

Earth Space Science
Ms. Curtis
Textbook: Earth Science 2006

I Unit 1 – Scientific Processes & the Nature of Matter

August - May

- A. Why are investigations important to the scientific community & global society?
Why do scientists try to control conditions and focus on the effect of a single variable during an experiment?
- B. Evaluation:
1. Read pp. 9-16, 80-92, 611-614, 662-666, 822-826, 870
 2. Exercises: as assigned
 3. Labs: Making Measurements
 4. Take Unit Test

II. Unit 2 - Astronomy

August 16 – November 5

- A. How can the use of astronomical data reveal the structure, scale, & changes in stars, galaxies, and universe over time? What influence does gravity have on the formation and life cycles of galaxies, including the Milky Way Galaxy, stars, and planetary systems? What are the components of the solar system, and how were they formed? How do the planetary laws apply to the solar system? How are stars formed? Why is the Sun categorized as a star? What is the chemical composition of the Sun and which element is the most abundant? What enables the Sun to produce as enormous amount of energy? How are the planets and satellites arranged within the solar system? What are the general characteristics of planets and how do these compare to the characteristics of Earth? How does the regular motion of the Sun, Earth, and Moon explain the length of day, a year, phases of the moon, and eclipses?
- B. Evaluation:
1. Read pp.30-38, 658-674, 684-708, 718-738, 754-764, 774-796
 2. Exercises: as assigned
 3. Lab: H-R Diagram, Stars Have Class Too, Galilean Moons of Jupiter, Crater Analysis, Earth-Moon Motion
 4. Take Unit Test

III Unit 3 – Meteorology

November 8-March 11

- A. What scientific processes and inquiry skills would a scientist use to study meteorology?
How does the structure and composition of the Earth's atmosphere support life? How does matter cycle and energy flow between the Earth's surface & atmosphere? How do incoming solar radiation, ocean currents, and land masses affect weather & climate?
- B. Evaluation:
1. Read pp. 31-38, 546-564, 600-614, 619, 630-646
 2. Exercises: as assigned
 3. Labs: Energy Absorption, Weather Map Interpretation
 4. Take Unit Test

IV. Unit 4 - Geology

March 14 – April 29

- A. What scientific processes and inquiry skills would a scientist use to study geology? Over geologic time, how have the internal motions of Earth altered the topography and geography of the continents and ocean basins? How can the Earth's surface be compromised when convective circulation in the mantle moves the lithospheric plates? What physical and chemical conditions are involved in the formation of rock? What are the properties of rock? How do rocks differ from minerals? What role does mechanical and chemical weathering have in changing the Earth's surface? How can geologists trace or reconstruct geologic history by observing sequences of rock types and fossils embedded in the rocks?
- B. Evaluation
1. Read pp. 124-144, 184-200, 210-226, 238-260, 270-284, 294-308, 318-330
 2. Exercises: as assigned
 3. Lab: Pangaea, Classification of Rocks, Sea-floor Spreading, Finding the Epicenter
 4. Take Unit Test

Unit 3 - Oceanography

May 5 – May 27

- A: What scientific processes & inquiry skills would a scientist use to study oceanography?
What are the physical properties of the ocean & what role do they play on life forms?
How do the oceans influence climate and weather? Why are oceans considered a valuable resource?
What impact has human activity had on the resources from the oceans?

B: Evaluation:

1. Read pp. 470-482, 492-508
1. Exercises: as assigned
2. Labs: Ocean Water Density
3. Take Unit Test

Review for and take the Final Exam

1 Week