



**LINK:** [http://www.windows.ucar.edu/earth/climate/carbon\\_cycle.html](http://www.windows.ucar.edu/earth/climate/carbon_cycle.html)

**Instructions:** Answer the questions below as your teacher guides you through the Carbon Cycle activity.

1. What is the difference between a carbon source and a carbon sink? [2 marks]

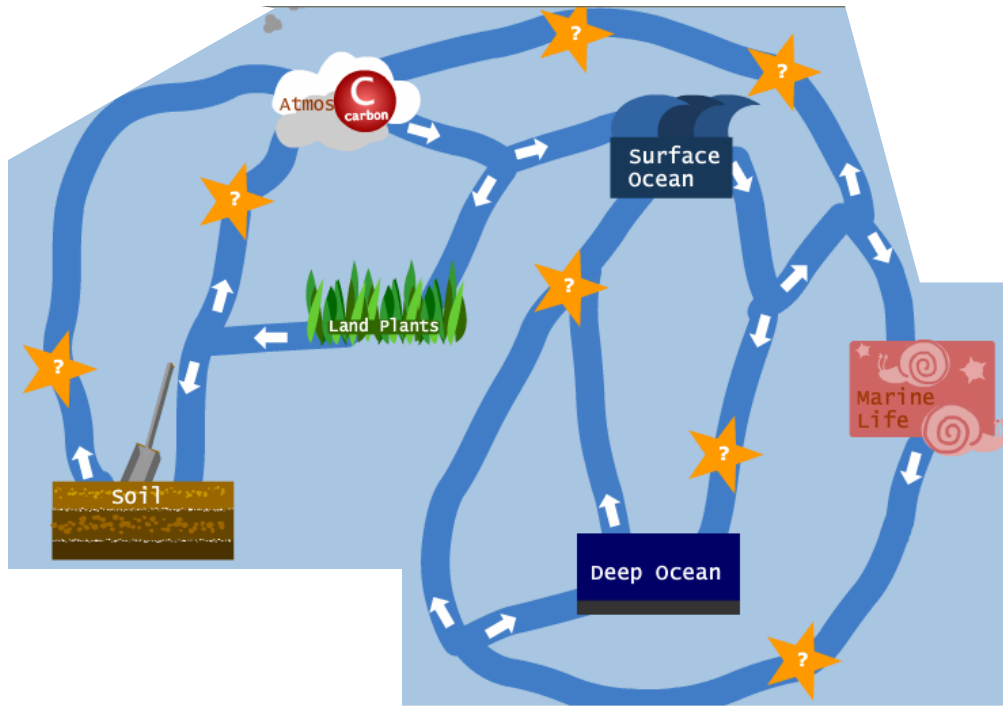
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**Atmosphere**

2. What form does carbon travel in when in the atmosphere? [1 mark]

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3. The amount of carbon dioxide in the atmosphere has increased by 30% in the past 150 years. What has caused this increase and what is the increase causing? [2 marks]

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<b>Q:</b> What percent of the atmosphere is carbon dioxide?				
0.04%	0.4%	4%	40%	



**Land Plants**

4. What role do land plants play in the carbon cycle? [2 marks]

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**Q:** If atmospheric carbon dioxide levels continue to increase, plants will take in more carbon dioxide and grow faster.  
True OR False

**Soil**

5. What is the relationship between plants and the soil in terms of carbon? [1 mark]

\_\_\_\_\_

6. What percentage of the Earth's carbon do soils store? [1 mark]

\_\_\_\_\_

**Q:** Soils emit carbon dioxide into the atmosphere.  
True OR False

**Surface Ocean**

7. The surface ocean takes in more carbon dioxide than land. What are they 3 ways carbon dioxide reaches surface ocean? [3 marks]

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

8. Cold water absorbs more carbon dioxide than warm water. Explain why this is a concern keeping in mind that carbon dioxide levels are increasing. [3 marks] *Hint: What do increasing levels of carbon dioxide cause?*

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



**Q:** More carbon can dissolve in cold water than in warm water.  
True OR False

**Deep Ocean**

9. How does carbon reach the deep ocean? [1 mark]

**Q:** The deep ocean accounts for more than \_\_\_\_ of the Earth's carbon.  
5%                  16%                  50%                  65%

**Q:** Carbon can't get from the deep ocean to soils on the land. There is a different type of carbon on land.  
True OR False

**Marine Life**

10. How does carbon reach large marine life? [1 mark]

**Q:** Phytoplankton are tiny plants and algae that float in the ocean and take up carbon dioxide as they grow.  
True OR False

11. What are the six carbon sources? [3 marks]

12. Look at the image of the carbon cycle on the first page of this Activity sheet. Can carbon from marine become carbon in the atmosphere? Explain. [2 marks]