Science Virtual Learning

LEP Science
Nutrient Cycles

May 4, 2020

LEP Science
Lesson: May 4, 2020

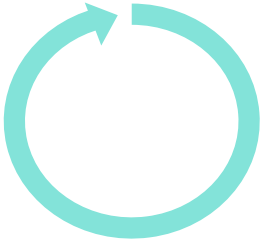
Objective/Learning Target:
Describe the processes involved in nutrient cycles (Water and Carbon)

Get out a blank sheet of paper to use in this lesson. Jot down answers to these warm up questions...

Warm Up #1: What exactly is a “cycle”? How is a cycle different from other processes?

Warm Up #2: What do you think a nutrient is? Where do they come from?

Warm Up Discussion



Warm Up #1: What exactly is a “cycle”? How is a cycle different from other processes? A cycle is best described as being circular. In a cycle, events begin and end at essentially the same place or situation.

Warm Up #2: What do you think a nutrient is? Where do they come from? A nutrient is a substance that is needed by an organism to sustain its life. Air, sugar and water are nutrients that are keeping you alive right now. We get most of our nutrients from our environment.

Our Lesson Objective:

By the end of this lesson, you should be able to describe the characteristics of two of the four nutrient cycles in our ecosystem.

Understanding our nutrient cycles is important when making decisions that can impact life in our ecosystems. Disrupting these cycles can have devastating impacts on the living things around us.

To begin, on the sheet of paper that you used for the warm up, put a heading titled **Water Cycle.** In this part of the lesson, we will be learning about the parts of the water cycle. On your paper, write these terms down the left side of the paper, during the video, take notes over their role in the water cycle:

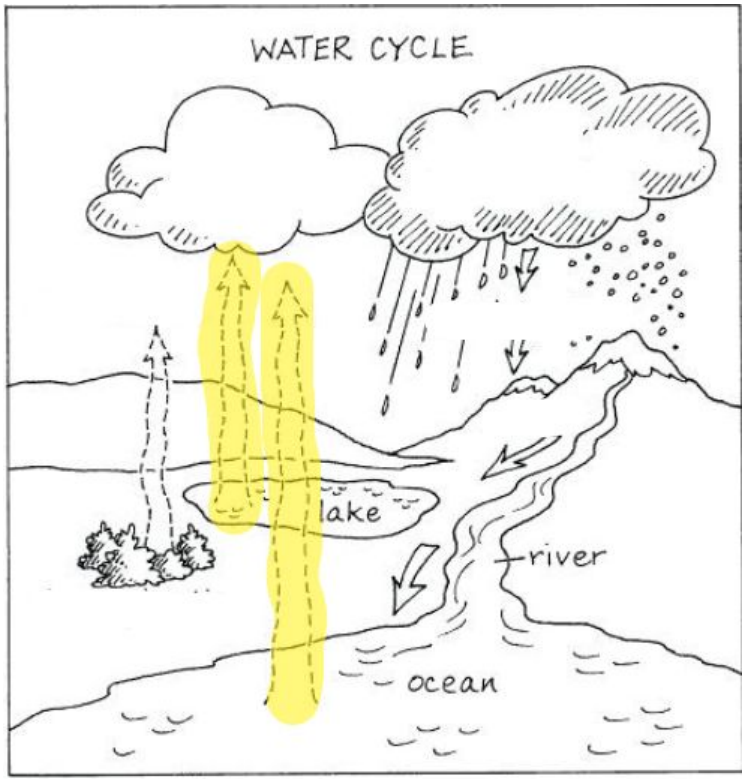
- Precipitation
- Runoff
- Groundwater
- Evaporation
- Condensation
- Transpiration

When ready, click this link to begin the video over the water cycle,

Water Cycle Practice: Let's use your notes to see how well you know the water cycle terms….

Which process is highlighted in the diagram?

