

Possible Ideas for Breadth Paper

(you may need to further refine the scope so it is specific and not too big)

- Follow up on something from Geol 502 field trips that interested you
- Follow up on something in Geol 501 research talk or paper that interests you
- Rise of oxygen in Earth's atmosphere
- History of water/atmosphere/geomorphic features on Mars
- Accreted terrane history of Washington (or some other region of the western N America)
- Mantle convection
- Core-mantle boundary dynamics
- Earth's magnetic field generation and polarity switches
- Cause of abrupt climate changes during the Late Pleistocene/Holocene
- Seismicity of the Yakima Fold Belt
- Mechanics of erosion (fluvial, glacial, or landsliding)
- Causes of various mass extinctions (pick one)
- Onset of plate tectonics (when?)
- Causes of banded iron formations (BIFs)
- Techniques for river restoration
- Biogeochemical processes (could be in soil, mid-ocean ridges, atmosphere, etc)
- Channel flow in orogens
- Climate-tectonics interactions
- Measuring sediments in rivers
- Mitigating effects of dam or techniques of dam removal
- Intersection of environmental policy & scientific data (ex. Yucca Mnt debate or New Orleans flood management)
- Hot spots (How do they form OR Is Yellowstone a hotspot)
- Causes of intraplate seismicity
- Magma chamber evolution
- Development of continental crust
- Global circulation models and predictions of future climate
- Global warming and storminess, ocean chemistry, forest health, sea-level rise, ice cap collapse, or other proposed effect
- Determining paleoaltitude – techniques or regions with debated altitude histories such as the Sierra, Cascades, Tibet, etc
- "Slow earthquakes" and tremor & shake