Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period:\_\_\_\_\_\_\_\_\_\_\_\_

**THE CARBON CYCLE GAME!**

**Directions: Go to the link titled “The Carbon Cycle Game” on Blackboard. Follow the instructions on the screen to move through the cycle and answer the questions below about the different stops along the way!**

**1 YOU ARE A CARBON ATOM**

1. You begin the carbon cycle as a carbon atom stuck underground in fossil fuels. How do you begin your first step into the carbon cycle?
2. How many megatons of carbon are released into the atmosphere from burning fossil fuels *each year*?

**2 WELCOME TO THE ATMOSPHERE**

1. In what molecule do you find carbon in the atmosphere?
2. What is the effect of adding more of this gas to our atmosphere?

***\*CLICK THE DOWN ARROW TO MOVE TO “LAND PLANTS”\****

**3 WELCOME TO LAND PLANTS**

1. What process removes carbon from the atmosphere?
2. Where does the energy for this process come from?
3. What is carbon used for in plants?
4. How do plants release carbon back into the atmosphere?

***\*CLICK THE DOWN ARROW TO MOVE TO “SOIL”\****

**4 WELCOME TO SOIL**

1. When plants die their carbon becomes what part of the soil? What is this part made of?
2. How much of the earth’s carbon is stored in soils? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. How is carbon from the soil released back into the atmosphere?

***\*YOU HAVE RETURNED TO THE ATMOSPHERE. CLICK “CONTINUE”, THEN THE RIGHT ARROW TO MOVE TO “SURFACE OCEAN”\****

**5 WELCOME TO THE SURFACE OCEAN**

1. What are three ways that carbon can become part of the ocean’s surface water?

1.

2.

3.

1. Which absorbs more carbon: land or ocean? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. Which absorbs carbon faster: cold water or warm water? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***\*CLICK THE DOWN ARROW TO MOVE TO “DEEP OCEAN”\****

**6 WELCOME TO DEEP OCEAN**

1. What are two ways that carbon can become part of deep ocean water?

1.

2.

1. How long does carbon usually remain in the deep ocean before continuing the carbon cycle?
2. How much of the earth’s carbon is stored in the deep ocean? \_\_\_\_\_\_\_\_\_\_\_\_

***\*YOU HAVE RETURNED TO THE SURFACE OCEAN. CLICK “CONTINUE”, THEN THE UP ARROW THEN DOWN ARROW TO MOVE TO “MARINE LIFE”\****

**7 WELCOME TO MARINE LIFE**

1. What do phytoplankton use carbon for? What is this process called?
2. How do larger forms of marine life get their carbon?
3. High levels of carbon have no effect on marine life: True or False? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Summarize what you have learned about the Carbon Cycle by filling out the table below for each reservoir or stage of the cycle.**

|  |  |  |
| --- | --- | --- |
| **RESERVOIR** | **CARBON STORAGE**  **(How does C get here?)** | **CARBON RELEASE**  **(How does C leave and go elsewhere?)** |
| **ATMOSPHERE** |  |  |
| **LAND PLANTS** |  |  |
| **SOIL** |  |  |
| **MARINE LIFE** |  |  |
| **SURFACE OCEAN** |  |  |
| **DEEP OCEAN** |  |  |