1) Precipitation
2) Runoff
3) Groundwater
4) Evaporation
5) Condensation
6) Transpiration



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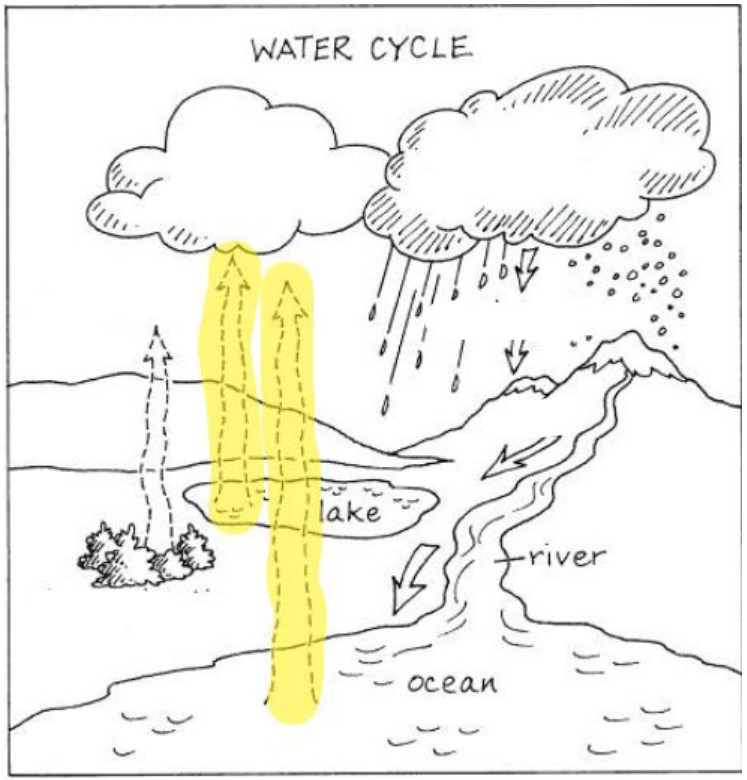

Water Cycle Practice: Let's use your notes to see how well you know the water cycle terms….

Which process made the clouds highlighted in the diagram?

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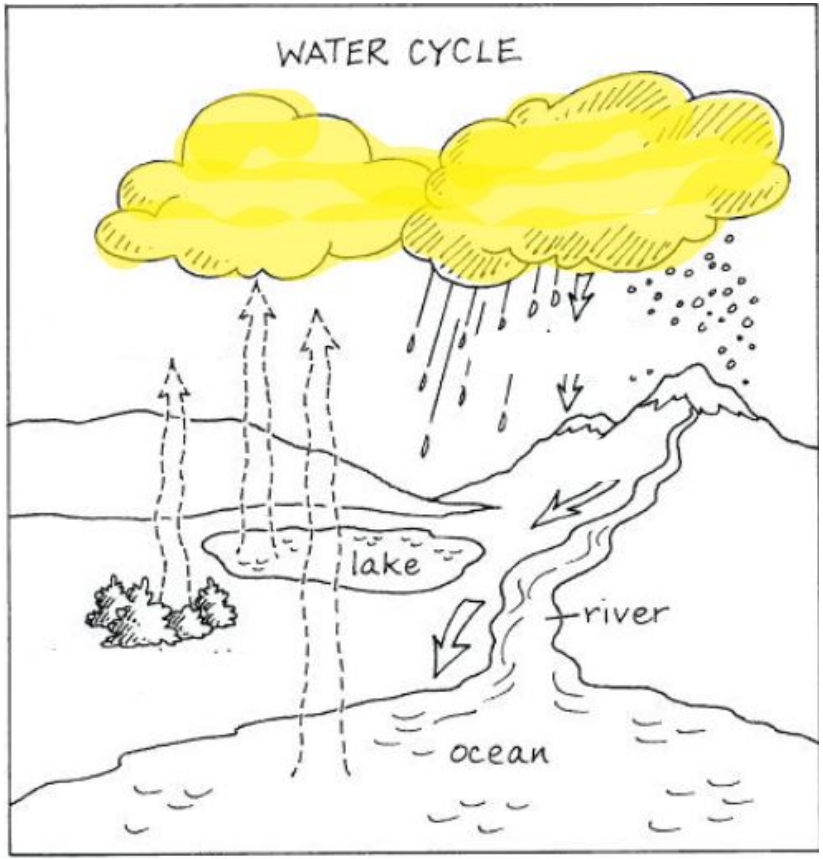

