Geological Map Lab I

Geologic Map of New York, Hudson-Mohawk Sheet
*(the key to this map is on a separate sheet)*

What general types of rocks are present just south of route 20 (lower 2/3 of the map)?

What is the approximate age of these rocks?

What is the approximate direction of the strike of these strata?

What is the approximate direction of the dip of these strata? How can you tell?
What is the approximate direction of the strike of the rock strata of the Hamilton Group between Buffalo and east Aurora?

What is the approximate direction of the dip of these strata? How can you tell?

Compare the dip of the Hamilton Group rocks on this map with those of the Hamilton Group rocks on the Hudson-Mohawk sheet. How do they compare? What can this structure be? (You may need to look at a map of New York to orient yourself where each map is located)
Geologic Map of Washington

Find Mount Rainier on the map (bottom center). Since there are no contour lines on this map, how can you determine where the top of the mountain is?

What is the type and age of the rocks on the top of Mount Rainier?

Geologic Map of Southeastern Utah

Route 70 runs east-west along the southern half of the map. This map crosses the San Rafael Swell in the central portion of the map. In what direction do the sedimentary beds dip in the vicinity of Rattlesnake Bench or Crawford Draw?

In what direction do the strata dip in the vicinity of Black Dragon Wash?

What type of geologic feature is the San Rafael Swell? What other evidence can you site to support your hypothesis?
The people who made this map inadvertently left off a key to the line symbols to help you determine what type of faults are present. Luckily, we don’t need their stinkin’ key.

Look at the dark hatched saw-toothed line running between the Marias River Shale and the Kootenai Formation (north central portion of the map)

What is the age of the rocks on the western side of this line?

What is the age of the rocks on the eastern side of this line?

Which side is the hanging wall and which side is the footwall?

What type of fault is this?

What is the approximate angle of dip of the Kootenai Formation?

How could we tell which direction these beds were dipping if there were no strike and dip symbols on the map?

What type of fault is the Glenn Fault? (you can determine this by determining if the hanging wall is going up or down – the side that is going up, hanging wall or footwall, will always show the older rocks exposed at the surface)
What type of structure is underneath Blair Valley? How can you tell? (there are 2 ways to tell)

What type of structure is underneath Sideling Hill? How can you tell? (again, there are 2 ways to tell)

What type of geologic structure lies beneath Funkstown and Hagerstown (Beekmantown Group, pink and red rocks)? In which direction is it plunging?

What type of structure is represented by the Conococheague Limestone just west of the Funstown/Hagerstown Beekmantown Group? In which direction is it plunging?