

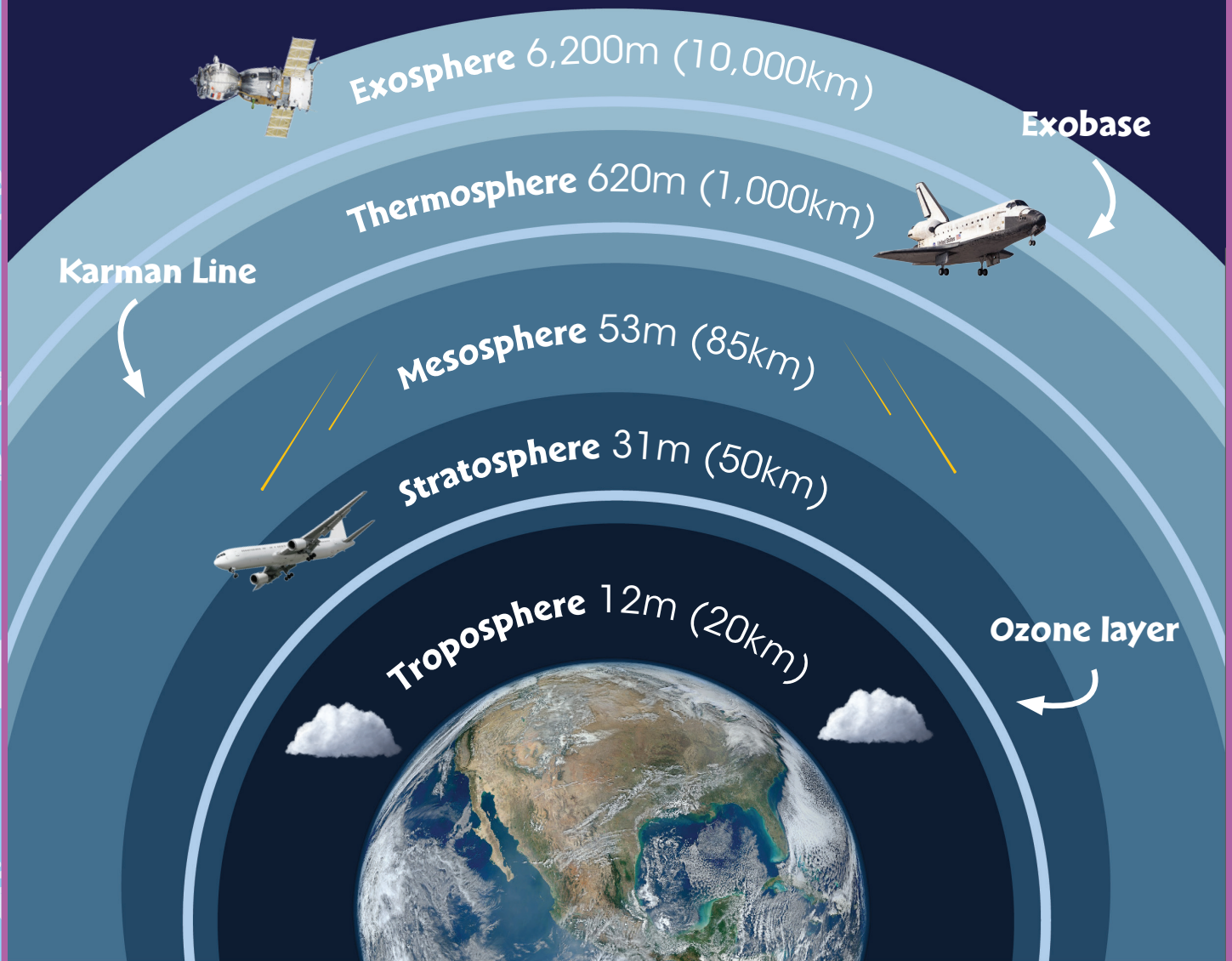
Earth



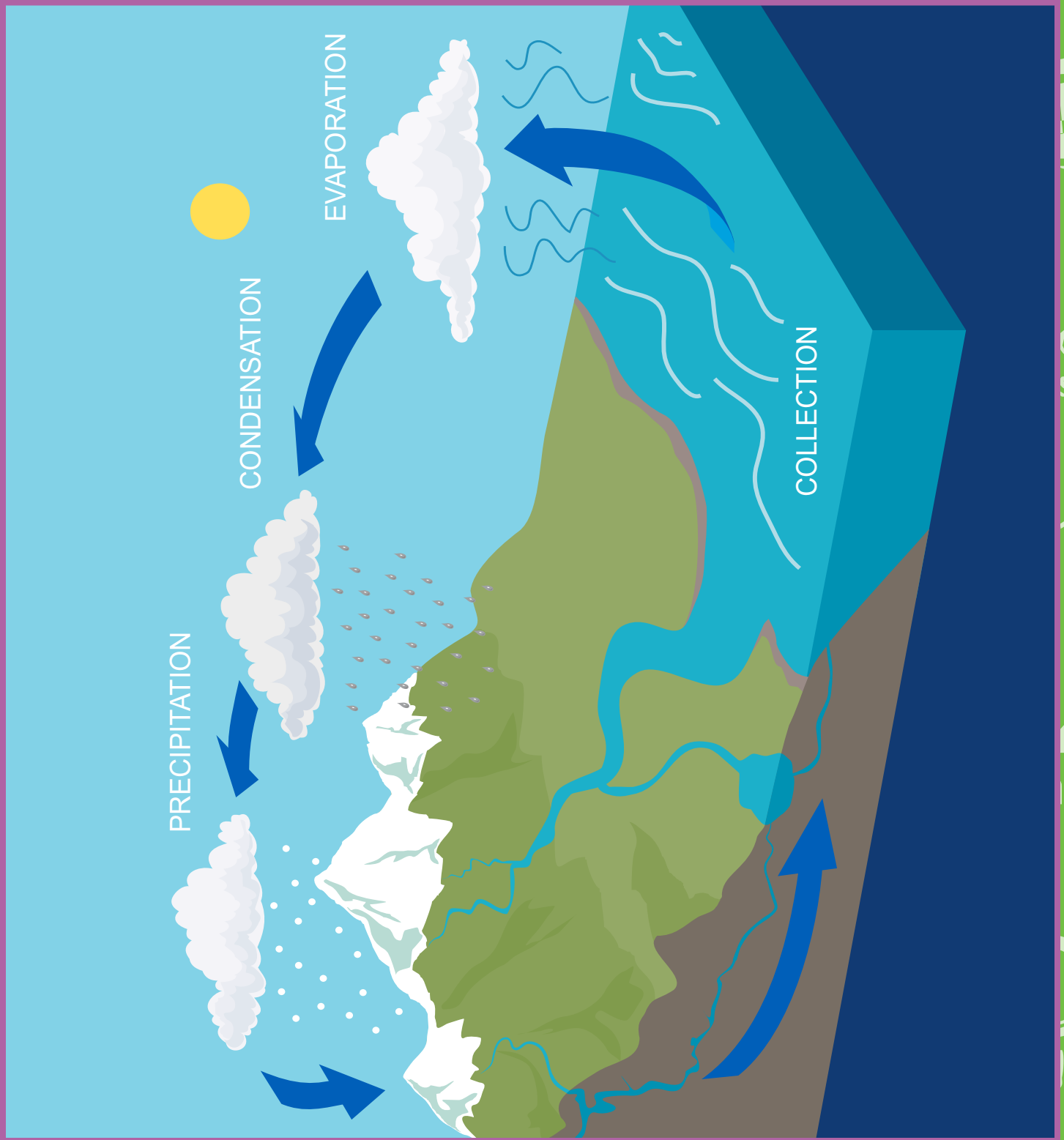
“The atmosphere is the glowing blue ring around Earth, and the white areas of Earth are clouds and ice caps that reflect the most radiation from the Sun.”

