

**PALEOCLIMATOLOGY**

Go back to <http://formontana.net> and then click on picture # 91. Look at the image and read the explanation below the image.

1. What is “rock flour”, and how is it formed?
2. Why does the rock flour stay suspended in the lake water rather than settling to the bottom of the lake?
3. When and why does it finally settle to the bottom?
4. What are “varves”?
5. What’s the difference between the type of sediment deposited in the summer and the type deposited in the winter?
6. What caused the water (called glacial milk) to be such a spectacular color of blue?
7. Some 18,000 years ago this valley was filled with a glacier. The cliff in the background, called the “headwall”, is where the glacier formed and began to flow down the valley. Another much shorter cold period happened from 1700 to 1850. What has been happening to Glacier Park’s glaciers since 1850?

Go back to <http://formontana.net> and then click on picture # 42. Look at the image and read the explanation below the image.

8. What is the yellow substance on the surface of the lake?

9. The pollen grains contain make reproductive cells. What forms from an egg cell that has been fertilized in the female pinecone?
10. Watch the short video called “The Birds and Bees of Ponderosa Pine Trees”. You can watch it silently because there is no narration (only music). How does Mr. Benson cause the male cones to release their pollen?
11. How big are the first year female cones?
12. During which month do the mature female cones release seeds on Mt. Ascension?
13. Ask a science-related question about the video that you have just watched?
14. Go back to <http://formontana.net> and then click on picture # 42. Not all of the pollen ends up on female cones. Where does much of it end up being deposited?
15. Explain how pollen found in lake sediments helps scientists know more about the region’s past climates.
16. Click on the Hot Link titled “What is paleoclimatology”. Define paleoclimatology.
17. Click on the link titled “More about the Flathead Lake Project”. According to the article, how many feet long is the longest core taken from the lake?
18. How many years (layers) of sediment are found in this core?

19. Scroll down to the map of the lake. What do the red dots represent?
20. Scroll down to the next photo. What unusual substance is the finger pointing at? Be sure to tell where it came from and when it was deposited.
21. Go back to <http://formontana.net/pollen.html>. Click on the link titled “Why study climate?” Give one reason why scientists want to know more about past climates.
22. Click on “Paleo Proxy Data”. List the six types of climate evidence described on this page.