

**Absaroka sequence – Pennsylvanian, Permian, Triassic**

1. What orogeny represents the beginning of the Absaroka sequence?
2. What was the paleogeography of the Pennsylvanian?
3. What environment was common, especially in the eastern U.S. and Europe, that led to what great energy resource?
4. When did the first reptiles appear?
5. What new types of plants and trees were common then?
6. In the Late Pennsylvanian, what was happening in the Appalachians, Ouachitas and Marathon Mts. of Texas? Why?
7. What was happening in the western U.S. in terms of paleogeography and ancestral Rocky Mountains?
8. What types of sandstones occurred adjacent to the uplifts in the western U.S.?
9. What types of vertebrates were common in the Pennsylvanian?
10. Describe the Antler orogeny – where was it and what type of structure do we now see ?  
How is this shown on a map (the teeth –triangles point to upper or lower plate?)

11. What are cyclothems?
12. What is the sequence of rock types from bottom to top in a cyclothem?
13. What resource did this create and what environment did it come from?
14. What caused the cyclicity/periodicity in the cyclothems?
15. What was the paleogeography in the eastern U.S. in the Late Pennsylvanian-Permian?
16. What type of deposit is in the Paradox basin and why?
17. What continents were crashing into which?
18. What color and type of rocks are in the Arizona-Utah area of Late Permian - Triassic age? What environment did this represent?
19. What environment was common in the west Texas area and why is this important to our energy resources?
20. What types of plants and trees were common in the Triassic?
21. What was the environment at the end of the Permian and beginning Triassic?

22. What types of animals lived in the Late Triassic in the Petrified Forest area?
23. What was happening in the east coast of the U.S. in Late Triassic time?
24. What did the east coast deposits represent in terms of plate tectonics?
25. What type of rocks are evidence of this?
26. After the Paleozoic ended, the western U.S. became the leading edge of the plate motion. What did this mean in terms of where the mountain building was occurring and what types of rocks?
27. Why are there petrified logs in the Triassic Chinle Formation (Petrified Forest Member)?
28. What environment do the petrified logs represent?
29. Where did the silica come from?
30. When was the biggest marine animal extinction event?
31. What types of animals became extinct?
32. Why did this happen?