

Navigating A Changing World

Climate Change and Geologic History

Vocabulary for Students



- **Paleontology:** the study of life in past geologic time.
- **Geologic timescale:** the geologic time scale (GTS) is a system of chronological dating that relates geological strata (stratigraphy) to time. It is used by geologists, paleontologists, and other Earth scientists to describe the timing and relationships of events that have occurred during Earth's history.
- **Boundary unit:** a stratigraphic unit is a volume of rock of identifiable origin and relative age range that is defined by the distinctive and dominant, easily mapped and recognizable petrographic, lithological or paleontological features (facies) that characterize it.
- **Stratigraphy:** the branch of geology concerned with the order and relative position of strata and their relationship to the geological timescale.
- **Carbon isotopes:** carbon atoms with varying numbers of neutrons.
- **Greenhouse gases:** a gas that contributes to the greenhouse effect by absorbing infrared radiation, e.g., carbon dioxide and chlorofluorocarbons.
- **Background extinction rate:** known as the normal extinction rate, refers to the standard rate of extinction in earth's geological and biological history before humans became a primary contributor to extinctions.

- **Feedback cycles:** a cyclic structure of cause and effect that causes some initial change in the system to run through a series of secondary effects, eventually influencing the initial change in some way.
 - **Negative feedback cycle:** negative feedback (or balancing feedback) occurs when some function of the output of a system, process, or mechanism is fed back in a manner that tends to reduce the fluctuations in the output, whether caused by changes in the input or by other disturbances.
 - **Positive feedback cycle:** positive feedback is a process that occurs in a feedback loop in which the effects of a small disturbance on a system include an increase in the magnitude of the perturbation.