Layers of the Atmosphere

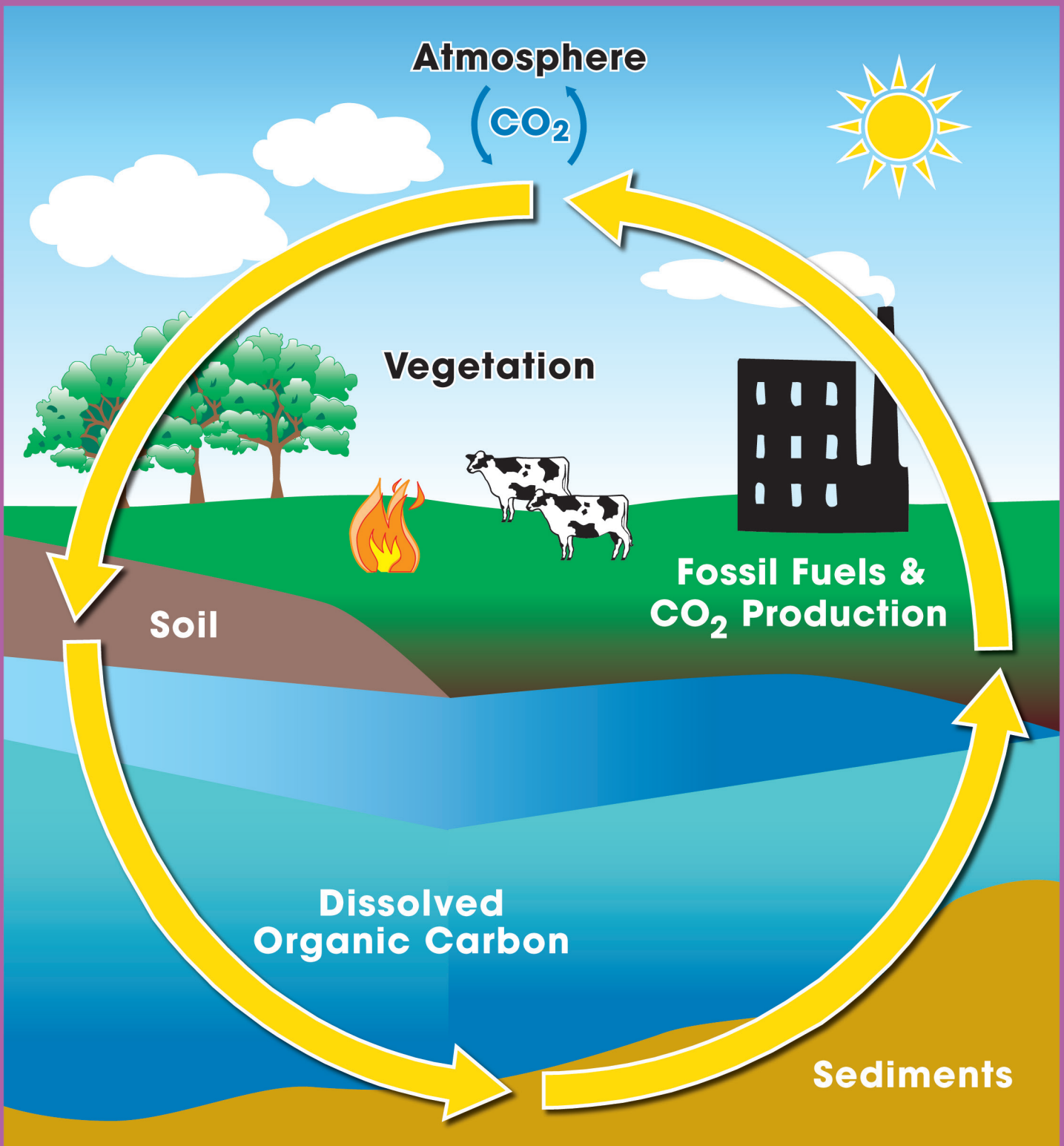
The Earth's Atmosphere



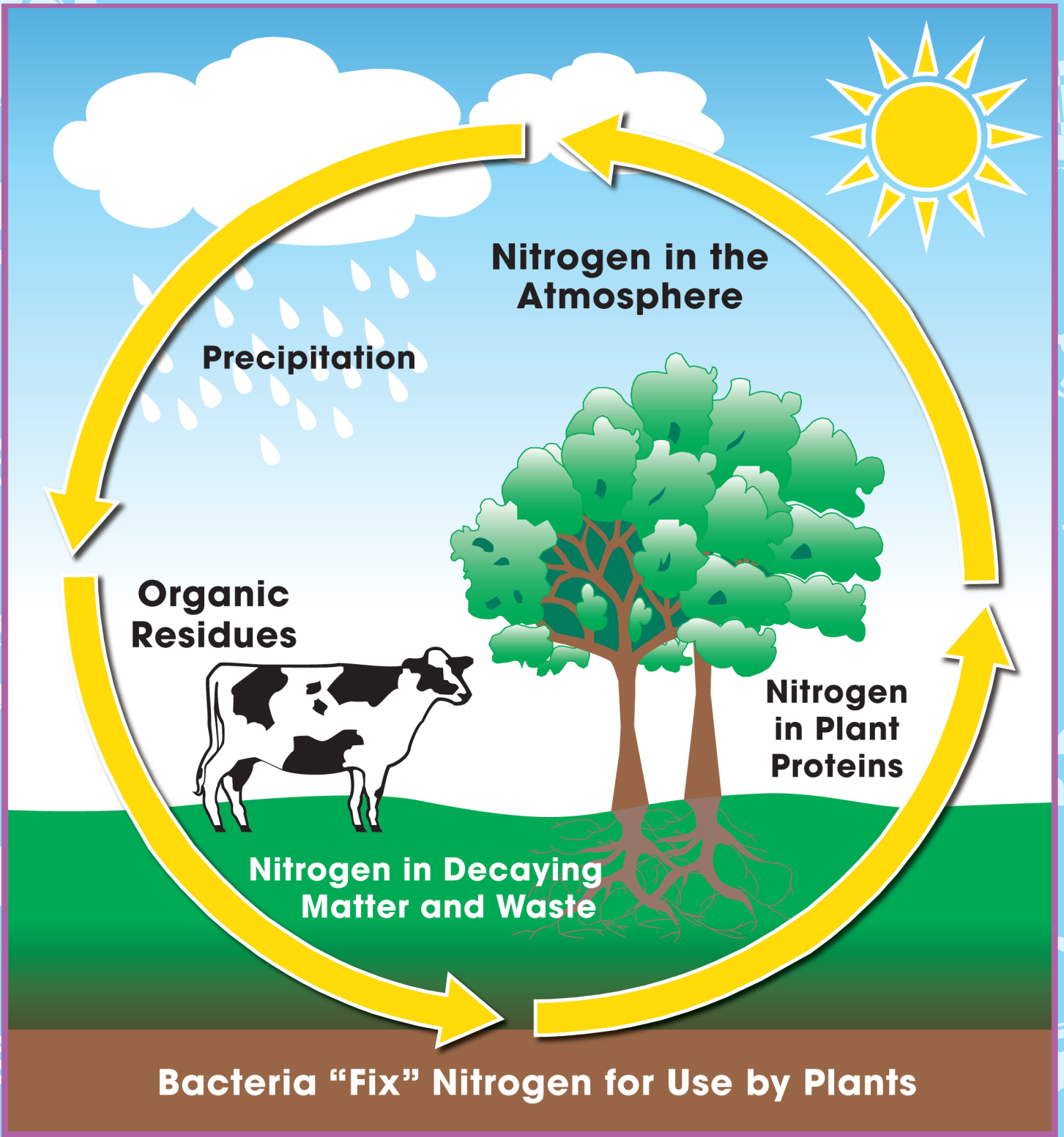
The Water Cycle



The Carbon Cycle



The Nitrogen Cycle



Greenhouse Gas Concentrations with Residence Times



Type of Gas	Concentration		Residence Time in Atmosphere	
	Year 1750 Levels	Current Levels		Difference
Carbon Dioxide Gas (Parts per million)	280	399	+42%	~ 100 to 300 years
Methane Gas (Parts per billion)	722	1834	+154%	12 years
Nitrous Oxide Gas (Parts per billion)	270	328	+22%	121 years
Tropospheric Ozone Gas (Parts per billion)	237	337	+42%	hours to days
Chlorofluorocarbon Gases CFC-11 CFC-12 (Parts per trillion)	0 0	232 516	+100% +100%	45 years 100 years



