CHAPTER 11:

CLIMATE
How Does Global Climate Change?

You should be familiar with these words:

- climate
- climate change indicators
- geothermal gradient
- global climate
- instrumental period
- proxy
- greenhouse effect
- GHG emissions (greenhouse gases)
- geothermal energy
- Milankovitch cycles
- continental drift
- paleoclimate
- thermal expansion
- phenology
- IPCC
- hindcasting

By the end of this chapter, you should understand…

★ Reflect on how temperature was measured in the past and how we collect data about climate trends today. (11.1)
★ List 5 examples of climate proxies and how they help us understand historic climate patterns. (11.2)
★ Connect the greenhouse effect, albedo effect, volcanic eruptions and ocean currents to global climate change. (11.3)
★ Justify how we know current global warming trends are human-caused. (11.4)
★ Connect the composition of the biosphere (ie. which species are present) to long term climate as CO2 is added or removed from the atmosphere. (11.5)
★ Research climate change indicators we monitor today are. (11.6)
★ Reflect on how humans are contributing to drastic climate change. (11.7)
★ Discuss the negative impacts of climate change on human populations and ecosystems. (11.8)
★ Explain the purpose of the IPCC. (11.9)
★ Illustrate reinforcing feedback loops that accelerate global warming. (11.10)