



### Correlating Rock Layers

### Lab #24

**Discussion:** It is relatively easy to determine relative ages of rock layers in a single formation. We have learned that when rock layers are in different locations, correlating the layers is much more tentative. We have also learned that the presence of index fossils makes it much easier to correlate rock layers that are separated by distance.

Define the following terms:

Relative age - \_\_\_\_\_  
\_\_\_\_\_

Absolute age - \_\_\_\_\_  
\_\_\_\_\_

Correlation - \_\_\_\_\_  
\_\_\_\_\_

Rock outcrop - \_\_\_\_\_  
\_\_\_\_\_

Unconformity - \_\_\_\_\_  
\_\_\_\_\_

Superposition - \_\_\_\_\_  
\_\_\_\_\_

**Objectives:** Use index fossils to correlate rock layers from different locations. Use index fossils to determine the absolute age of a rock layer.

**Purpose:** Use index fossils to date and correlate rock layers.

**Hypothesis:** Some fossils occur in widespread areas and existed only for short time periods. These fossils can be used to date rock layers.

**Theory:** Index fossils are found over large geographic areas of the planet in rock layers of the same age because the living things that made the fossils only existed on Earth for a relatively short time period.

**Materials:**

PS/ESRT.

**Method:**

**Part A:** Using the following diagram, match the index fossils to determine the total number of rock layers represented by the two sites.

Which layers are the same age? \_\_\_\_\_

Which layers have been eroded away? \_\_\_\_\_

Which rock layer is the oldest? \_\_\_\_\_

Which rock layer is the youngest? \_\_\_\_\_