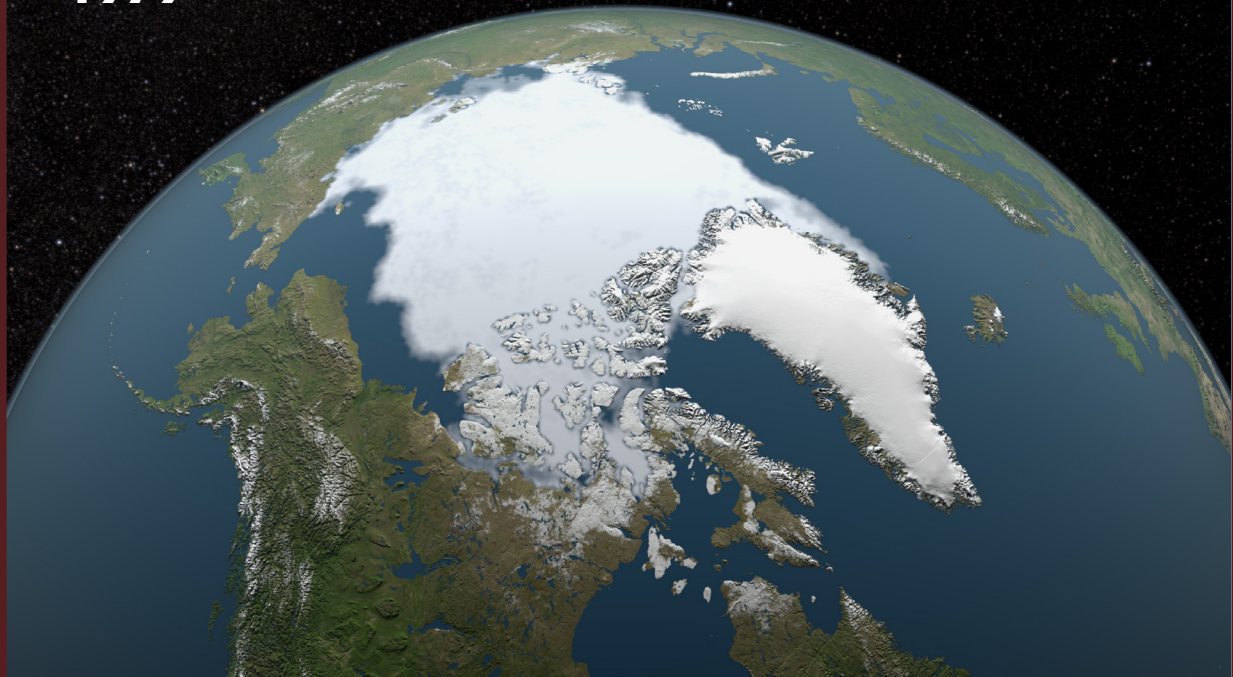
Arctic & Antarctic Icebergs



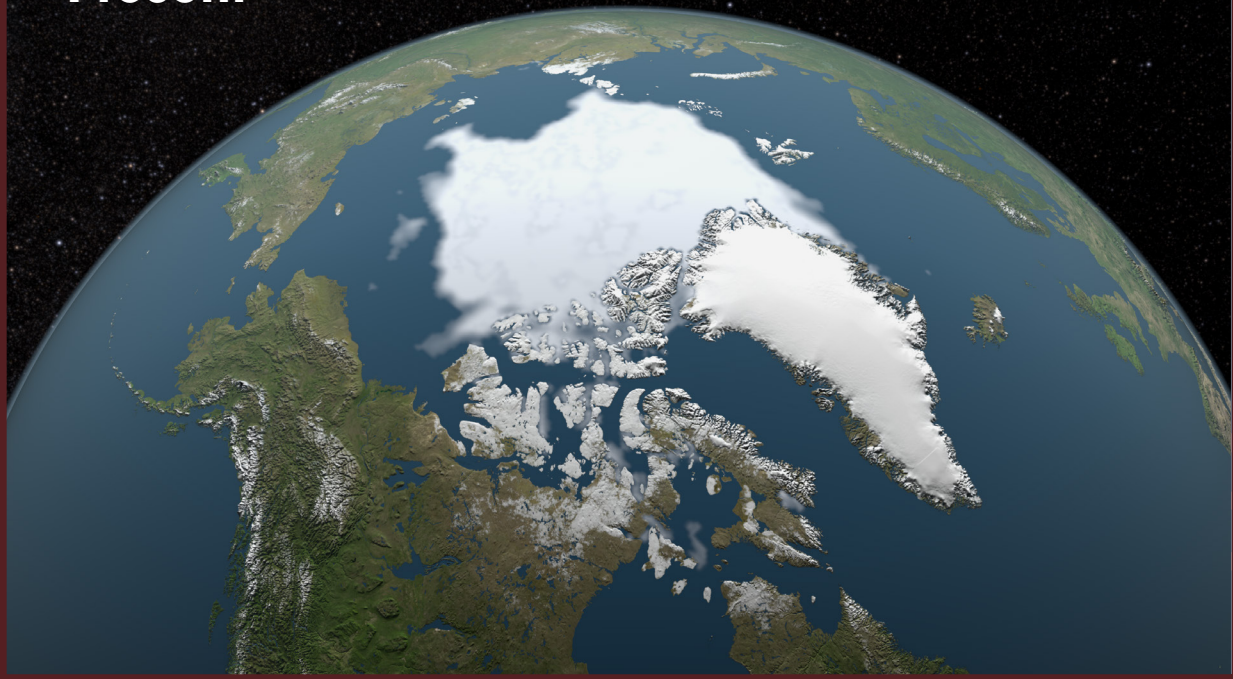
“Ice reflects more sunlight than other materials on Earth’s surface.”

