

Geological era/period	Evidence
Cenozoic	<ul style="list-style-type: none"> A. Pollen grains are determining conditions of deposition of Quaternary deposits. Pine pollen means cold conditions while oak pollen means warmer conditions. B. Tree rings means temperate conditions as climate is seasonal. C. Thin needle like leaves (coniferous trees) to survive ice and snow in winter. D. Horses (in Tertiary) adapted to grass eating on the temperate prairies (large open area of grassland) of North America. E. Woolly mammoths hint glacial conditions F. Siliceous and agglutinated foraminifera are more common in cold waters. G. Tillite formed in ice ages
Cretaceous	<ul style="list-style-type: none"> A. Thin shelled carbonate foraminifera are more common in warm waters. B. Reef limestones and other limestones means warm tropical seas
Jurassic	<ul style="list-style-type: none"> A. Diversification of reptiles (cold blooded) suggests warm temperate climate. B. Corals generally illustrate warm, tropical seas C. Number of fossils - plentiful shows warm seas. D. There is more magnesium present in shells that formed at higher temperatures e.g. in bivalves of the Jurassic. E. Reef limestones and other limestones means warm tropical seas
Triassic	<ul style="list-style-type: none"> A. Cold blooded reptiles of Permo-Trias suggest a warm climate. B. Red, well sorted, large scale cross bedded sandstones, with no fossils means desert C. A thick cuticle layer in leaves means dry conditions D. Evaporites and halite pseudomorphs mean high temperatures and low precipitation (arid) E. During permo-triass, desiccation cracks means hot, arid conditions F. Dreikanter (pebble with 3 curved faces) form in deserts due to wind erosion.
Permian	<ul style="list-style-type: none"> A. Trees show no growth rings so there were no seasons which means the trees grew at an equatorial latitude. B. Large coal deposits illustrate a high rate of vegetative growth hence a hot, humid equatorial climate. C. Coal forms abundantly in equatorial climate D. Laterites form in humid climates where chemical weathering is evident. E. Evaporites mean high temperatures and low precipitation (arid)
Carboniferous	<ul style="list-style-type: none"> A. Trees show no growth rings so there were no seasons which means the trees grew at an equatorial latitude. B. Great thickness of coal deposits in the Carboniferous illustrate a high rate of vegetative growth hence a hot, humid equatorial climate. C. Corals generally illustrate warm, tropical seas D. Numbers of fossils - plentiful shows warm seas. E. Thin shelled carbonate foraminifera are more common in warm waters. F. Laterites form in humid climates where chemical weathering is evident. G. Coal forms abundantly in equatorial climate H. Tillite formed in ice ages (Gondwanaland drift)
Devonian	<ul style="list-style-type: none"> A. Trees show no growth rings so there were no seasons which means the trees grew at an equatorial latitude. B. Laterites form in humid climates where chemical weathering is evident. C. Lungfish as in the Devonian illustrate seasonal drought. D. Numbers of fossils - plentiful shows warm seas.
Silurian	<ul style="list-style-type: none"> A. Evaporites and halite pseudomorphs mean high temperatures and low precipitation (arid) B. Higher amount of O16 to O18 ratios show warm waters. This can be measured from CaCO₃ shells of belemnites, bivalves and most important, of foraminifera.
Ordovician	<ul style="list-style-type: none"> A. Evaporites and halite pseudomorphs mean high temperatures and low precipitation (arid) B. Higher amount of O16 to O18 ratios show warm waters. This can be measured from CaCO₃ shells of belemnites, bivalves and most important, of foraminifera.

Blue = Using Fossils

Orange = Using Lithology