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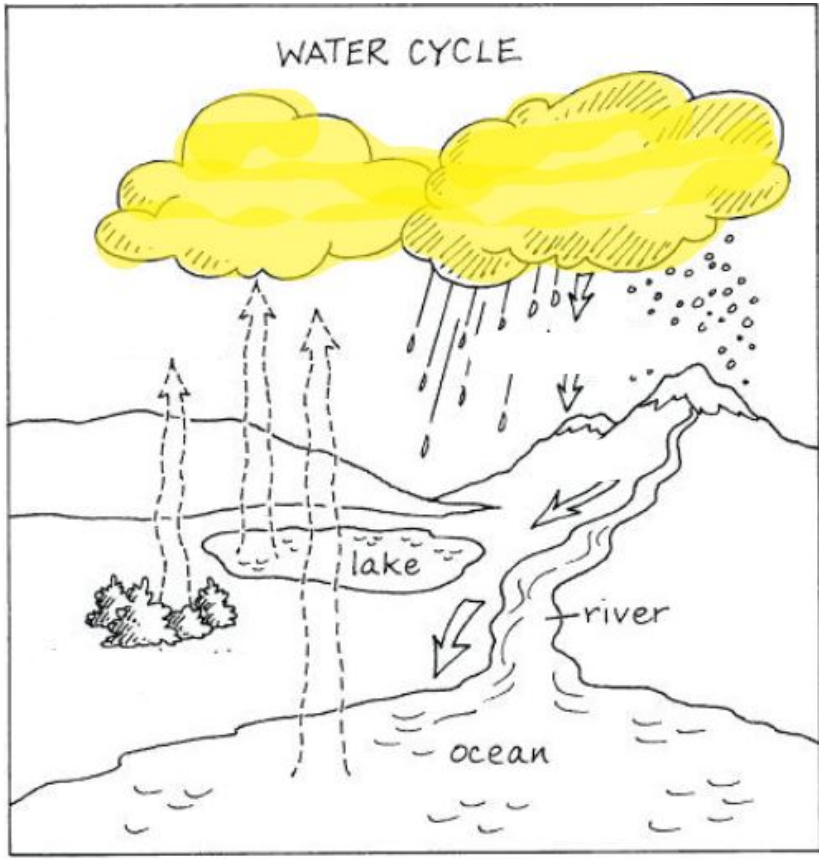