Arctic Ice Cap Reduction

1979



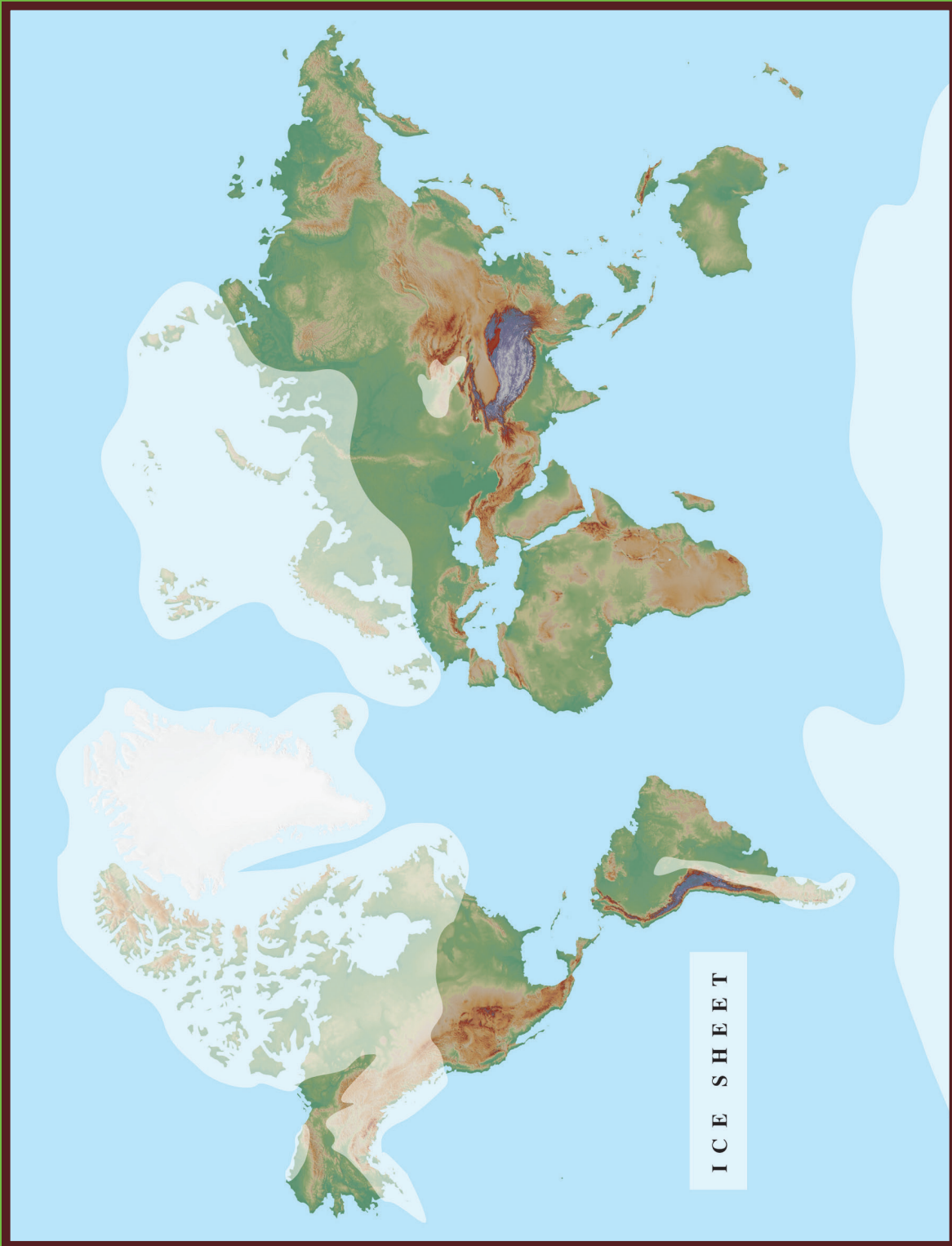
Present



"image courtesy of NASA"

