






Geologic Processes Worksheet

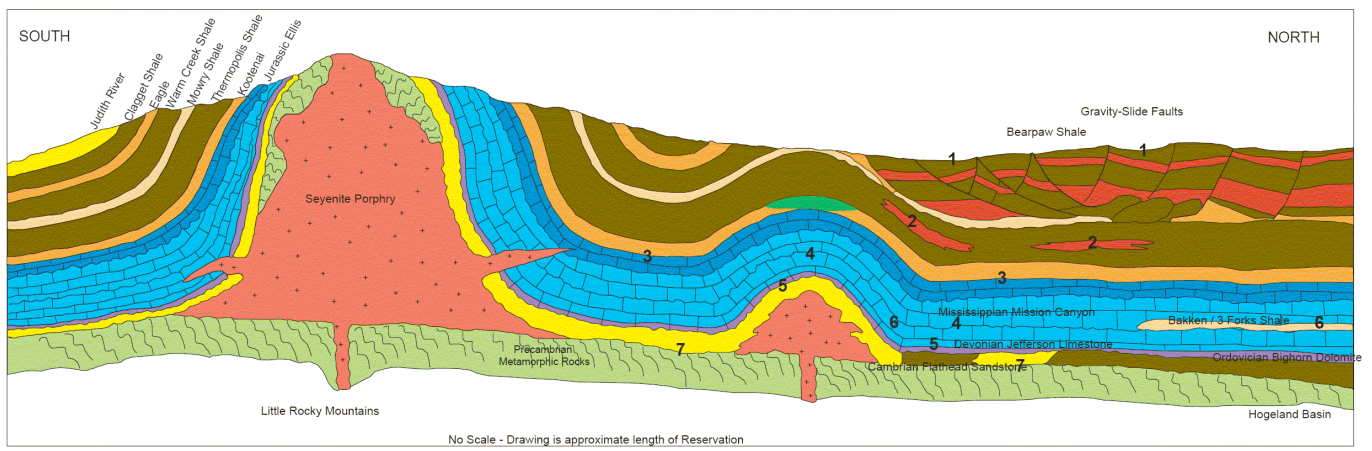
Name _____

For each picture, name the type of fault and the type of force that created it.

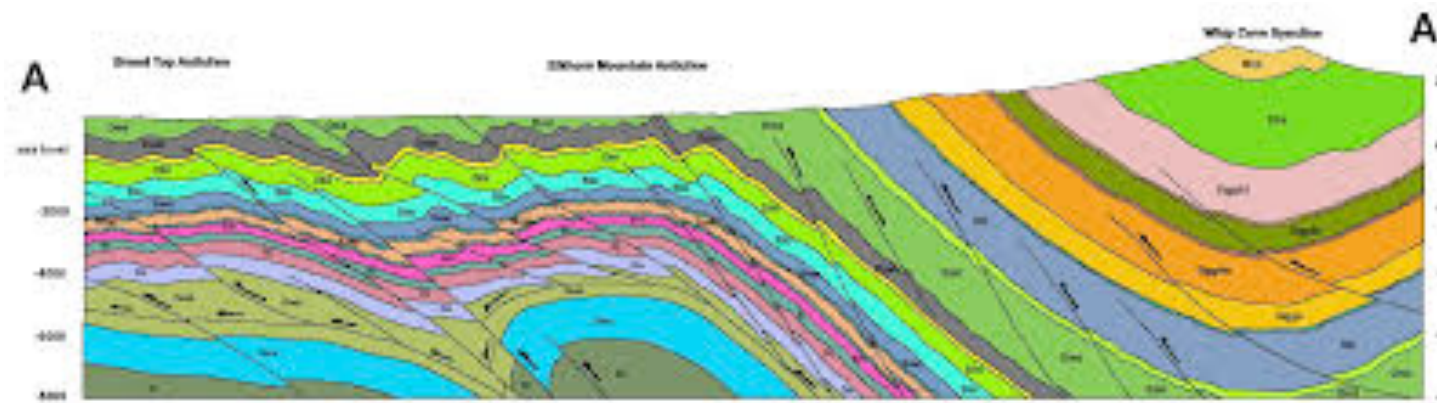
Picture	Fault type (strike-slip, reverse, or normal)	Forces creating it (compression, tension, or shear)
		
		
		
		
		

Each map below shows a cross section of the crust in different locations. Each color is a layer of rock (same color means its the same rock type). A line shows a fault that is formed. For each map, tell whether the rocks underwent compressional or tensional forces, and explain how you know.

