Integrated Science Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Cycles worksheet

*Please answer the following* ***using the words in the text box.***

## Carbon Cycle

|  |  |
| --- | --- |
| Coal Oil Natural Gas  | burning of fossil fuels volcanoes  |
| Photosynthesis Respiration ocean  | sugar Greenhouse decayed  |

1. Plants use CO2 in the process of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to make \_\_\_\_\_\_\_\_\_\_\_ and oxygen.
2. Animals use oxygen in the process of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and make more CO2.
3. The \_\_\_\_\_\_\_\_\_\_\_\_ is the main regulator of CO2 in the atmosphere because CO2 dissolves easily in it.

1. In the past, huge deposits of carbon were stored as dead plants and animals \_\_\_\_\_\_\_\_\_\_.
2. Today these deposits are burned as fossil fuels, which include \_\_\_\_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. More CO2 is released in the atmosphere today than in the past because of \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ .
4. Another natural source for CO2 is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
5. Too much CO2 in the atmosphere may be responsible for the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ effect.
6. Write the equation for **photosynthesis.**

1. Draw a **simple diagram** of the Carbon Cycle using the words in the text box above.

## Oxygen Cycle

|  |  |  |
| --- | --- | --- |
| Photosynthesis  | Ozone Waste  |  Crust Oceans Respiration  |

1. Plants release 430-470 billion tons of oxygen during process of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
2. Atmospheric oxygen in the form of \_\_\_\_\_\_\_\_\_\_\_ provides protection from harmful ultraviolet rays.
3. Oxygen is found everywhere on Earth, from Earth’s \_\_\_\_\_\_\_\_\_\_\_\_\_ (rocks) to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ where it is dissolved.
4. Oxygen is vital for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ by animals, a process which produces CO2.and water.
5. Oxygen is also necessary for the decomposition of \_\_\_\_\_\_\_\_\_\_\_\_\_\_ into other elements necessary for life.
6. Write the equation for **respiration**.

1. Draw a **diagram** of the Oxygen Cycle using the words in the text box.

## Nitrogen Cycle

|  |  |  |  |
| --- | --- | --- | --- |
| Atmosphere  |  78%  | ammonia  |  proteins denitrificating  |
| Nitrate  |  nitrogen-fixing  |  plants  | animals waste plants  |

1. Our atmosphere is \_\_\_\_\_\_ nitrogen gas.
2. Animals and plants cannot directly use all the nitrogen found in our \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. Only special bacteria can directly use nitrogen in our atmosphere and “fix” it so other organisms can benefit. These bacteria are called \_\_\_\_\_\_\_\_\_\_\_\_-\_\_\_\_\_\_\_\_\_ bacteria.
4. Higher organisms use nitrogen to make their \_\_\_\_\_\_\_\_\_\_\_\_\_.
5. Animal waste decay by the action of bacteria which create \_\_\_\_\_\_\_\_\_\_\_\_\_and \_\_\_\_\_\_\_\_\_\_ products rich in nitrogen, and useful for plants to use again.
6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_ bacteria in the soil can break down the ammonia into the gaseous form of nitrogen, which is not available for use by plants or animals.
7. In another part of the cycle, animals eat \_\_\_\_\_\_\_\_\_\_\_\_ containing nitrogen, which is again returned to the soil by animal \_\_\_\_\_\_\_\_\_\_\_\_\_ or decaying \_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_.
8. Draw a **diagram** of the Nitrogen cycle using the words in the text box.