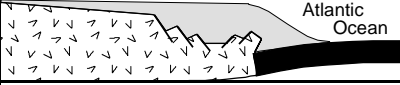
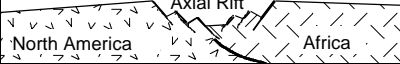

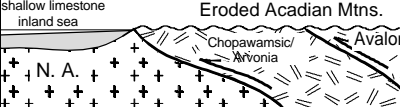

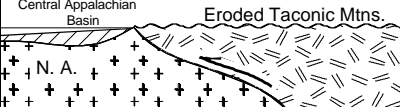

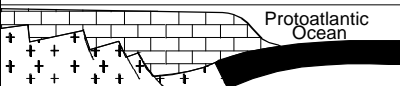
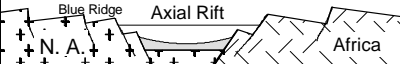



Age mya	Significant Rock Units	Sequence of Events	Description of Events
CENOZOIC	Alluvial and Coastal Plain Sediments	<b>REJUVENATION</b>	Gentle uplift of the eroded roots of the Alleghenian mountains starts erosion again leading to formation of the present mountains with their long ridges and water gaps.
	Chesapeake Group	<b>ATLANTIC DIVERGENT CONTINENTAL MARGIN</b> 	After the rifting the new continental margin sinks below sea level and accumulates an eastward thickening wedge of sediments, continuing until the present day. Virginia erodes completely down to sea level, and the sea may at times have covered most or all of Virginia. Present sea level is low.
	Pamunky Group		
70 K	Potomac Group		
140 TR/JR	Newark Group	<b>RIFTING</b> (Opening of Atlantic Ocean) 	The supercontinent Pangaea rifts apart along a zone now located off the Virginia coast. Culpepper, Richmond, Farmville, etc. basins form. As Africa moves away the present Atlantic ocean begins to open and continues to the present.
230 PENN/PERM	Harlan Wise Gladeville Lee	<b>ALLEGHENIAN OROGENY</b> (Closing of Protoatlantic Ocean) 	Africa, which rifted away in the Cambrian, returns, closing shut the Protoatlantic ocean, and creating the supercontinent Pangaea. A Himalaya size mountain range exists throughout Virginia except the far southwest part of the state. At this orogeny most older rocks in Virginia are folded and thrust faulted toward the west. Coal swamps form in southwest Virginia and spread across most of the eastern United States.
310 MISS.	Princeton Hinton Bluefield Greenbriar McCrary	<b>INTER-OROGENIC CALM</b> 	After the Acadian mountains are eroded a large inland sea spreads from eastern West Virginia across most of eastern North America and fills with limestone sediments containing abundant fossils.
345 DEVONIAN	Price/Pocono Hampshire Greenland Gap Brallier Millboro Needmore	<b>ACADIAN OROGENY</b> 	A second terrane ( <i>Avalon</i> ) collides with eastern North America, building a mountain range in the piedmont area containing Richmond. A large basin sinks in western Virginia and W.Va. and fills with a thick sequence of gray, green and red sediments now exposed in Shenandoah mountain at the western state line.
395 SILURIAN	Oriskany Helderburg Tonolway Bloomsburg Keefer Rose Hill Tuscarora	<b>INTER-OROGENIC CALM</b> 	After the Taconic mountains are eroded to a very low region the Central Appalachian Basin in western Virginia and W.Va. forms containing reefs and limestone deposition. Desert conditions across all eastern North America lead to salt deposition in the basin.
435 ORDOVICIAN	Massanutten Juniata Oswego Martinsburg Edinburg Lincolnshire	<b>TACONIC OROGENY</b> 	A volcanic island arc terrane ( <i>the Chopawamsic/Arvonian</i> ) collides with southwest Virginia and southeast Pennsylvania creating a mountain range in the western Piedmont region. A deep basin forms in the Shenandoah valley area, and a second basin in W.Va., which fills with sediments from the mountain.
500 CAMBRIAN	New Market Beekmantown Stonehenge Conococheague Elbrook Rome Shady	<b>PROTOATLANTIC DIVERGENT CONTINENTAL MARGIN</b> 	As the Protoatlantic ocean basin opens the new continental margin sinks below sea level and an east thickening wedge of sediments is deposited. Climate was tropical and the sediments mostly tidal flat limestones /dolomites. Rocks now exposed throughout the Shenandoah valley.
570 PRE-CAMBRIAN	Antietam Harpers Weverton Catoctin Robertson River Lynchburg	<b>RIFTING</b> (Opening of Protoatlantic Ocean) 	The rifting of the Grenville supercontinent and the opening of the Protoatlantic ocean. The continental edge at this time ran down the axis of the present day Blue Ridge province, and Virginia lay south of the equator in a tropical climate.
1200 PRE-CAMBRIAN	Old Rag Lovingsston Pedlar	<b>GRENVILLE OROGENY</b> 	The Grenville rocks may represent many geologic events, but the 1.2 billion year event closed an ocean basin and sutured North America and Africa together. Remains today in the Blue Ridge province as metamorphosed granite batholiths.