

Study Guide for March Test

There will be 10-15 questions to check your understanding of the rock cycle. Make sure you understand the worksheet titled "The Rock Cycle". You can also go to www.bengalfrosh.com, then **Benson's site**, then **Unit 7**, and watch the **Rock Cycle PenCast** (highly recommended!).

Study your notebook entries since February 27, notes, handouts, labs, and worksheets.

1. What is the difference between weathering and erosion? C (corresponds to list on other side of this handout)
2. What type of rock makes up the Rimrocks of Billings? . . . the Gates of the Mountains? E
3. List three metamorphic rocks and tell what their parent rocks were? A
4. Can you list 3 specific types of sedimentary rocks? E
5. How is a sedimentary rock changed into a metamorphic rock? F
6. Why does water take up more room as it freezes? K
7. What kind of sedimentary rock formed if mud is deposited in a deep part of the ocean? E
8. List the characteristic of sedimentary rocks. E
9. What are the three situations where rocks experience the forces that change them into metamorphic rocks? F
10. Where do most of the world's earthquakes happen? H
11. What kind of weathering is frost wedging (ice wedging) and why does it speed up chemical weathering? CD
12. Where is the process of weathering happening at a faster rate? F
13. What is the correct order for sediments to be deposited by water from first to last? E
14. What do we call a soil that is made up rock material that originated from the bedrock that the soil is sitting on? C
15. What is the #1 agent of erosion in the world? K
16. What is the correct sequence of steps for the formation of sedimentary rock? E
17. Why does Southern Alaska experiences earthquakes? I
18. What are the factors (triggers) that contributed to the debris flow that happened a couple years ago out at the mouth of Meriwether Canyon in the Gates of the Mountains? D
19. How did the Helena Valley form? J
20. Which type of seismic wave makes the ground ripple like water when a pebble is dropped into it? H
21. Why did Carroll College fare so well during the 1935 quakes? J
22. What do geologists think is the reason fossils of sea creatures can be found in the mountains throughout the world? L
23. Which seismic wave can travel through the Earth's core, and why? H
24. What caused most of the destruction during/after the 1906 EQ in San Francisco? I
25. What's the difference between an epicenter and a focus? H
26. Why do earthquakes along the San Andreas tend to be more shallow than those along the coast of South America? H

27. Which seismic wave is the fastest, and why? H
28. What is the “shadow zone” and why does every earthquake have one? A
29. How is Hawaii most affected by EQs that happen along the “Ring of Fire”? I
30. How did a big earthquake cause the “ghost forest” on the coast of Washington? K
31. How did the 1959 EQ near Yellowstone Park kill over 20 people? J
32. Which of the three rock types can scientists use radiometric dating to determine the age for? G
33. When was the last huge earthquake along the coast of Washington/Oregon? K
34. In parts of western (and central) Montana you can see Madison limestone at the surface, but there are few places in the eastern half of Montana where you see Madison limestone. Explain why. K
35. If a dike cuts across sandstone, which was there first – the dike or the sandstone? Explain why. G
36. Be sure to study your WS: Principles of Geology – there will be several questions related to that, including a diagram.
37. Make sure you know a lot about the famous Montana Earthquakes. J (see March 13 posts on Benson’s website – Unit 7)

- A. Notebook entries since Feb. 27
- B. Notes: Weathering and Erosion (handout)
- C. Worksheet: Weathering and Erosion
- D. Notes: Weathering, Erosion, etc. (handout)
- E. Notes: Sedimentary Rocks (handout)
- F. Rock Cycle (handout)
- G. Principles of Geol. (WS)
- H. NOTES Handout: Earthquakes (handout)
- I. Notes: Earthquake Hazards (handout)
- J. Notes: Montana Earthquakes (handout)
- K. Covered in class
- L. Video: The Alps

Honors students will also have to answer additional questions. The topics will be the Virtual EQ, Carbon Cycle (limestone), half-life, unconformity, the Geology Map Activity, MESPOWs that were assigned (26, 34, 50, 113, 121)