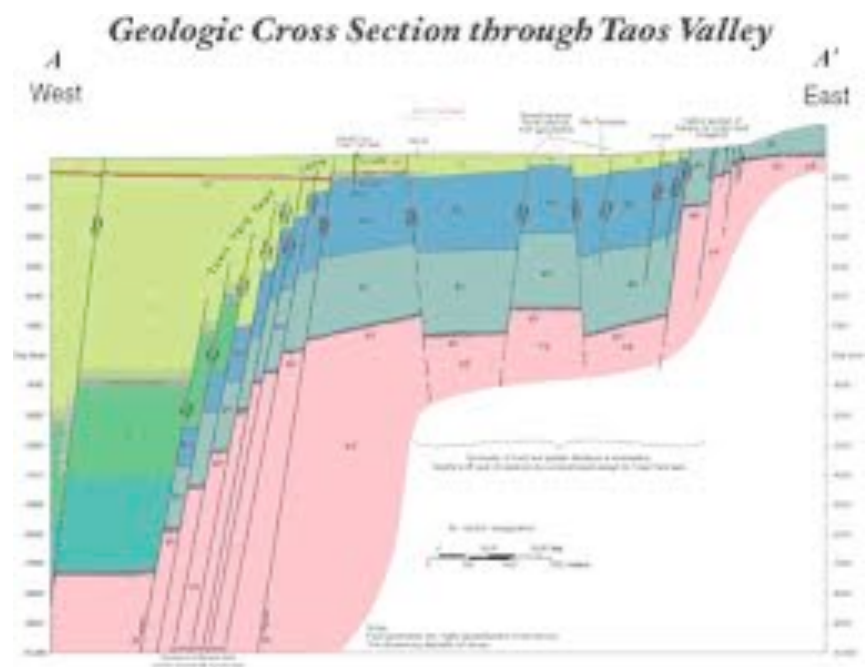
1



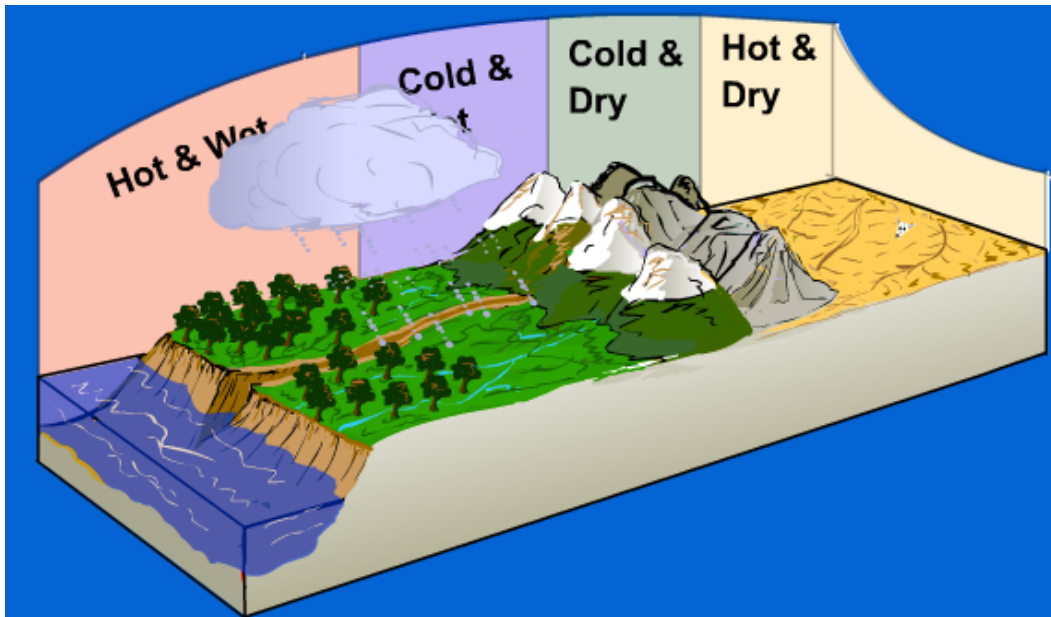
2.