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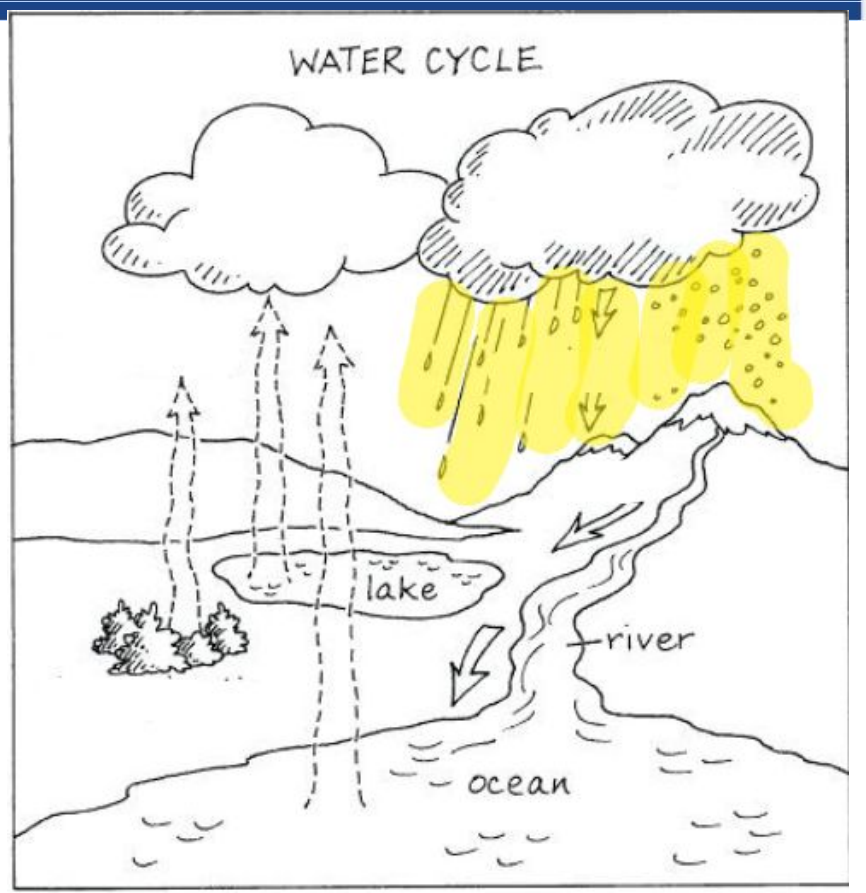

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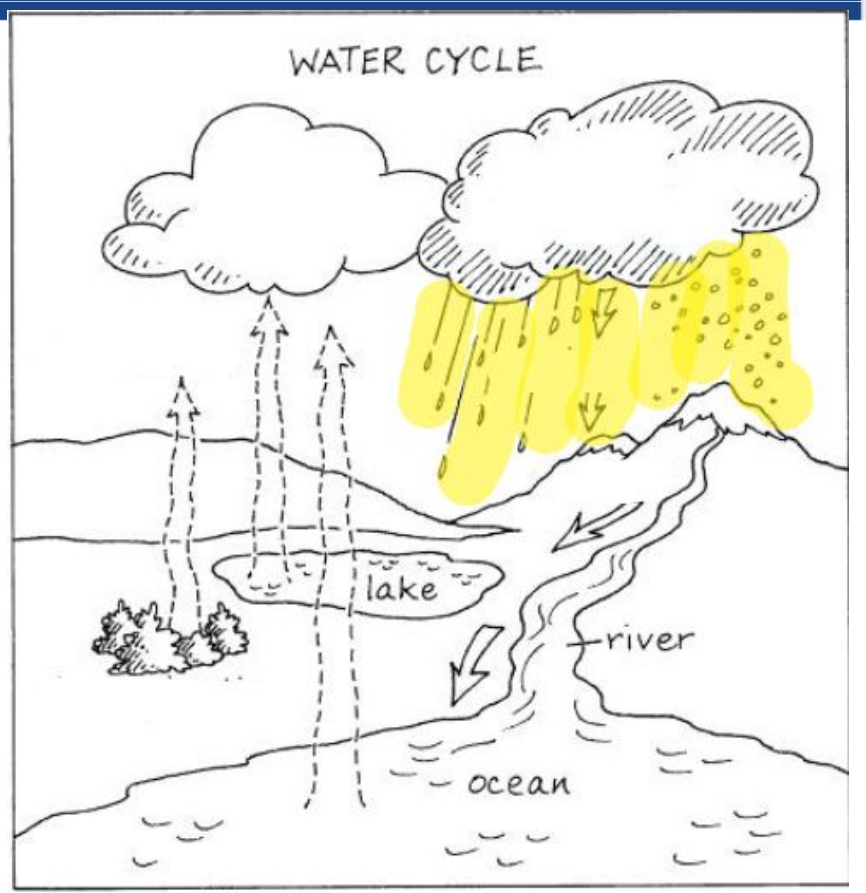