The Ice Age

20 Thousand years ago



Shanghai, China

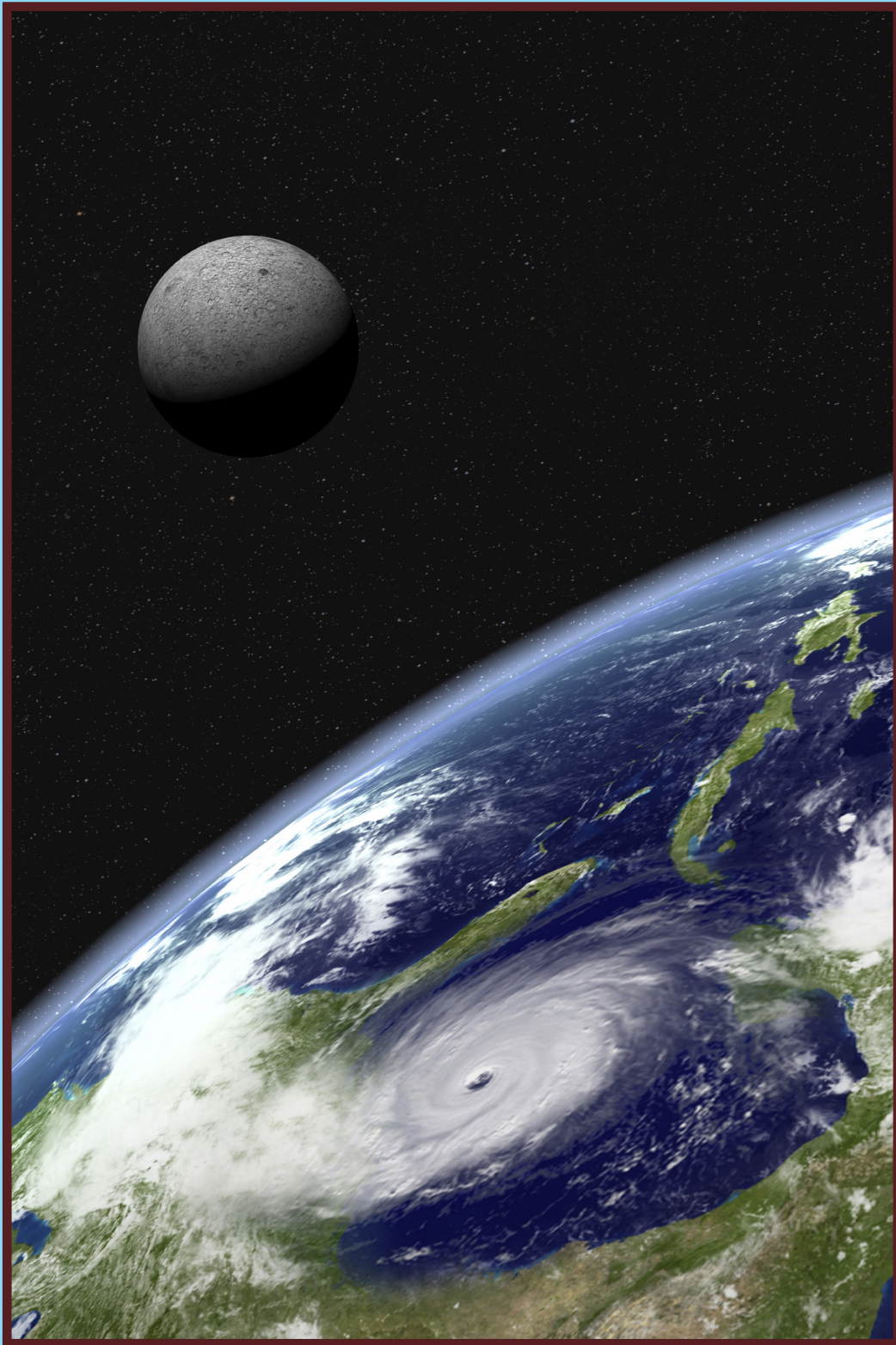
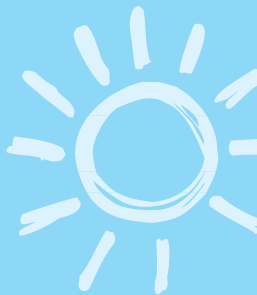


“Scientists predict that sea levels may rise as much as 26 inches by the end of this century. This will have devastating effects for people living in cities that are built at the ocean’s edge.”



