**Biogeochemical Cycles Performance Task**

**Use your notes, textbook and the Internet as references.**

**Step 1: Label**

* **Mark an A on all words that represent Abiotic factors**
* **Mark a B on all the words that represent Biotic factors**
* **Mark an N on all words that represent the Nitrogen Cycle**
* **Mark a C on all the words that represent the Carbon Cycle**
* **Mark a P on all the words that represent the Phosphorus Cycle**
* **Mark a W on all the words that represent the Water Cycle.**
* **Check your work to ensure that all terms are labelled correctly. Each term should have two letters on it: (A or B) and (W, C, N or P)**

**Step 2: Color**

* **Color everything associated to the Water Cycle BLUE**
* **Color everything associated to the Carbon Cycle RED**
* **Color everything associated to the Nitrogen Cycle ORANGE**
* **Color everything associated to the Phosphorus Cycle GREEN**

**Step 3: Classify**

* **Cut out all terms**
* **Using a piece of construction paper organize the terms into four labelled sections: Water Cycle, Nitrogen Cycle, Carbon Cycle, Phosphorus Cycle**
* **Creativity and neatness counts!!!!**

**Step 4: Answer the following questions on a separate sheet of paper.**

* **Compare and contrast the Abiotic and Biotic factors of an ecosystem**
* **Explain why the term cycle is used to describe biogeochemical cycles.**
* **How does carbon move from the abiotic to the biotic parts of an ecosystem?**
* **Compare and contrast the nitrogen and phosphorus cycles. Specifically, identify which happens when either exists in very large quantities in the environment.**
* **Draw and label each part of the Carbon Cycle.**

**Use the directions to GROUP, COLOR and LABEL each TERM**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Nitrogen fixation | Condensation | Proteins | Atmospheric nitrogen (N2) | Amino acids | Rocks |
| Animals | Plants | Animals | Plants | Animals | Plants |
| Plants | Dead plants and animals | Dead plants and animals | Dead plants and animals | Carbon dioxide | Methane (CH4) |
| Decomposers | Nitrogen fixing bacteria | Decomposers | Precipitation | Runoff | Wind |
| Limestone (Calcium carbonate) | Fossil Fuels | Surface Water | Surface Water | Surface Water | Surface Water |
| Fossil Fuels | Denitrifying bacteria | Nitrifying bacteria | Evaporation | Cellular respiration | Photosynthesis |
| Ammonia (NH3) | Transpiration | Infiltration or percolation | Combustion | Water vapor | Cell membranes (Phospholipids) |
| Carbohydrates (C6H12O6) | Acid Rain | Global warming | Very slow process | No atmospheric form | Erosion of minerals |
| Fertilizer | Fertilizer | Legumes (beans and nuts) | CFCs | Nitrites, Nitrates | Groundwater |
| Aquifer | Fossil fuels | Ocean Acidification | Eutrophication | Plant uptake | Plant uptake |
| Plant uptake | Plant uptake | Food chains | Food chains | Food chains | Diffusion |
| Lightning | Diffusion into soil | Eutrophication | Coal | Oil | DNA/RNA |