

Name: _____

- Read Chapter 6 through Section 6.6: The Earth's Atmosphere (we'll cover 6.7 later in class)
- Feel free to look over the class notes (optional):
<http://research.ssl.berkeley.edu/matt/ASTR10/chapter6.html>

- *Briefly* answer the following questions. Each one should not require more than a few words.

1. How big is Earth?

2. What are the two most common elements found in Earth's surface rocks?

3. What type of mineral (rock) is formed when these two elements combine?

4. What destructive natural phenomenon can scientists use to learn about Earth's interior?

5. What are the two main types of seismic waves?

6. What are the four main regions of Earth's interior?

7. What is special about the outer core?

8. Where are the densest materials in the interior of Earth? Where are the lightest materials?

9. What does the fact that the densest materials are separated from the lightest materials tell us about the young Earth?

10. What is the temperature at the center of Earth?

11. Give two reasons why it is so hot.

12. Start with a rock containing 100,000 atoms of potassium. How many potassium atoms are present in the rock 1.28 billion years later? How many argon atoms are present?

13. How old is Earth?

14. How is heat transported from the interior of Earth to the surface?

15. What occurs where material from deep within Earth rises to the surface?

16. What occurs where material from near the surface sinks into Earth interior?

17. What is generated by motions in the outer core?

18. What phenomenon is caused by charged particles colliding with atoms and molecules in the atmosphere?

19. At what altitude are you above roughly three quarters of the mass of the atmosphere?

20. What are the two main elements found in Earth's atmosphere?

21. What type of electromagnetic radiation passes through the atmosphere and is absorbed by the surface?

22. What type of electromagnetic radiation does the surface radiate?

23. What type of electromagnetic radiation do atmospheric molecules (such as CO₂ and H₂O) absorb and re-emit?

24. What molecule do oxygen atoms combine to create in Earth's upper atmosphere? (A layer is named for it.)

25. What type of electromagnetic radiation does this layer protect the surface from?

26. What are two possible sources of Earth's early atmosphere?
