

The Carbon Cycle Game

Find Carbon Cycle link on Ecology Page at www.biologybynapier.com or Go to: https://www.windows2universe.org/earth/climate/carbon_cycle.html

You are a carbon atom. You will travel through the carbon cycle and answer questions about yourself along the way!

1. When you were underground, where were you?
2. How were you released into the atmosphere?
3. How much carbon is released into the atmosphere as fossil fuels each year?

Continue with your path by following the directions! (“Click to begin your journey”)

Welcome to the atmosphere:

4. What molecule are you in the atmosphere?
5. What percent of the atmosphere is made up of carbon dioxide?
6. How much has the amount of carbon dioxide (CO₂) in our atmosphere increased over the last 150 years? How has this affected the temperature of our planet?

Welcome to plants:

7. What process do plants use to remove you from the atmosphere?
8. What process do plants use to release you back into the atmosphere?

Welcome to the soil:

9. What is detritus?
10. How much carbon is stored in the soil?

11. How do you leave the soil and return to the atmosphere?

Welcome to the surface of the ocean:

12. What are the three ways that you could have made it to the ocean’s surface?
13. Which absorbs more carbon dioxide, the ocean or the soil?

Welcome to marine life:

14. What marine life uses you to make its own nutrition?
15. Could marine life survive without you?

Welcome to the deep ocean:

16. How long will you stay in the deep ocean before continuing your cycle?
17. How much of the Earth’s carbon does the deep ocean hold?

Click on “Learn more about carbon” when you finish traveling to all the places carbon is found in this cycle. Answer the following questions:

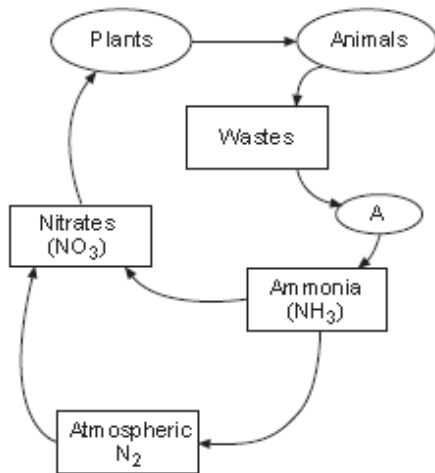
18. How does carbon move from plants to animals?
19. How do you release carbon dioxide into the atmosphere?
20. What would happen to the Earth if there was no carbon?
21. How does carbon prevent the above from happening?
22. What happens when there is too much carbon dioxide and other greenhouse gases in the atmosphere?

Carbon and Nitrogen Cycle and Ecological Succession Review

Choose the best answer to the following questions:

- 105 The action of decomposers in the nitrogen cycle most directly aids in the
- 1 synthesis of proteins from nitrates
 - 2 removal of nitrogen compounds from the atmosphere
 - 3 restoration of nitrogen compounds to the soil
 - 4 fixation of atmospheric nitrogen

Base your answers to questions 100 and 101 on the diagram of the nitrogen cycle below and on your knowledge of biology.



- 100 What is the role of NO₃ in the cycle?
- 1 It is converted to atmospheric nitrogen.
 - 2 It is used by animals for carbohydrate synthesis.
 - 3 It is used by plants for protein synthesis.
 - 4 It is used by bacteria to synthesize ammonia.

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