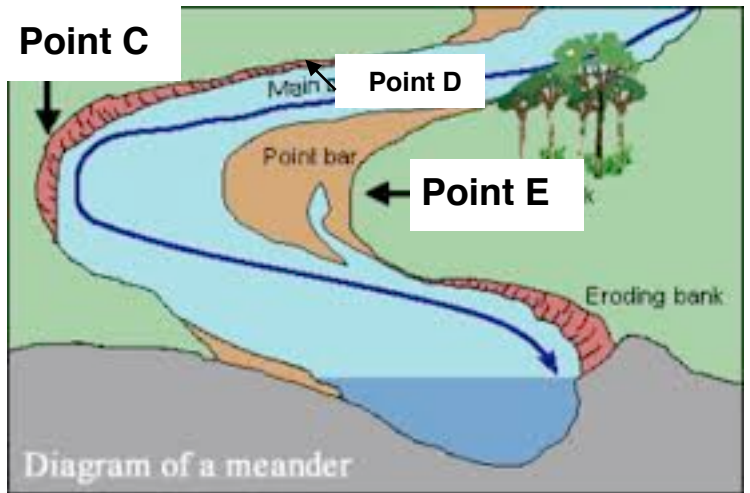
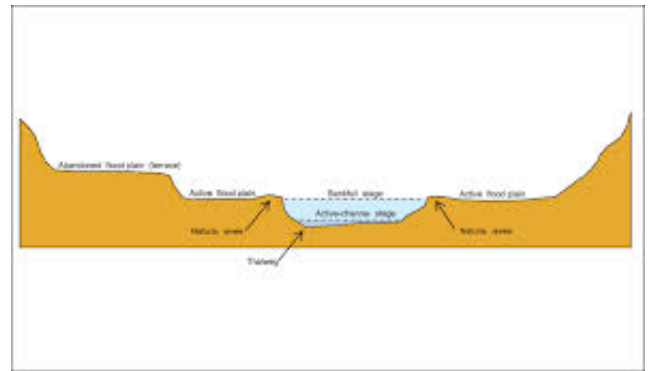
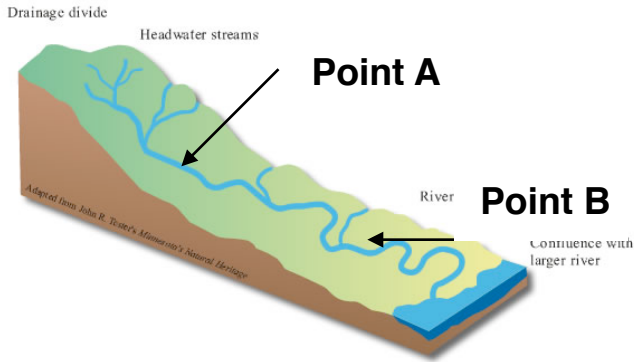
3.



The picture below shows 4 different areas that would experience different climates (different temperatures and moisture levels). Answer the questions that follow using this diagram.



4. Which area(s) would experience the most weathering? Explain.
5. Which area(s) would experience the least amount of weathering? Explain.
6. Which area(s) would experience the most chemical weathering? Give an example.
7. Which area(s) would experience mostly mechanical weathering? Give an example.
8. Using the diagram, give an example of erosion that would be seen somewhere on the map.
9. In the Hot & Dry climate, what would be one type of weathering and one type of erosion that would occur?
10. Where would you see the most frost-wedging and freeze-thaw occur?
11. Where would large amounts of abrasion occur?



