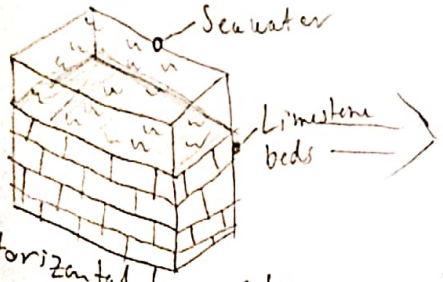
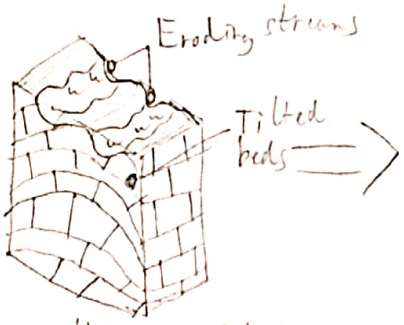
Question: Sketch and label a series of diagrams depicting development of the three types of unconformities (angular unconformity, nonconformity, and disconformity), and describe what sequences of events is implied by each type (4.2 A, B, C). For this question, label the location of the unconformity, the youngest rock unit, and the oldest rock unit.

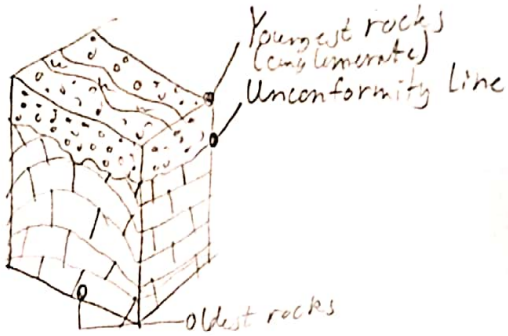
Angular Unconformity



1. Horizontal layers of limestone may be produced as sediment is deposited beneath the sea.

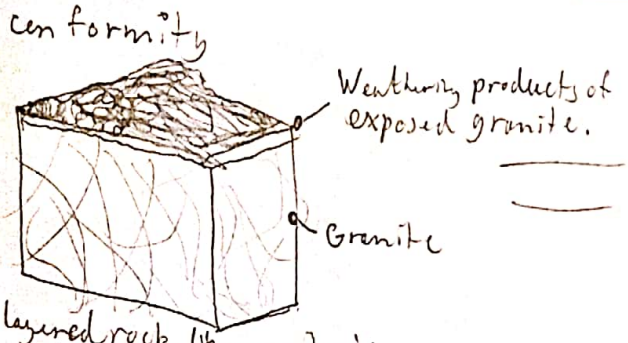


2. Seas withdraw and beds are folded and uplifted. The tilted beds experience erosion (due to streams here), causing the beds to become exposed.

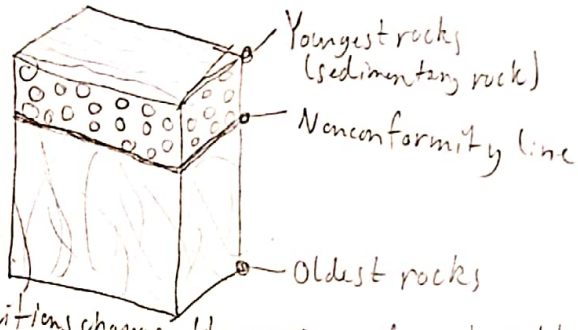


3. Conglomerate is deposited over tilted beds, forming an angular unconformity.

Nonconformity

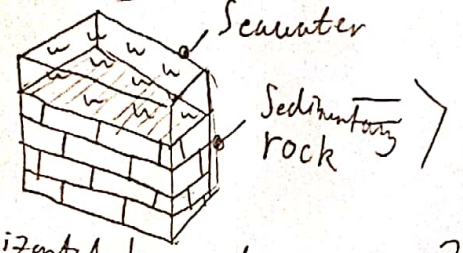


1. Nonlayered rock, like granite, is formed at depth and uplifted. Surface material erodes away to expose underlying granite to surface weathering and erosion, potentially forming soils containing things like iron oxides, sand, and clay.

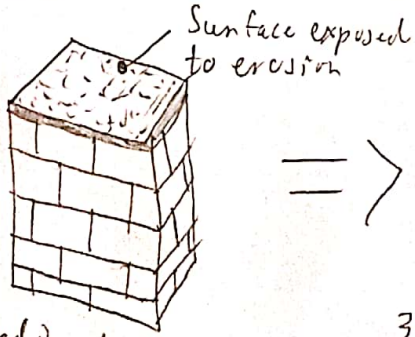


2. As conditions change, the erosion surface is buried by sands and cobbles, which lithify. The nonconformity appears as the contact layer between the sedimentary rock and granite.

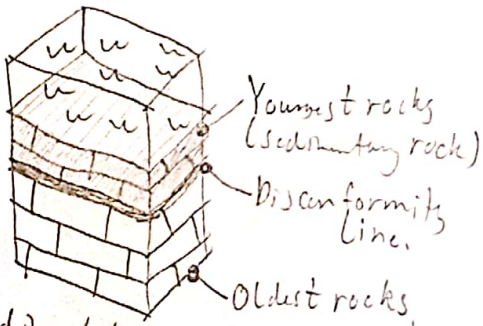
Disconformity



1. Horizontal layers of sedimentary rock may be produced as sediment is deposited.



2. Sedimentary rock is exposed to surface due to uplift or a drop in sea level, causing sedimentation to stop and weathering and erosion to affect exposed rock.



3. Sedimentation resumes, causing older sedimentary rock to be buried by newer sedimentation layers, forming a disconformity.