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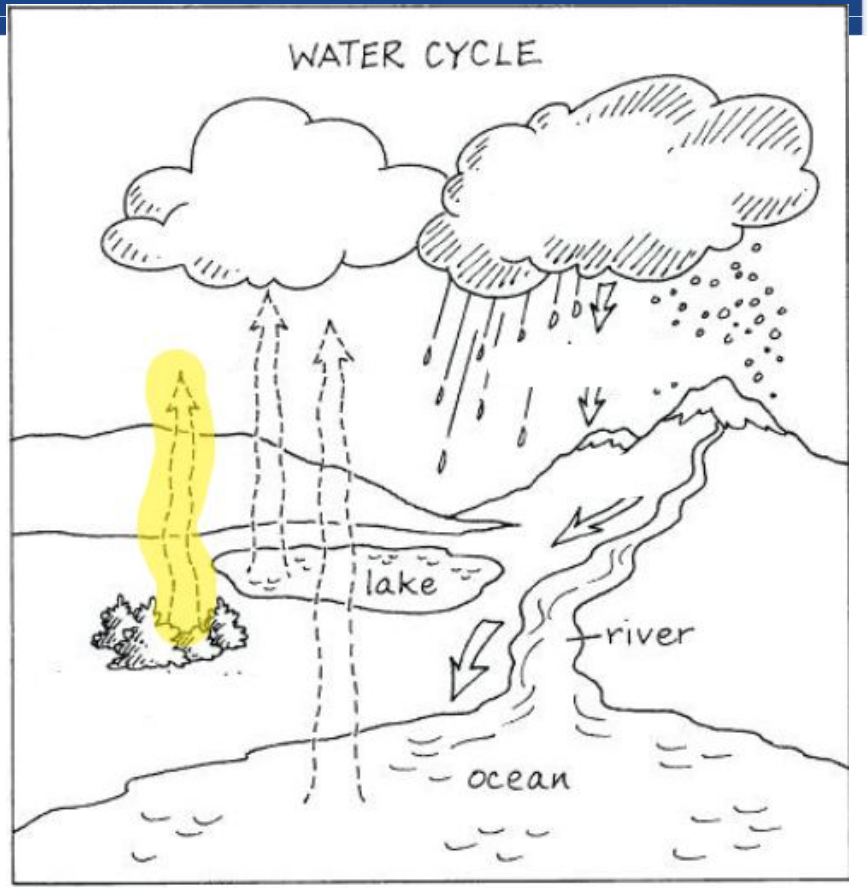

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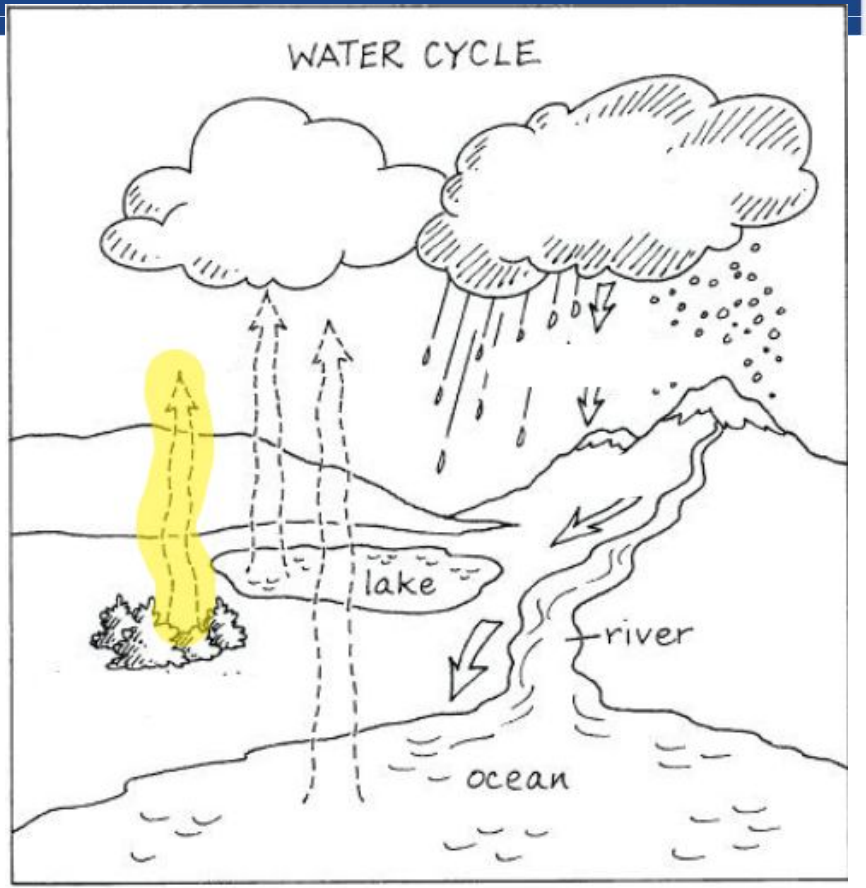

