

Chemicals in Our Breathing Space

Chemical Name and Formula	Physical Description	2-D Structural Formula	3-D Ball-and-Stick Model
Water H_2O (Greenhouse Gas)	Triangular geometry; two hydrogen atoms single-bonded to one oxygen atom; $\alpha = 104.5^\circ$		
Carbon Dioxide CO_2 (Greenhouse Gas)	Linear geometry; two oxygen atoms double-bonded to one central carbon atom	$O = C = O$	
Methane CH_4 (Greenhouse Gas)	Tetrahedral geometry; four hydrogen atoms spaced evenly around and single-bonded to one carbon atom; $\alpha = 109.5^\circ$		
Nitrous Oxide N_2O (Greenhouse Gas)	Linear geometry; two nitrogen atoms triple-bonded together with a single bond to one oxygen atom; (one of two possible configurations)	$N \equiv N - O$	
Ozone O_3 (May be either "good" or "bad")	Triangular geometry; three oxygen atoms with one single bond and one double bond; $\alpha = 116.8^\circ$		
Benzene C_6H_6 (One of the major VOCs)	Six carbon atoms forming a hexagonal ring with alternating single and double bonds; one hydrogen atom single- bonded to each carbon atom around the outside		