphere and hydrosphere; 6) map work.

Grading: This is a proficiency-based class following related State Science Content Standards and the Common Core Standards for reading, writing and speaking. 100% of the grade will be based on demonstrating your learning of the Core Learning Targets (CLTs) on a combination of proficiency-based assessments and student projects. ***A student MUST demonstrate proficiency in ALL covered CLTs in order to pass the class. Students must complete required prerequisites (homework/classwork) before taking CLT assessments.***

Each CLT will be evaluated on a 5-point scale:	Reported grades will be an average of proficiency scores as follows:
0= no evidence	A = 4s in 90% of CLTs
2= needs improvement	B = Average 3.5 in CLTs
3= meets proficiency standards	<u>C = 3s in most CLTs</u>
3.5= advanced application of content	F = 0 or 2 in one or more CLTs
4= exceeds standards	

Homework: You can expect weekly homework assignments to support your continued success in class.

Textbook: None. Assigned readings will be available through handouts and online.

Notebook: Notebooks may be used on level 3.5 and 4 assessment questions at teacher discretion.

Class Expectations (these are mine: we'll develop additional agreements as necessary):

1. **Learn and Follow** classroom safety guidelines at all times.
2. Practice environmental stewardship by reducing, reusing and recycling.
3. BE A SCIENTIST: Question everything!

Projects: Students are required to complete three projects during this term:

1) **Showcase Night:** Students will investigate a topic of personal interest related to the study of Earth Science, prepare a display summarizing what they've learned, and present it at the MHS Showcase Night on November 1. The project MUST involve DOING science - not just presenting what others have done. Students may work alone or in teams. *Guidelines will be provided in class.*

2) **Science in the News:** Students will work in teams to provide regular updates to the class on Earth Science topics in the news. Possible topics include: tracking local weather, weather events such as tornadoes, hurricane, typhoons; earthquake events; solar activity; space exploration updates; environmental issues. *Guidelines will be provided in class.*

3) **Science Report:** Students are also required to submit a two-page, polished, type-written report with references on a science topic of personal interest. *Guidelines will be provided in class.*

Resources to support learning: **WIKI:** <http://mrzatzmhs.wikispaces.com>
GOOGLE DOCS: <https://docs.google.com>
(Students will need an email account.)

HELP!: Helping you succeed is what I am here for! So let me know whenever and as soon as you need any help. Homeroom, lunch and after school I'll be available to provide extra assistance to students struggling to master the content and/or who need to make up or retake key assessments. Otherwise, contact me at:

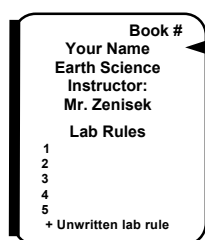
PHONE: 503.829.2355 ext5094

EMAIL: zenisekj@molallariv.k12.or.us

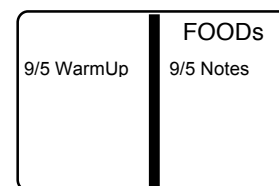
Trimester Schedule (subject to change as necessary)

Week	Topics	Mon	Tues	Wed	Thur	Fri	>Check In Quizzes
Wk 1:	Intro to Scientific Thinking	---	9/4	9/5	9/6	>9/7	• 3, 6, 9, 12 Week Exams •
Wk 2:	ES.1/2: Big Bang to Earth	9/10	9/11	9/12	9/13	>9/14	Lab: Planetary Motion
Wk 3:	ES.2: Earth-Sun-Moon	9/17	9/18	9/20	•9/21•	9/28	Lab:
Wk 4:	ES.3: Earth Layers	9/24	9/25	9/26	9/27	>9/28	Lab: Density of Earth Mtrl
Wk 5:	ES.3: Plate Tectonics	10/1	10/2	10/3	10/4	>10/5	Lab:
Wk 6:	ES.3: E-Quakes, Volcanoes	10/8	•10/9•	10/10 - Conf	10/11 - Conf	---	Lab: Epicenter Location
Wk 7:	ES.4: Rock Cycle	10/15	10/16	10/17	10/18	>10/19	Labs: Crystals / Rock ID
Wk 8:	[ES Project Work]	[10/22]	[10/23]	[10/24]	[10/25]	[10/26]	[ES Project Work]
Wk 9:	ES.4 : Geotime [Proj DUE]	[10/29]	10/30	10/31	•11/1•	11/2	• Showcase Night •
Wk 10:	ES.5: Weather/Climate	11/5	11/6	11/7	11/8	>11/9	Lab: Differential Heating
Wk 11:	ES.6: Mapping the Earth	---	11/13	11/14	11/15	>11/16	Lab: Mapping
Wk 12:	•Pre-Final Exam•	11/19	11/20	•11/21•	---	---	
Wk 13:	Tri 1 Finals	11/26	11/27	11/28	• 11/29 •	---	• ES Final •

Suggested Notebook (NB) Set Up



First page centered: **Your Full Name**
"Earth Science A"
"Instructor: Mr. Zenisek"



- Second page will begin the "LABS" section
- Middle of NB: fold down page to begin "FOODs & WUPs"
- Put **WUPs** on the left page and **FOODs** on right
- >>>**date** each entry >>>**start a new page** for each major topic
- We will use the *Cornell Note-taking System* on the FOOD pages.
- **GYROs** (Journals) will begin on the last page of the notebook and proceed inward

Earth Science Topics and Key Vocabulary*				
A: Intro: Systems and Scientific Methods	ES.1: Earth Origins	ES.3: Geosphere	ES.4: Geologic Time Rocks and Minerals	ES.5: Atmosphere and Hydrosphere
*matter, energy, force	galaxy cluster	*crust	*rock cycle	*barometric pressure
Systems: subsystems, .. structure, function, .. history, interaction,	*nebular hypothesis accretion	*mantle, lithosphere asthenosphere	*igneous (intrusive/extrusive)	tropo/strato/meso/thermo/ -sphere
	heliosphere	mesosphere	*sedimentary	iono/exo/-sphere
	rocky, jovian planets	*liquid outer core	*weathering, erosion	carbon, nitro cycles
*Earth System:	asteroids, comets	*solid inner core	glaciation	*weather vs climate
.. atmosphere	extinction events	epicenter, focus		climate change
.. hydrosphere	exoplanets	*seismic waves (P,S&L)	deposition	*differential heating
.. geosphere		fractures, faults	cementation	*water cycle
		*plate tectonics	*metamorphic	ocean currents
*Science, fact, hypothesis, theory, law	ES.2 Earth-Sun-Moon System	continental drift	*relative dating	waves/tides
	*gravity (fg=m/d) orbit	*seafloor spreading	uniformitarianism	
	perihelion/aphelion	MOR: mid-ocean ridge RV: rift valley	uncomformities superposition	ES.6: Mapping
*controlled experiment	*solar/lunar eclipse	transform boundary	geologic column	*latitude, longitude
ind/dependent and constant variables	equinox/solstice precession	*subduction	index fossil	prime meridian
	lunar cycle	*divergent boundary =constructive boundary	*absolute dating radioactive decay	*geomagnetic pole
		*convergent boundary =destructive boundary	half-life	magnetic declination
				topographic map
				elevation/countour

***NOTE:** Students must master key words with an *asterisk to meet proficiency standards. Students are also expected to spell these words correctly. Words may be added or dropped during the course.