

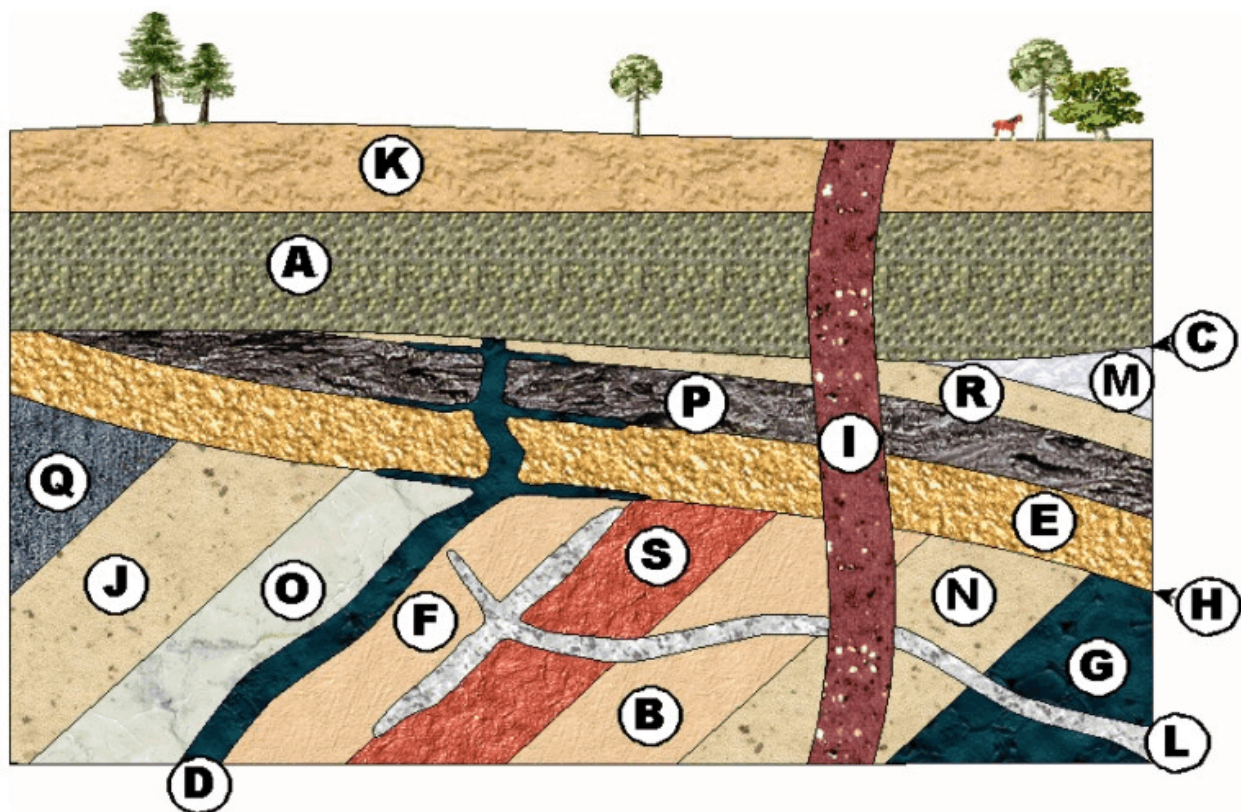
LAB EXERCISE 10 - STRATIGRAPHY & TIME

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Age of Rock Layers

Use the rules of stratigraphic relationships you have learned to solve the geologic history of the stratigraphic section pictured below. Apply also your knowledge of geologic age calculations to narrow the time questions in your geologic history.

Explanation: Letters C and H mark unconformities. Do not forget to include them in your analysis. Letter D depicts a mafic igneous intrusion containing 5.20 moles ^{40}K and 0.45 moles ^{40}Ar . The intermediate igneous intrusion L was analyzed with 12.2 moles ^{238}U and 0.65 moles ^{206}Pb . The granitic pegmatite intrusion I contains K-feldspar with 13.81 moles ^{87}Rb and 0.01 moles ^{87}Sr . Do the appropriate age calculations for all igneous intrusions using table 6.2 as a guide. All other layers depicted are sedimentary in nature with exception of G which is an ancient basaltic lava flow.



Write a history of these rock layers in table form going from the oldest layer (G) to the youngest! Include all events that can be ascertained from the section, such as times of erosion, tilting, folding, etc. Narrow the events to the appropriate geologic time (e.g., Permian, Jurassic, Tertiary, etc.). Use your age calculations as your guide. Remember in your write up: THE OLDEST EVENT IS ON THE BOTTOM!!!!

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SEQUENCE OF EVENTS TABULATED WRITE UP (Remember, OLDEST ON BOTTOM)!