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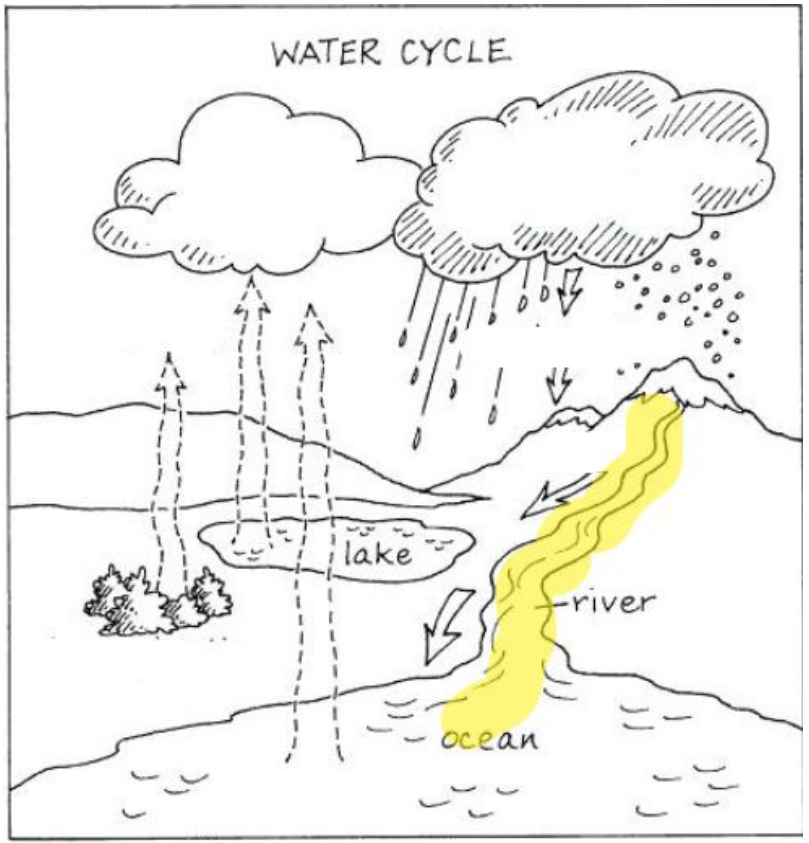

