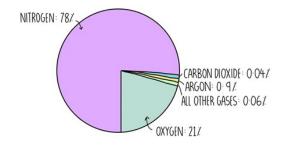


Year 11 Chemistry 9: Chemistry of the Atmosphere Knowledge Organiser



1. Composition of the earths atmosphere now				
79%	Nitrogen			
20%	Oxygen			
1%	Other gases including CO ₂			



2. Evolution of	2. Evolution of the atmosphere				
Time		Atmosphere	reason		
4 billion year a go	dirs	Nitrogen, Carbon dioxide and water vapour (like mars)	Volcanic erruptions		
		Nitrogen, Carbon dioxide decreases	Earth cools and water vapour condenses. Carbon dioxide dissolves into the oceans		
2.7 billion years ago		Increasing oxygen decreasing carbon dioxide	Photosynthesising organisms evolved		
		Reducing oxygen to modern levels	Animals evolved and began respiring the oxygen		

3. Climate change					
Greenhouse gases	Gases which increase the temperature of the atmosphere Eg Carbon dioxide, methane, water vapour				
Greenhouse effect	When excess greenhouse gases absorb and radiate IR radiation back to the earth warming it				
Man-made climate change	The leading theory that human activities are causing an increase in global temperature				
Carbon footprint	Total amount of carbon dioxide emitted over the life of a product, service or event				
Global dimming	Particulates block the light from the sun slightly, reducing global temperature				
Acid rain	Gases dissolve in rain causing damage to buildings, statues, lakes and trees				

4. Atmospheric pollutants from combustion					
Pollutant	Source	Effect			
Carbon dioxide	All combustion	Global warming			
Carbon monoxide	Incomplete combustion	Toxic, breathing problems			
Carbon particle (Soot)	Incomplete combustion	Breathing problems, global dimming			
Sulfur dioxide	Burning sulphur, impurities in fossil fuels	Acid rain			
Oxides of nitrogen	Vehicle engines	Acid rain			