

**Geology 103 - Field Trip to North Mountain**

**Name** \_\_\_\_\_

Make sure we have the loupes, acid, and boards.

*Note the rock in the parking lot. That's all.*

*Look at the mountain to the north and the mountain to the south. Look at the rocks, color, shape, etc..*

1. How the two mountains and rocks similar?

2. How are the two mountains and rocks different?

3. Where did that white stuff around the plants come from? (Think back to rivers and groundwater.)

*Trailhead just past the sign to the south of the visitor center - Look at those boulders to the trail's left.*

4. These rocks are igneous/sedimentary/metamorphic and I know because of these observations.

a.

b.

5. The name of this particular rock is \_\_\_\_\_

*Head west till down a dip, over a rise (good bike jump) and stay to the left. Look to the north where you'll see a DAM!*

6. Describe two reasons why this dam (and another similar dam about 3/4 mile to the south) would be here.

A

B

*Go south to Trail 100-A Take trail 100-B west to N. Mt.*

7. These rocks are igneous/sedimentary/metamorphic and I know because of these two observations.

a.

b.

8. Identify two minerals you can see in the rock \_\_\_\_\_

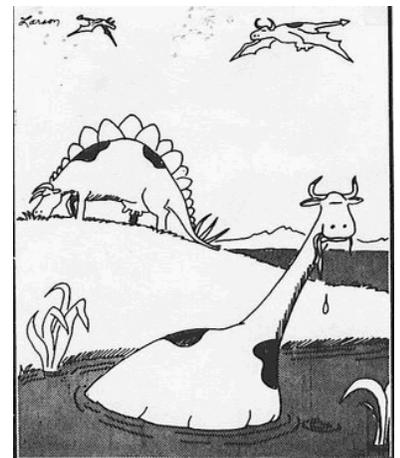
9. Keeping in mind that 7th Street runs north-south, the strike of these rocks is \_\_\_\_\_ and the dip \_\_\_\_\_

10. What must this area have been earlier in geo-history? (Think back a couple of steps.)

11. From which direction(s) did the forces come that squished this rock, E-W or N-S?

12. Professor offers you \$10 for the 1st fossil you find in these rocks. Good deal? Why?

13. What are the plants doing to the poor rocks?



Sixty-five million years ago, when cows ruled the earth

14. Look at that white stuff in the joints. Where is this coming from? Explain how it got here. Where have you seen this before on our little walk?
15. Along the paved trail, there are some rocks with desert varnish and some without. Weird. Why?
16. Without support, this road will collapse. Why? (Don't use the word "repose" in your answer.)
17. Contrast the thickness of soil horizons in the flats to where the mountain is steeper and explain why.
18. Does the rocks' dip have anything to do with the road cut? Why is this going on? (Consider minerals in the rock!)
19. What is the story behind those red rocks ?
20. Why might stepping on the fungus or lichen be destructive to the soil?
21. Now that we've seen both rocks, Shaw Butte / T-Bird Butte and North Mountain look different?
22. How did they each form?
23. Remember that granite boulder at the beginning? Is it an enigma? Why is it ROUND instead of angular?
24. Draw what must be happening underground between the mountains.

Write your own two original questions. These may become future field trip questions. Royal-

A

B