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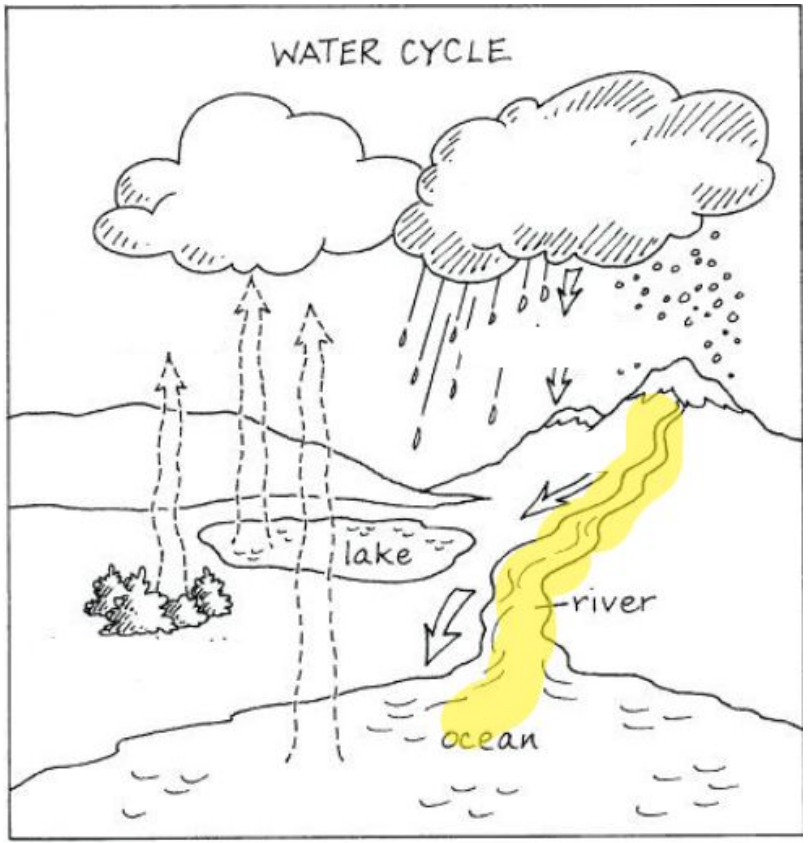
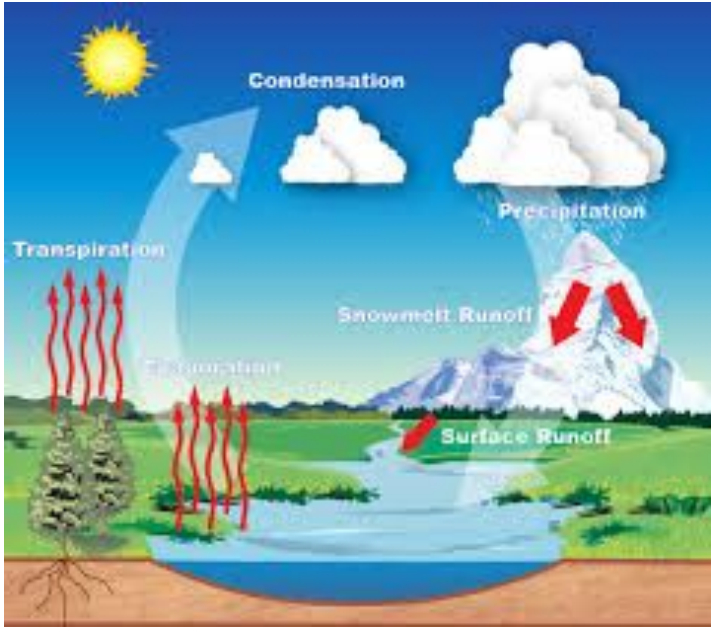


Water Cycle Practice: If you struggled with the terms of the water cycle, go to this water cycle interactive and hover over the terms with your mouse.



Now, on the same sheet of paper, put a heading titled **Carbon Cycle**. In this part of the lesson, we will be learning about the parts of the carbon cycle. Write these terms down the left side of the paper. As you watch the video, note the role of each item in the carbon cycle:

- Ocean and Freshwater
- Plants
- Animals
- Fossil Fuel Burning
- Buried Plant and Animal Remains
- Sea Creatures
- Limestone

When ready, click this link to begin the video over the carbon cycle,

Carbon Cycle Practice: Use your notes to answer these questions- amend your notes as needed.

What role do oceans play in the carbon cycle?

