

Name: _____

EAS 343: Geomorphology

Google Earth Tectonic Landforms

Objective: Students will be able to use Google Earth to evaluate lineaments as land forms, recognizing the underlying geological structures responsible for these forms. Students will visualize the structural features and identify the mechanisms that generate those features.

Directions: Below you will find a list of sites around the world where the surface geology exemplifies some interesting tectonic landforms. You are to complete the following items for each of **FIVE** sites you choose and those that are required (denoted by ***). You will have 7 total cross-sections.

For each location:

- A. Draw a simple map sketch centered on your view window, trying to include the basic geologic structure depicted for reference. Be sure to include a north arrow!
 - B. Using the measurement tool () from the toolbar, centering on the Placemark indicating the site () , draw a line using the distance indicated for each site. Include this line on your sketch from part A.
 - C. Construct a topographic profile for your site, with the measured line as your profile distance.
 - D. Below your profile, develop a geologic cross-section, including as many of the rock units as necessary. Your cross-section should include enough depth to clearly demonstrate the processes involved in the creation of this feature. Annotate your cross-section with arrows depicting dominant stresses and relative motion if you believe faults are present.
1. Off Oregon Coast (250km)
 2. East Pacific Rise (250km)
 3. Nazca Trench (250km)
 4. East Andes 1 (10km)
 5. East Andes 2 (10km)
 6. East Andes 3 (6km)
 7. Southern California (100km)
 8. Nevada (1.5km)
 9. Sheep Mountain (10km)
 10. Northwest Africa (2.5km)
 11. North Africa Fold (25km)
 12. ***East Africa (15km)
 13. Central Asia (60km)
 14. Central Asia 2 (7.5km)
 15. ***Australia (15km)
 16. New Zealand (15km)