

OLLI Climate Change

Winter 2023 with Nicole Myers

Week 2

Digital presentations associated with the course & handouts will be available at:

<https://www.appreciatingearth.com/olli>

A Few Helpful Definitions:

- **Climate** - long-term characteristic atmospheric conditions
- **Temperature** – a measure of a substance’s heat energy
- **Dynamic**: a process characterized by constant change
- **System**: a group of interacting, interdependent parts that form a complex whole
- **Unstable**: A system itself is said to be unstable if at least one of its state variables is unstable
- **Interconnected Earth Systems**: atmosphere, hydrosphere, cryosphere, geosphere, biosphere

Earth Systems: this week we will focus on the climate and environmental evolution that Earth has experienced for 4.54 billion years. Through geologic time all Earth spheres have co-evolved and rapid changes have coincided with mass extinctions.

Figure from: Christopher Robert Scotese, Research Gate. A New Global Temperature Curve For the Phanerozoic

https://www.researchgate.net/publication/309324713_A_NEW_GLOBAL_TEMPERATURE_CURVE_FOR_THE_PHANEROZOIC