A. They absorb and release carbon
B. They make carbon when exposed to sunlight
C. Water is partly carbon
D. All of the other answers are correct

Carbon Cycle Practice: Use your notes to answer these questions- amend your notes as needed.

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Carbon Cycle Practice: Use your notes to answer these questions- amend your notes as needed.

What role do plants play in the carbon cycle?

A. They convert sunlight to carbon
B. They absorb carbon from the air and store it
C. They absorb carbon from the water and store it
D. They release carbon dioxide into the air

Carbon Cycle Practice: Use your notes to answer these questions- amend your notes as needed.

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B. They absorb carbon from the air and store it
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D. They release carbon dioxide into the air

Carbon Cycle Practice: Use your notes to answer these questions- amend your notes as needed.

What role do animals play in the carbon cycle?

A. They convert sunlight to carbon
B. They absorb carbon from the air and store it
C. They absorb carbon from the water and store it
D. They release carbon dioxide into the air when they breathe

Carbon Cycle Practice: Use your notes to answer these questions- amend your notes as needed.

What role do animals play in the carbon cycle?

A. They convert sunlight to carbon
B. They absorb carbon from the air and store it
C. They absorb carbon from the water and store it
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Carbon Cycle Practice: Use your notes to answer these questions- amend your notes as needed.

What role do fossil fuels in the carbon cycle?

A. They absorb carbon from the air when they are burned
B. They release carbon when they are mined
C. They release carbon dioxide into the air when they are burned
D. All of the above answers are correct

Carbon Cycle Practice: Use your notes to answer these questions- amend your notes as needed.

What role do fossil fuels in the carbon cycle?

A. They absorb carbon from the air when they are burned
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C. They release carbon dioxide into the air when they are burned
D. All of the above answers are correct

Carbon Cycle Practice: Use your notes to answer these questions- amend your notes as needed.

What role do shell-bearing sea organisms play in the carbon cycle?

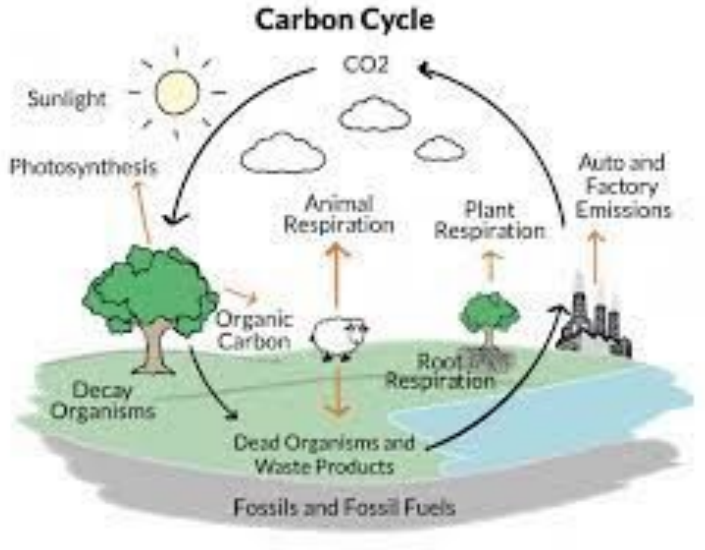
A. They are made partly of carbon
B. They release carbon into the ocean water
C. They release carbon when they decompose
D. All of the other answers are correct

Carbon Cycle Practice: Use your notes to answer these questions- amend your notes as needed.

What role do shell bearing sea organisms play in the carbon cycle?

A. They are made partly of carbon
B. They release carbon into the ocean water
C. They release carbon when they decompose
D. All of the other answers are correct

Carbon Cycle Practice: IF you struggled answering the questions, use this Link to Carbon cycle interactive to further your learning.



Extra Practice:

Water Cycle Flash Cards

Water Cycle Practice Quiz

Carbon Cycle Flash Cards

Carbon Cycle Practice Quiz