12. In which point would the water flow be fastest?

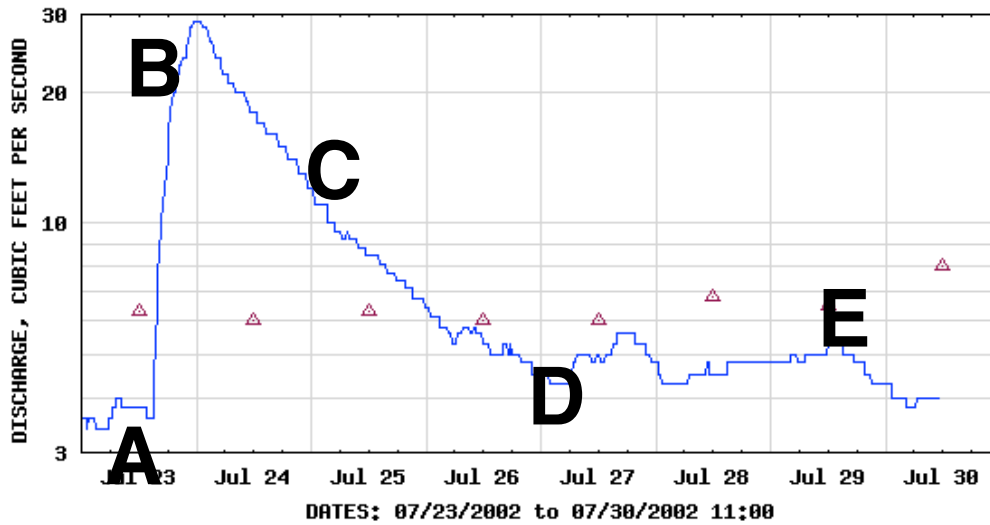
13. In the Diagram of the meander, which point would have the most weathering and erosion occurring? Explain.

14. In the Diagram of the meander, which point would have the most deposition occurring? Explain.

15. In the diagram to the upper right, why do you think there is a “shelved” pattern, or a stepped pattern? Explain how the river may have caused this.

16. In the diagram in the upper left, where would the river have a bottom that is mostly large rocks? Where would its bottom be made of mostly fine sand and silt? Explain.

USGS 01121000 MOUNT HOPE R NR WARRENVILLE, CT.

