***Nitrogen Cycle:***



* \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ is not able to be used by living things straight out of the air. It must be converted to a form of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(NH3) in order for living things to use Nitrogen in DNA, protein building, etc.
* The process of converting atmospheric Nitrogen to Ammonia (and vice-versa) is called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* The enzyme \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ performs Nitrogen Fixation in this manner:

**N2 + 8 H+ + 8 e− → 2 NH3 + H2**

* Some of the things in nature that can perform Nitrogen fixation are \_\_\_\_\_\_\_\_\_\_\_\_\_\_ , \_\_\_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ by plants means to absorb Nitrogen from the soil through the roots.
* Animal waste is largely made of \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
* Nitrogen is ingested by living things through\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and then cycled through \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

***The Carbon Cycle:***



* \_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_ are sources of energy that comes from the slow, oxygen-poor decomposition of plants (\_\_\_\_\_) and animals(\_\_\_\_\_)
* When fossil fuels are burned (\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_) , they release carbon into the air.
* \_\_\_\_\_\_\_\_\_\_\_\_ is the amount of Carbon stored up in currently living organisms.
* Limestone and Dolomite are \_\_\_\_\_\_\_\_\_\_\_\_\_ rock types. Marble is a \_\_\_\_\_\_\_\_\_\_\_\_\_ rock type. Both contain \_\_\_\_\_\_\_\_\_\_\_\_\_\_ minerals(CO3) which release Carbon into the atmosphere when they weather.
* Sea shells and some exoskeletons of ocean organisms are made of Calcium \_\_\_\_\_\_\_\_\_\_\_, which fall to the bottom of the ocean when they die. These become incorporated into \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_, and then into rock by \_\_\_\_\_\_\_\_\_\_\_\_.
* Photosynthesis and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_ are opposite metabolic reactions: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ makes food from atmospheric CO2, and cellular respiration releases \_\_\_\_\_\_\_\_\_\_\_ when organisms break down food.

***The “Oxygen” Cycle doesn’t really exist.*** . .

* Oxygen is an element that gets cycled with all the other nutrients, but mostly in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (involving water)





