

ES 3209 Unit 1 Review Worksheet

Define:

Evidence -

Theory -

Paradigm -

Law -

Geology -

Astronomy -

Oceanography -

Meteorology -

1. In the space below, briefly describe at least two aspects of Earth Science that make it different from other sciences.

i)
ii)

2. Use your own example to demonstrate how Earth Science is related to other scientific fields.

3. Match the definitions of **some minor fields of study in Earth Science**.

crystallography		A	The branch of geology that deals with the origin, composition, structure, and alteration of rocks.
hydrology		B	The study of the characteristics, origin, and development of landforms.
stratigraphy		C	The scientific study of the properties, distribution, and effects of water on the earth's surface, in the soil and underlying rocks.
petrology		D	The study of minerals, including their distribution, identification, and properties
volcanology		E	The study of the fossil forms of all life, animals and plants.
geochemistry		F	The scientific study of <i>volcanoes</i> and volcanic phenomena.
mineralogy		G	The study of rock strata, especially the distribution, deposition, and age of sedimentary rocks.
seismology		H	The branch of science that studies the formation and structure of crystals
geomorphology		I	The scientific study of earthquakes earthquake, trembling or shaking movement of the earth's surface
paleontology		J	the branch of chemistry dealing with the chemical composition of the earth's crust and the chemical changes that occur .

4. _____ is the science that deals with the dynamics of the oceans.

_____ This word literally means “the study of the Earth.”
 _____ An understanding of the atmosphere is the primary focus of this science.
 _____ This science helps us understand the Earth’s place in the universe.

5. Describe the formation of the universe using the Big Bang Theory

6. Describe the formation of the universe using Creationism

7. Using the terms ‘*paradigm shift, Big Bang and Creationism*’, describe the main reason for how many people’s view of the formation of the universe has changed over time.

8. With the aid of 4 labeled diagrams, describe the solar nebula hypothesis.

Diagram of first stage	Diagram of second stage
Diagram of third stage	Diagram of fourth stage

9. List and briefly describe the four “spheres” that constitute our environment.

i)
ii)
iii)
iv)

10. In your own words, describe what a system is, and provide a brief example of how the Earth acts as a system*.

a. Your definition of a system:

b. Provide a brief example of how the Earth acts as a system. (be sure to include each of the spheres)

Define and briefly describe the characteristics for each of the following terms and then label them on the diagram on the following page.

11. lithosphere

12. oceanic crust

13. Mohorovicic discontinuity

14. lower mantle

15. asthenosphere

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16. continental crust

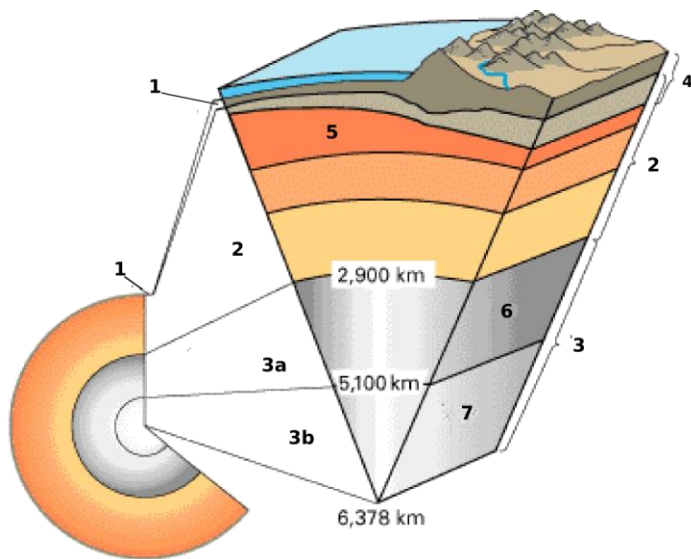
17. inner core

18. outer core

19. Describe the reasons for the segregation of the earth into its layers in the space below.

20. The three principal divisions of the earth are:

i.)	ii)	iii)
The thinnest layer is the:		



28. Label the parts of the diagram above.

1.	4.
2.	5.
3.	6.
3.a	7.
3.b	

Please answer the following questions in full and complete sentences in the space provided.
(text, p. 29)

29. (Q9) What are the two sources of energy for the Earth System?

i)
ii)

Please answer the following questions in full and complete sentences in the space provided. (text, p. 488)

30. (Q4) In what way is the lithosphere different from the asthenosphere?

difference:

31. (Q10) a. Which of the Earth's compositional layers is the most voluminous?
b. What is the approximate percentage of this layer?

a.	b.
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