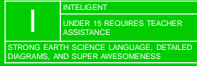


Lesson – Correlation in Geologic History

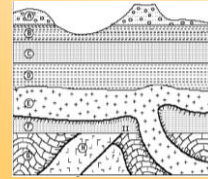
THE FOLLOWING VIDEO HAS BEEN APPROVED FOR ALL AUDIENCES BY THE EARTH SCIENCE TEACHERS ASSOCIATION OF AMERICA, INC

THE VIDEO HAS BEEN RATED



- I can correlate rock layers
- I understand what an index fossil is
- I can describe unconformities

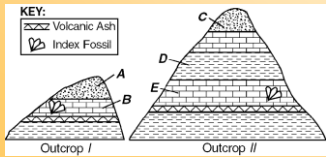
Review: Put in order from oldest to youngest



- G Intrusion H
- Folding of G
- Fault II
- F Extrusion E
- D C
- B
- A Weathering of A & B

Correlation

- Correlation is used to *match* 2 layers formed at the *same time* but at different locations

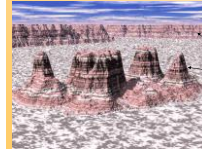


1. Exposed Bedrock
 - Bedrock is an areas local rock
 - Usually covered by soil

Afton Canyon, Barstow, CA



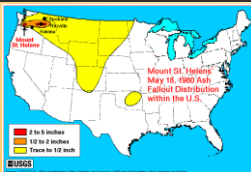
2. Similarities in Rocks
 - Used only in small areas and can still be inaccurate



Same strata separated because of erosion.

3. Volcanic Ash Deposits

- Volcanic Ash - sand & clay sized particles of extrusive rock is shot into the air
- Scatters over wide areas



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4. Use of Index Fossils

- Fossils: Remains or evidence of former living things
- Normally found in Sedimentary rocks



Cast - Trilobite about 50 million years old

Mold - 560 million year old



Index Fossils:

- widespread geographically
- short lived



Crinoid - Mississippian Period



Trilobites - Cambrian Period



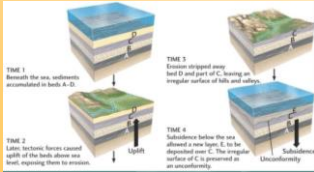
Brachiopod - Devonian Period

CENOZOIC ERA (Age of Mammals)	Quaternary Period	<i>Penetia gibbosa</i>	<i>Neptunia tabulata</i>
	Tertiary Period	<i>Calyptraphora velata</i>	<i>Uvaniceras planicosta</i>
MESOZOIC ERA (Age of Reptiles)	Cretaceous Period	<i>Scaphites nigropictus</i>	<i>Uvaniceras labialis</i>
	Jurassic Period	<i>Paraliploceras rotund</i>	<i>Merina trimaedea</i>
	Triassic Period	<i>Trochites subrotatus</i>	<i>Murchie subrotatus</i>
PALEOZOIC ERA (Age of Ancient Life)	Permian Period	<i>Lophites americana</i>	<i>Paraliploceras bonoi</i>
	Permian Period	<i>Diplocephalus americana</i>	<i>Lophophylitium pretitulum</i>
	Mississippian Period	<i>Cystoceras multiradiatus</i>	<i>Protocardia garryi</i>
PALEOZOIC ERA (Age of Ancient Life)	Devonian Period	<i>Macrocephalus mucronatus</i>	<i>Palaetolipus antonovi</i>
	Silurian Period	<i>Cystophylus niagarensis</i>	<i>Uvaniceras bartholi</i>
	Ordovician Period	<i>Bathyrus astaxa</i>	<i>Tenagaplex trachelosa</i>
PRECAMBRIAN	Cambrian Period	<i>Paraliploceras pinus</i>	<i>Billingella corugata</i>

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Unconformities

- Buried Eroded surfaces
- Parts of the rock record are missing
- Cause a gap in the rock record



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