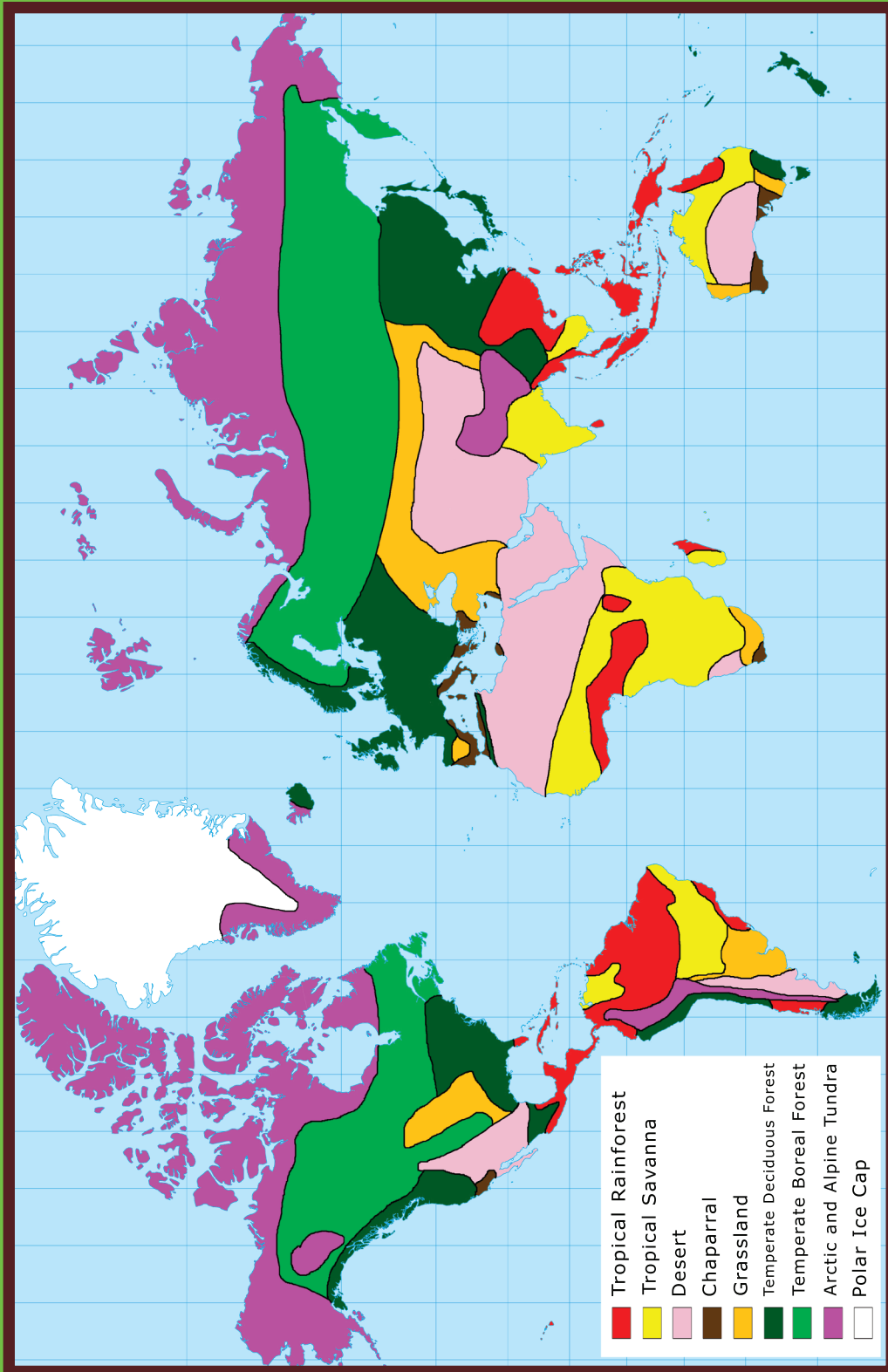


Extreme Weather

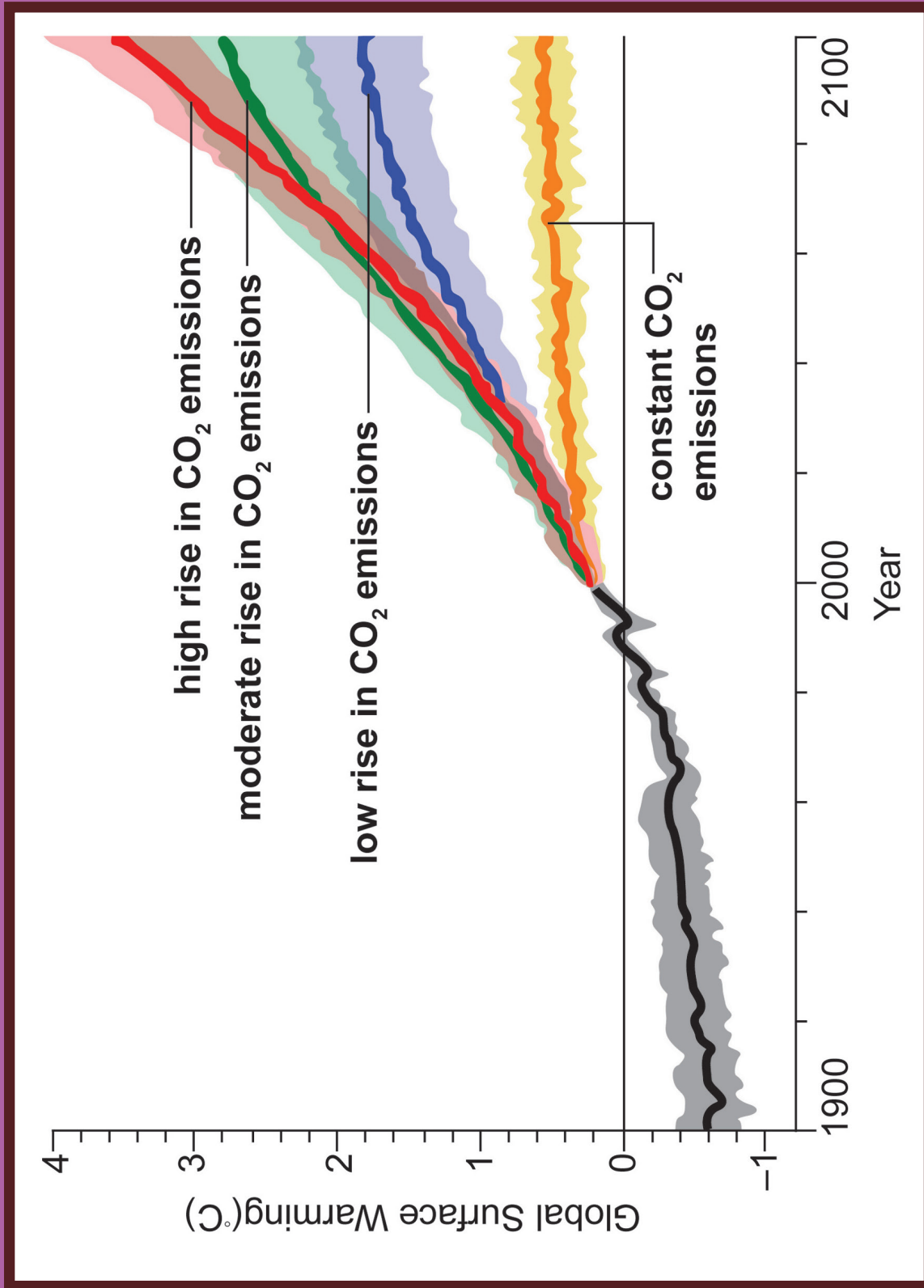


“Satellite image of a Hurricane located in the Gulf of Mexico”

