Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Homeroom: \_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_ **2.7**

**The Chemical Make-Up of Our Atmosphere (SPI.9.5)**

|  |  |
| --- | --- |
| ***Key Point*** | ***Notes*** |
| **What Gases Make Up Our Atmosphere?** | * Our atmosphere is a \_\_\_\_\_\_\_\_\_\_\_\_\_ of gases!
* Earth’s atmosphere is made up of the following gases:
* **\_\_\_\_% nitrogen (N2)**
* **21% \_\_\_\_\_\_\_\_\_\_ (O2)**
* **1% other gases** including: carbon dioxide (CO2), argon (Ar), water vapor (H2O), neon (Ne), helium (He), methane (CH4), hydrogen (H2), krypton (Kr), and ozone (O3)
* Oxygen and nitrogen exist as \_\_\_\_\_\_\_\_\_\_\_\_ molecules in our air
* “Di” = \_\_\_\_\_
* Screen shot 2011-09-25 at 2.02.46 PM.png
* Would nitrogen and oxygen be better described as an element or compound?
* Why?
* What word could you use to even better describe them?
 |
| **Pie Chart of the Gases in Our Atmosphere** | ***Draw your own pie chart of the gases in Earth’s atmosphere:*** |
| **Drawing a Model of the Mixture of Gases in Our Atmosphere** | ***Draw your own model of the atoms of the gases in******our atmosphere:*** |
| **Benefits of the Chemical Make-Up of Earth’s Atmosphere** | * Our atmosphere has \_\_\_\_\_\_\_\_\_\_\_, which ensures our survival
* With *too much* oxygen, oxygen will chemical bond with other substances forming rust
* With *not enough* oxygen, we would not be able to \_\_\_\_\_\_\_\_\_\_!
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_ gases (like CO2 and CH4) trap heat
* *Without* the presence of these greenhouse gases, life on Earth would be too cold to exist
* *With adding more* greenhouse gases to our atmosphere (like CO2) we are beginning to trap more heat resulting in \_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_! We do not want to do this!
 |
| **So What?!** | *Write a summary of what you learned today here and why learning about the gases in our atmosphere is important to you in the real-world:* |

“**I Own This” (Independent Practice):**

1. What gas is the most abundant (common) in our atmosphere?
2. Fill in the table below with the appropriate percentages for the following gases

|  |  |  |  |
| --- | --- | --- | --- |
| **Gas** | **Chemical Symbol/Chemical Formula** | **Element or Compound?** | **% of Earth’s Atmosphere** |
| Oxygen | O2 |  |  |
| Argon  | Ar |  |  |
| Nitrogen  | N2 |  |  |
| Helium | He |  |  |
| Carbon Dioxide | CO2 |  |  |



1. Using the picture to the right, what makes up the “other” is ***this*** circle graph?
2. Draw the atomic arrangement of the gases in our atmosphere.
3. Using the table below, describe some key differences between our atmosphere and the atmosphere of Mars and Venus.



1. What difference do you think these differences in atmosphere make?