

Relative and Absolute Dating

Compare relative and absolute dating

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Relative Dating (based on exposures and boreholes)

Law of Superposition

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Unconformities

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Way-up Structures

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Law of Cross Cutting

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Law of Included Fragments

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Biostratigraphical (fossil) Correlation

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Lithostratigraphy (+ varves, lava flows and ash layers) Chronostratigraphic markers

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Biostratigraphical Correlation

Main Points

1. First appearance of fossil
2. Last appearance of fossil
3. Range of fossil
4. Zone fossils
5. Fossil assemblages
6. Problems of derived fossils
7. Matching beds by fossil content
8. Rocks with identical species are of same age
9. Evolutionary sequences of named fossils

Phranerozoic Eon

ERA	PERIOD	A	B	C	D	E
Cenozoic	Quaternary Tertiary					
Mesozoic	Cr Ju Tr					
Palaeozoic	P C D S O C					
A TRILOBITES					D BRACHIOPODS	
B AMMONITES					E CORALS (ALL 3)	
C GRAPTOLITES						

Zone Fossils

1. ABUNDANT
2. WIDESPREAD
3. WELL PRESERVED
4. EASILY RECOGNISED
5. EVOLVE RAPIDLY

Usefulness of:-

Graptolites
Ammonites
microfossils

