

Climate

Objective		
1. Explain major climate categories (Köppen climate classification system – temperate, tropical, and polar).		
2. Compare weather and climate.		
3. Summarize natural processes that can and have affected global climate (particularly El Niño/La Niña, volcanic eruptions, sunspots, shifts in Earth’s orbit, and carbon dioxide fluctuations).		
4. Explain the concept of the greenhouse effect including a list of specific greenhouse gases and why CO2 is most often the focus of public discussion.		
5. Outline how deforestation and the burning of fossil fuels (linked to increased industrialization) contribute to global climate change.		
6. Explain how large-scale development contributes to regional changes in climate (i.e. heat islands in large cities like NY, Chicago, Beijing, etc.).		
7. Analyze actions that can be taken by humans on a local level, as well as on a larger scale, to mitigate global climate change.		
8. Analyze how changes in global temperatures affect the biosphere (ex. agriculture, species diversity, ecosystem balance).		
9. Explain how changes in atmospheric composition contribute to ocean acidification. Analyze its effect on ocean life and its connection to global climate change.		
10. Explain how changes in global temperature have and will impact sea level.		

11. Analyze how sea level has been affected by other earth processes such as glaciations and tectonic movements. Consider long- and short-term changes.

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