

Rock Dating – Relative Dating

Definitions/Information:

*Principle of Original Horizontality: Rock layers are horizontal when they are deposited.*

Relative Dating: Comparing or ranking the ages of rocks without actually determining their actual ages.

For example, with relative dating we might say that rock A is older than rock B, but we don't know the actual age of either rock.

Absolute Dating: Determining (or approximating) the exact age of a rock.

Principle of Superposition: The closer a rock layer is to the surface of the Earth, the younger it is.

Principle of Cross-Cutting Relationships: If a layer of rock is found cutting through another layer of rock, the layer which is cutting through must be younger.

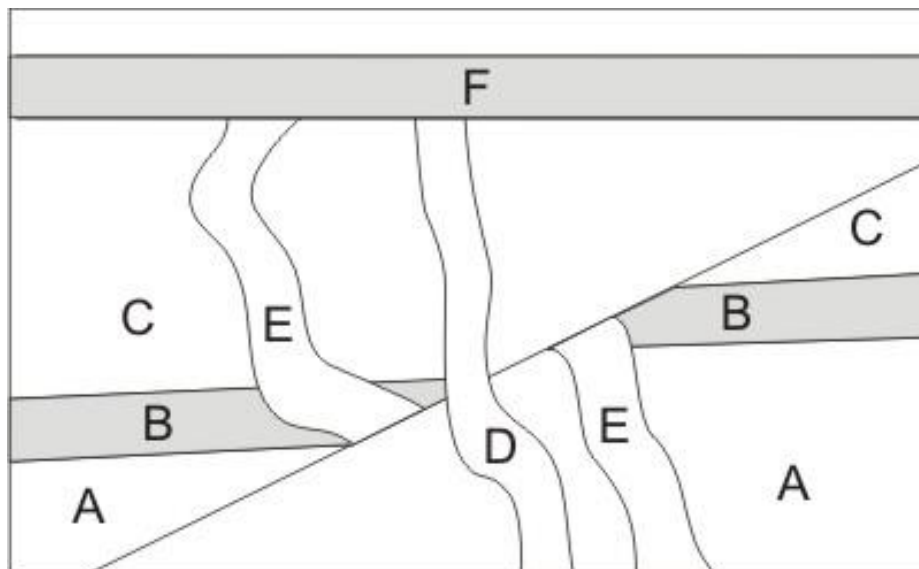
Principle of Faunal Succession: In the history of the Earth, many species of living things have come and gone. Some animals and plants are not alive today, but their fossils are evidence that they lived in the past. Layers of rocks with similar types of fossils are probably of similar ages.

**HINTS:** Questions to ask yourself when you are trying to determine which of two rock layers is older:

1. Which layer *reaches highest?*
2. Which layer cuts through the other layer?
3. Which layer was broken by the earthquake?

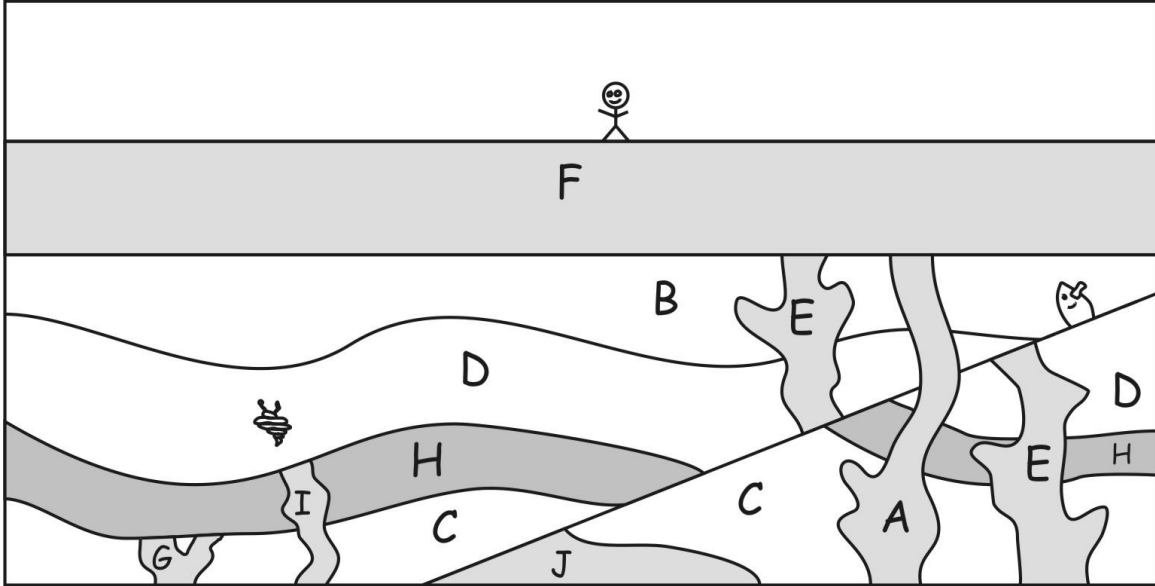
Practice #1. Rank the rocks in the diagram from oldest to youngest.

|          |  |  |  |  |  |
|----------|--|--|--|--|--|
| Oldest   |  |  |  |  |  |
| Youngest |  |  |  |  |  |
|          |  |  |  |  |  |



Practice #2. Rank the rocks in the diagram from oldest to youngest.

| Oldest |  |  |  |  |  |  |  | Newest |  |
|--------|--|--|--|--|--|--|--|--------|--|
|        |  |  |  |  |  |  |  |        |  |



Practice #3. Rank the rocks in the diagram from oldest to youngest.

| Oldest |  |  |  |  |  |  |  | Newest |  |
|--------|--|--|--|--|--|--|--|--------|--|
|        |  |  |  |  |  |  |  |        |  |

