Regents Earth Science Course Syllabus

Mr. Smeal

Earth Science Regents

Niagara Falls Highschool

*Introduction:*

This course is designed to introduce students to the study of Earth’s systems and its location in the universe. The concepts presented in this course will increase your knowledge of the physical world you live in and the processes going on around you. Throughout the year, you must make an effort to observe the world around you. Being observant outside the classroom will help you understand concepts inside the classroom. Start to take note of the daily path of the sun and the position/shape of the moon. Pay attention to the weather and look around as you travel from one place to another. Try to explain the rock formations you come across and think about what happened in the past in order to form them. I can guarantee that if you apply what you learn in class to the outside world, this course will be even more rewarding and exciting!

This course includes all Earth Science topics as required by the New York State learning standards for science. These topics can be divided into three major areas of study:

*1.* ***Geology***: The study of the solid Earth.

*2****. Meteorology/Weather & Climate***: The study of the changing conditions of the atmosphere over short and long periods of time.

*3.* ***Astronomy*:** The study of the motions of objects in space and Earth’s position in the universe.

Additionally, frequent reading and writing will be included in the course, as per new Common Core Curriculum standards.

**Tentative Course Outline:**

*Unit 1: Introduction to Earth Science*

(2 weeks)

* Graphical relationships
* Density
* Rate of change
* Energy

*Unit 2: Earth’s Materials*

(3 weeks)

* Minerals
* Igneous, sedimentary, and metamorphic rocks
* The Rock Cycle

*Unit 3: Surface Processes and Landscape Formation*

(4 weeks)

* Weathering, erosion, and deposition
* Surface water and groundwater
* Fluvial and glacial processes and features
* New York landscapes

*Unit 4: Mapping Earth’s Surface and Locating Points*

(2 weeks)

* Latitude/Longitude
* Topographic maps
* Profiles/Cross-sections Watersheds

*Unit 5: Plate Tectonics and Earth’s Interior*

(4 weeks)

* Earth’s interior layers and their properties
* Plate boundaries/plate movements
* Volcanoes, hot spots, and earthquakes
* Tilting, folding, and faulting of rock layers

*Unit 6: Geologic History*

(3-4 weeks)

* Tectonic events/movement of landmasses
* Index fossils/time distribution of fossils
* Radioactive decay
* Sequence of events

*Unit 7: Weather and Climate*

(5 weeks)

* Weather variables
* Atmospheric layers and their properties
* Weather systems (air masses, fronts, cyclones, etc.) and hazards
* Insolation
* Geographic factors
* Human influence

Unit 8: Astronomy

(5 weeks)

* Earth’s motions and cycles
* Seasons
* Stars
* Planets
* Eccentricity of orbit
* The solar system
* The universe and its expansion

Lab Practical Portion of Regents

Cumulative Earth Science Regents Exam

\*Unit Plans may not be followed in the order that they appear to be in now\*

**Course Materials:**

Binder or folder for class materials

Lab Folder (all labs will be kept in folder and in the classroom)

Something to write with pen/pencil

**Grading Policy:**

Tests: 20%

Quizzes: 20%

Labs: 10%

Homework/Assignments: 50%

All assignments are due on their assigned date and will not be accepted late without penalty. Homework and classwork turned in late will result in a loss of 10 points per day, up to a maximum of 50 points. If you are absent when an assignment is due, it is due the day you return.

Test corrections can be done to earn points back. Corrections must be done within five school days of getting the grade received on the test. Each incorrect question must be rewritten as a statement with the correct answer to receive credit. You may use your notes and/or the textbook.

**Labs:**

Labs are an extremely important part of the curriculum. All students are required by the state to complete a certain number of lab hours in order to take the Regents at the end of the year (1200) lab min. Failure to complete this requirement will cause students to be barred from the exam, resulting in a grade of zero. Laboratory books are provided in class and are NOT to leave the classroom. Labs are to be completed and kept in your lab folder in the classroom. If you are absent for a lab period or a lab is misplaced, it must be made up. These labs are evidence that you’ve completed the state-mandated laboratory requirement. Prior to taking the Regents exam in June, you will also take a Lab Practical based on the concepts covered in the laboratory exercises.

I am always available during post session for students to make up missed lab work. You do not have to wait until lab make-up week to complete missed labs. You must complete them ASAP.

**Absence Policy**: I keep an ongoing “Absent Station” at the front of my room that explains what was done each day with copies of paperwork given. If you are absent, you must visit this station when you return. It is your responsibility to get the work you’ve missed. Tests and quizzes must be made up within a week or you will receive a zero.

**Classroom Guidelines:**

1. Be in your assigned seat

2. Be prepared; Bring all materials to class with you.

3. Follow directions the first time they are given.

4. Treat each person in this room with respect and dignity.

5. Do all work assigned to you and try your best.

**Ask for help or guidance during office hours as well as in class.**

**Join my Remind**

**Twilight Earth Science - @twilightea**

**Important information and reminders will be posted here. Students can also contact me for help and questions through remind.**

**Agreement**

I, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (print student name) and

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (parent/guardian) have read the course criteria, and class expectations in Mr. Smeal’s Science class for the year.

Signature (student) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature (parent) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_