

OLLI Geology of the National Parks

Fall 2021 with Nicole Myers

Week 5

Digital presentations associated with the course & handouts will be available at:

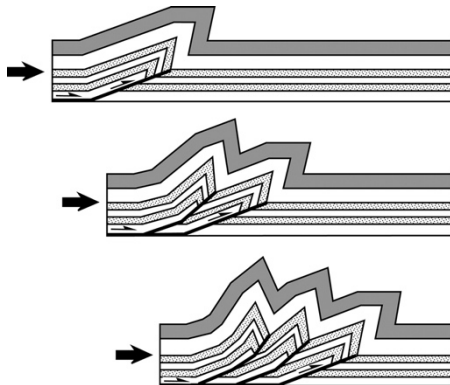
<https://www.appreciatingearth.com/olli>

Cordilleran Orogenies Approximate Timeline:

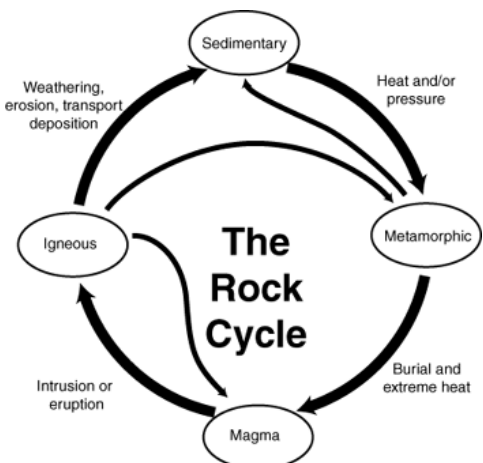
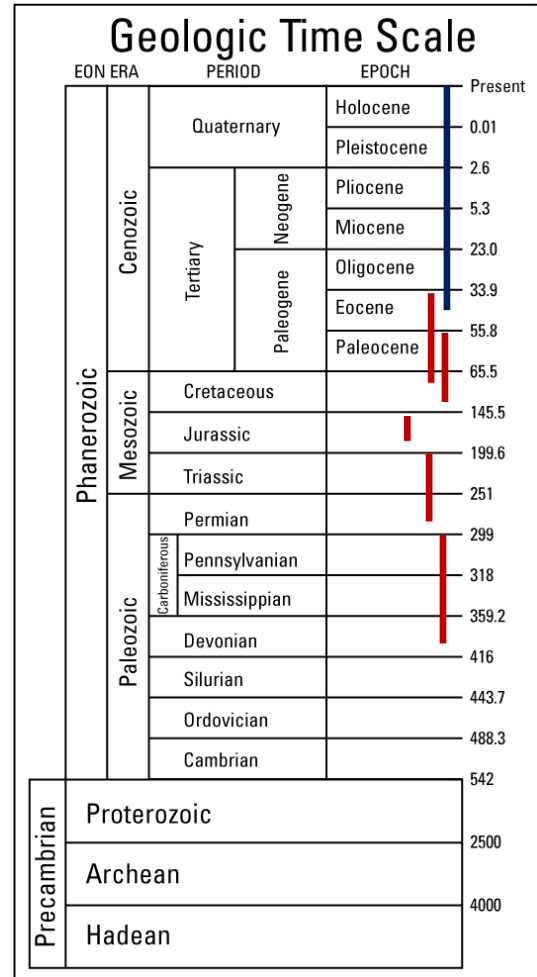
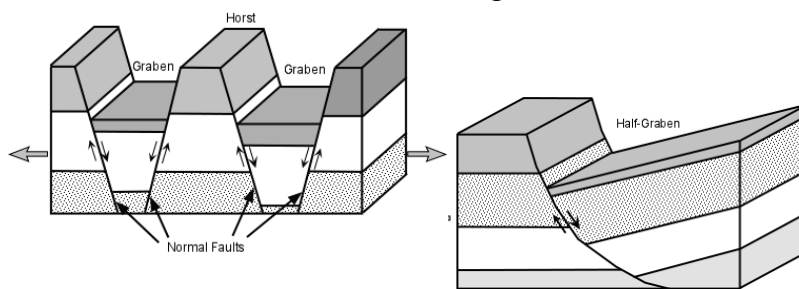
- Antler Orogeny ~375-300Ma
- Sonoma Orogeny ~280-200Ma
- Nevadan Orogeny ~180-140Ma
- Sevier Orogeny ~120-50Ma
- Laramide Orogeny ~70-40Ma
- Basin & Range Extension started ~50-30Ma

Faulting & Tectonics:

- Fold & thrust belt = reverse & thrust faults = compressional stress = tectonic convergence



- Horst & graben = normal & detachment faults = extensional stress = tectonic divergence



Simplified Geologic Time Scale,

Simplified Geologic Time Scale from: Spooner, Alecia M. "The Geologic Timescale." *Dummies*. A Wiley Brand. <https://www.dummies.com/education/science/the-geologic-timescale/>

Simplified Rock Cycle

<https://www.geol.umd.edu/~jmerck/honr219d/notes/02.html>

Simplified Horst & Graben + Fold & Thrust Images

<https://sites.google.com/site/ldgeohazards/what-are-earthquakes/fault-systems?tmpl=%2Fsystem%2Fapp%2Ftemplates%2Fprint%2F&showPrintDialog=1> & <https://sp.lyellcollection.org/content/349/1/1>