Major World Ecosystems



Projections for Climate Change



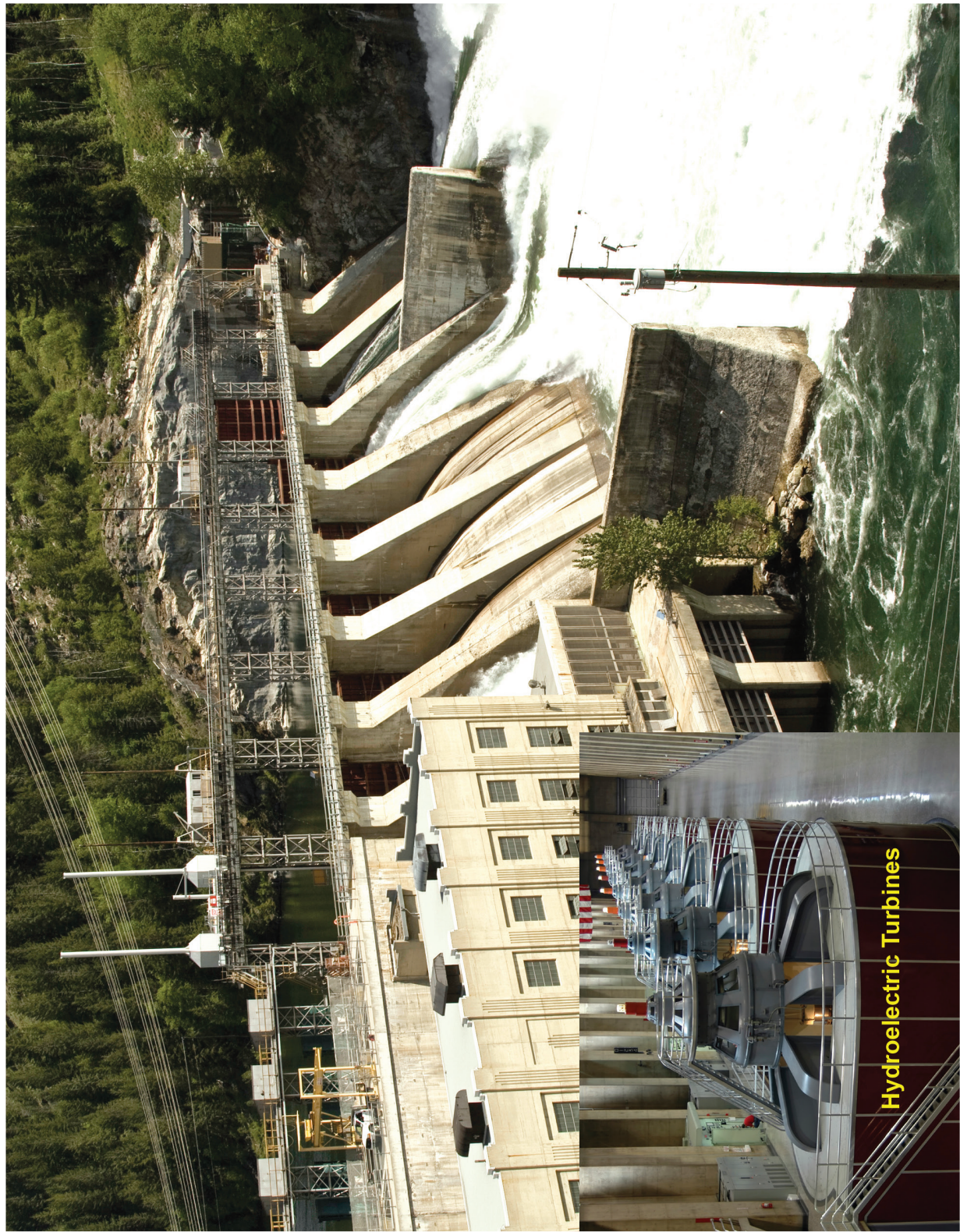
Source: NASA Earth Observatory

Alternative Sources of Energy



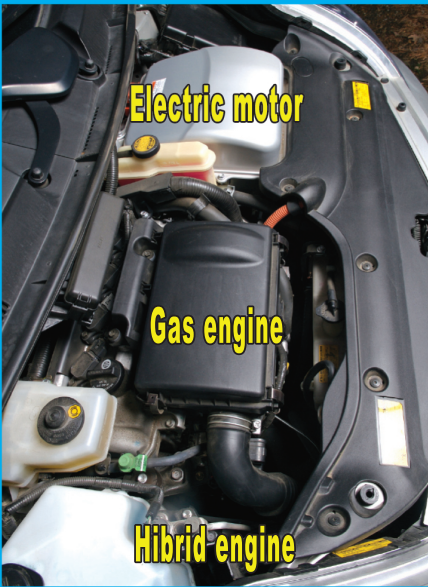
Wind turbines and solar cells can be used to generate electricity without greenhouse gas emissions.

Hydroelectric Power Plant

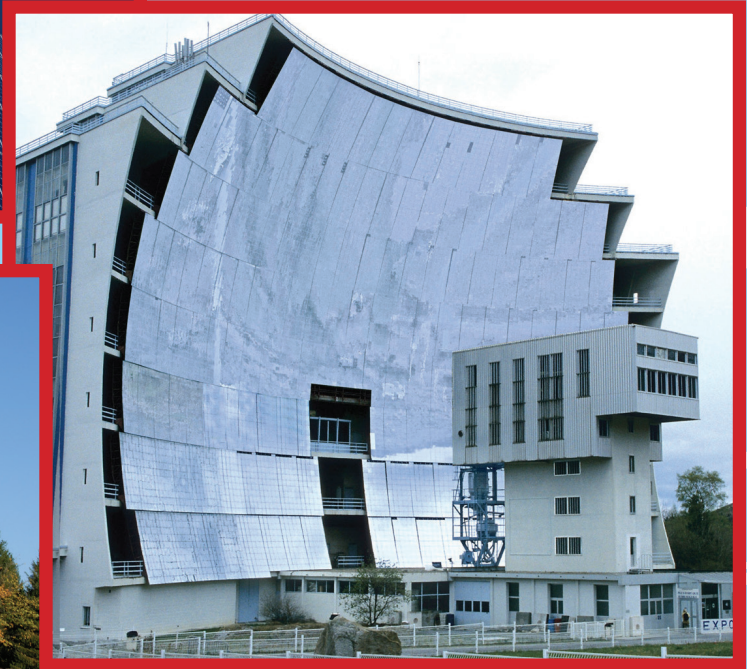


Hydroelectric Turbines

Alternative Energy Automobiles



Alternative "Green" Homes and Businesses



Abu Dhabi, United Arab Emirates

