

Earth Science Midterm Objective Review

Below is a listing of the main objectives from each of the chapters/ units that we have covered this marking period. You should be able to define, describe, interpret, list, and explain the content involved in each of these objectives. The questions that I create for your midterm will come from these listed here. As stated, if your questions are of good quality, they could be used to change or improve the actual midterm test.

Chapter 1: Earth As A System

1. Describe how scientists view Earth today.
2. Compare and contrast open and closed systems.
3. Explain the significance of Earth as an essentially closed system.
4. Describe the four spheres of the Earth System.
5. How explain how Earth's spheres interact with each other and change over time.
6. Describe the characteristics of the water, carbon, and energy cycles.
7. Analyze how humans interact with the water, carbon, and energy cycles.

Chapter 2: The Nature of Science

8. Identify possible similarities and differences among scientists who study Earth.
9. Describe the qualities of scientific thinking.
10. Explain the importance of science inquiry and peer review.
11. Explain the differences among a hypothesis, theory and a law.
12. Describe the simple and complex tools that Earth's scientists use.
13. Explain how computers and satellites have advanced Earth Science.

Chapter 2 and 3: Maps and Models of Earth

14. Explain how maps are models of Earth.
15. Compare and contrast three types of map projections.
16. Use latitude and longitude to describe locations on Earth.
17. Relate the history of mapmaking to advances made in more recent years.
18. Explain how topographic maps use contour lines to show elevation.
19. Describe topographic map symbols.
20. Demonstrate how to use topographic maps to determine shape of the land, the flow of rivers, and distances.
21. Explain how scientists describe the formation of our solar system.
22. Describe Earth's size and shape and the arrangement of its layers.
23. List three sources of Earth's internal heat.
24. Describe Earth's magnetic field.
25. Give evidence of Earth's rotation.
26. Relate Earth's rotation to the day-night cycle and the time zones.
27. Give evidence for Earth's revolution around the Sun.
28. Describe Earth's path and rate of revolution.
29. Explain why seasons occur.

Chapter 4 and 5: Atoms to Minerals

30. Identify the characteristics of matter.
31. Compare the particles that make up atoms.
32. Describe the three types of chemical bonds.
33. Identify the characteristics of minerals.
34. Explain how minerals form.
35. List the physical characteristics of minerals that are influenced by their crystalline structure.
36. Identify rock-forming minerals by inspection, using physical properties such as color, luster, hardness, and crystal shape.

Chapter 4 and 5: Atoms to Minerals (continued)

37. Describe the properties of the most common minerals, silicates and carbonates.
38. Describe the tests that are used to identify mineral groups.

Chapter 6: How Rocks Form

39. Differentiate among the three major types of rocks.
40. Compare and contrast the processes in the rock cycle.
41. Distinguish between intrusive and extrusive igneous rocks and how they form.
42. Contrast the types of plutons that form as a result of intrusive igneous activity.
43. Distinguish among the three types of sedimentary rocks and how they form.
44. Discuss different feature of sedimentary rocks.
45. Explain the processes involved the formation of metamorphic rocks.
46. Differentiate among the different kinds of metamorphic rocks.

Chapter 14: Weathering, Soils, and Mass Wasting

47. Describe how mechanical weathering breaks down rock.
48. Describe how chemical weathering breaks down/ changes rock.
49. Name three factors that influence weathering rates.
50. Explain how soil forms.
51. Describe soil composition and the factors that affect it.
52. Give examples of mass movement.
53. Explain how erosion reshapes Earth's surface.
54. Describe the ways in which human activity threatens soil fertility.
55. Summarize soil conservation methods that reduce soil erosion.

On November 1st & 2nd 2011, we will be reviewing in class for your upcoming Honors / Earth Science Midterm Exam. To this end, you will be asked to construct a practice test that you will give to a fellow student to take and you will be responsible for correcting it.

Tuesday, November 1st, 2011 - Construct a practice test of 45 questions that you will give to another student to take. The practice test will consist of objective type questions (True / False, Multiple Choice, and Matching). You should use 15 questions of each type totaling 45 total. These are questions that could appear on a SCANTRON type test. You must also make a separate answer key

Wednesday, November 2nd, 2011 - Exchange tests with another student, and take the practice test that another student constructed the prior day. Get your test back and correct it. Meet back with your partner and go over the questions / materials that you might have answered incorrectly. Review for Midterm for the remainder of the period

***Midterm Day(s) Thursday, November 3rd, 2011
Makeup / Wrap-up Midterm Day: Friday, November 4th, 2011***

Remember, the better the question, the more likely I could use it to improve / change the actual midterm that you all are given on Thursday / Friday.