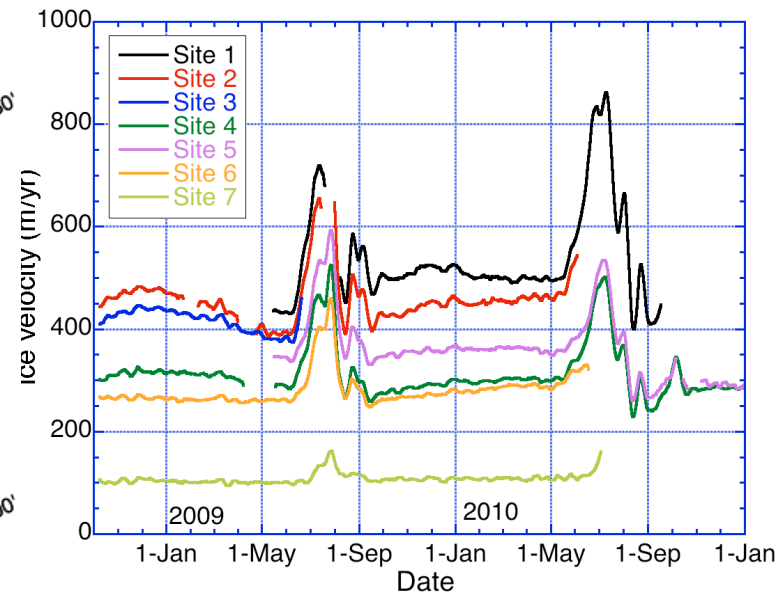
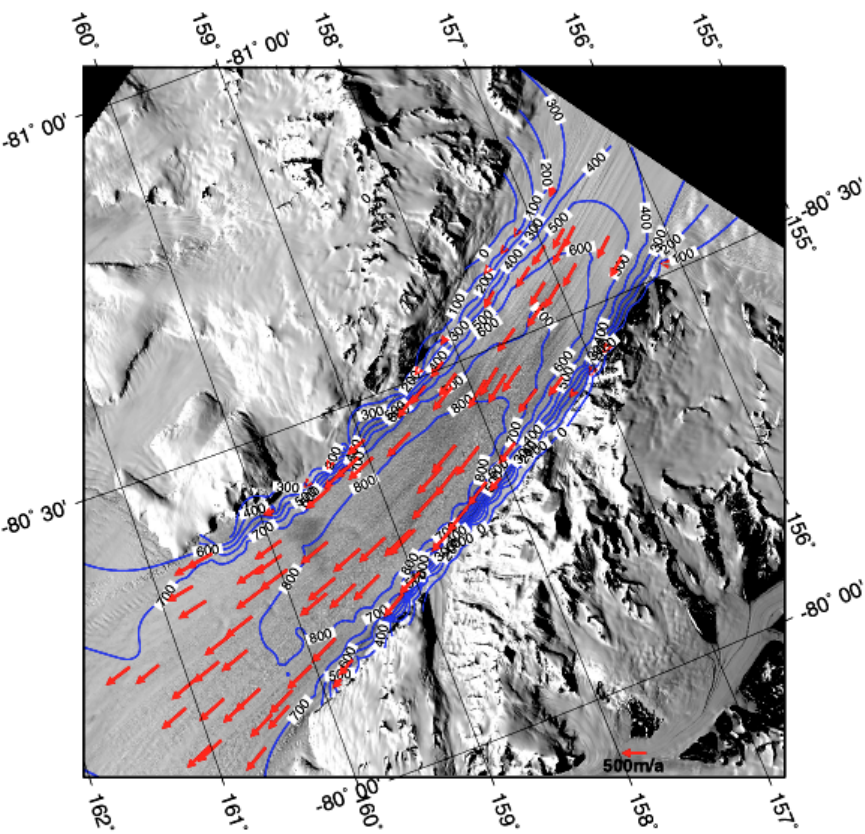


EXPLANATION
 — DISCHARGE
 ▲ MEDIAN DAILY STREAMFLOW BASED ON 61 YEARS OF RECORD

Provisional Data Subject to Revision

Stream discharge rate is the amount of water that passes a point every second. The greater the stream discharge, the more “full” a stream is. Lower discharge usually means drought, slow waters, and more deposition. Greater discharge usually means flooding, faster water, and more weathering and erosion. The graph above shows the stream discharge for a week-long period.

17. At which point is the stream in most danger of flooding?
18. At which point is the stream probably in a drought?
19. What happened to the stream in between points A and B on the graph? What may have caused this?
20. During which points on the graph is weathering and erosion most likely happening? During which points on the graph is deposition most likely occurring?



21. The glacier above has red lines that show velocity (longer arrow means greater velocity). In which parts of the glacier is the most erosion and weathering occurring?

- a) In the middle of the glacier
- b) on the sides of the glacier
- c) In the top of the glacier (upper right of map)
- d) In the bottom of the glacier (bottom left of map)

22. The graph in the upper right shows the speeds of several glaciers that are near one another. This glacier (identify by color) will be creating the most erosion and weathering on its mountain surface? Which one will be depositing the most material on its mountain? Explain.

23. Would glaciers leave sandy, muddy, or rocky soil? Explain.
24. Would wind erosion leave sandy, muddy, or rocky soil? Explain.
25. Would stream deposition at the end of a stream leave sandy, muddy, or rocky soil? Explain.
26. Would gravitational weathering and erosion create sandy, muddy, or rocky soil? Explain.

27. The islands below are formed in North Carolina, and they are not volcanic islands. Determine how they are formed.

