

Atmospheric  
Science Training  
ModuleBuilding  
Blocks of  
MatterGreenhouse  
Gases:  
 $\text{CO}_2$  and  $\text{H}_2\text{O}$ The Flow  
of MatterOxygen,  
Oxidation and  
CombustionStratospheric  
Ozone and  
Ultraviolet LightNitrogen:  
Properties  
vs. AmountAtmospheric  
Science Training  
Conclusion

## Planet Temperature/Atmosphere Chart

Planet	Temperature Range	Amount of Atmosphere	Atmospheric Composition
Mercury	-170° C to 662° C (520° difference)	Trace atmosphere = ~0.00000000000010 bars*	42% oxygen ( $\text{O}_2$ ) 29% sodium (Na), 22% hydrogen ( $\text{H}_2$ ) 6% helium (He) 0.5% potassium (K), possible trace amounts of: argon (Ar), carbon dioxide ( $\text{CO}_2$ ), water ( $\text{H}_2\text{O}$ ), nitrogen ( $\text{N}_2$ ), xenon (Xe), krypton (Kr), neon (Ne)
Venus	constant 465° C (0 to 10° difference)	Atmosphere = 92 bars	96.5% carbon dioxide ( $\text{CO}_2$ ) 3.5% nitrogen ( $\text{N}_2$ ) 0.0020% water ( $\text{H}_2\text{O}$ ) trace amounts of: sulfur dioxide ( $\text{SO}_2$ ), argon (Ar), carbon monoxide (CO), helium (He) and neon (Ne)
Earth	-50° C to 45° C (59° difference)	1 bar (at sea level)	78% nitrogen ( $\text{N}_2$ ) 21% oxygen ( $\text{O}_2$ ) 0.035% carbon dioxide ( $\text{CO}_2$ ) 1 to 4% water vapor ( $\text{H}_2\text{O}$ ) 300 Dobson Units ozone ( $\text{O}_3$ ) 0.002% methane ( $\text{CH}_4$ ) 0.9% argon (Ar) trace amounts of: helium (He), krypton (Kr) and hydrogen ( $\text{H}_2$ )
Moon	-153° C to 134° C (287° difference)	0 bars	no atmosphere
Mars	-111° C to 26° C (137° difference)	Atmosphere = 0.0061 bars	95.32% carbon dioxide ( $\text{CO}_2$ ) 2.7% nitrogen ( $\text{N}_2$ ) 1.6% argon (Ar) 0.13% oxygen ( $\text{O}_2$ ) 0.08% carbon monoxide (CO) water ( $\text{H}_2\text{O}$ ) - 0.0210%; trace amounts of: nitrogen oxide (NO), neon (Ne), hydrogen-deuterium-oxygen (HDO), krypton (Kr) and xenon (Xe)

