FLINN SCIENTIFIC

Name_____

Air in a Bottle Worksheet

Data Table

Gas	Quantity	Color
Nitrogen, N_2	780,000 ppm	
Oxygen, O_2	200,000 ppm	
Argon, Ar	9,000 ppm	
Carbon dioxide, CO_2	400 ppm	
Neon, Ne	19 ppm	
Helium, He	5 ppm	
Methane, CH_4	2 ppm	
Krypton, Kr	1 ppm	
Hydrogen, H_2	1 ppm	

Discussion Questions and Calculations

1. Look at the Air in Bottle model closely and fill out the table above. Summarize your findings.

2. How is the Air in a Bottle model similar to the Earth's atmosphere? How is it different?

3. The concentration of carbon dioxide is significantly smaller than oxygen and nitrogen in the air, yet it has such important environmental impacts. It is present at a concentration of 400 ppm in the atmosphere; did you find it in the Air in a Bottle model? What are the environmental impacts of carbon dioxide?

4. Imagine the Air in a Bottle model being a greater volume or lesser volume with the same amount of particles. What might this represent?

5. Convert the units of ppm of each gas into a percent.