Biology, Chapter 3-3
Nutrient Cycles of Ecosystems

Students will:

A) Define ecology and related terminology.

B) Summarize how water, carbon, and nitrogen cycle between biotic and abiotic factors of an ecosystem.

C) Summarize the results of nutrient limitations.

B) Summarize how water, carbon, and nitrogen cycle between biotic and abiotic factors of an ecosystem.

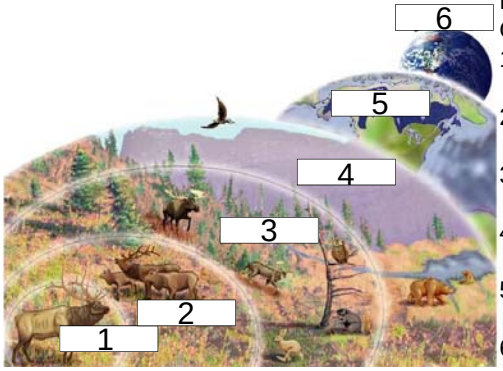
However……..

- An _____ can be as large as the _____, or as small as a _____!!!
- Ecosystems are more than just the organisms they contain. _____, weather, _____ and geologic factors also influence the _____ within an ecosystem.
- _____ cycles contribute to maintaining the _____ of an ecosystem.
- _____ cycles move _____ between _____ and _____ factors of an ecosystem.

A) Define ecology and related terminology.

I_____ P_____ C_____ E_____

B_____ B_____.



Levels of Org.

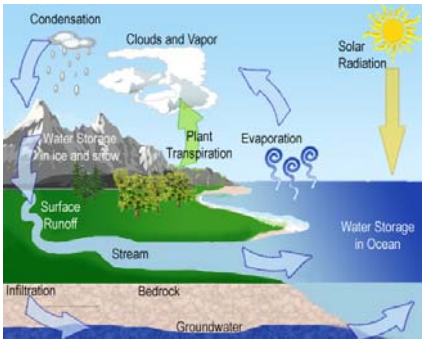
1.
2.
3.
4.
5.
6.

B) Summarize how water, carbon, and nitrogen cycle between biotic and abiotic factors of an ecosystem.

The WATER Cycle: Analyze the following

Look at both ends of the arrows to help

List two or more examples of



Abiotic Factors:

1.
2.

Biotic Factors:

1.
2.

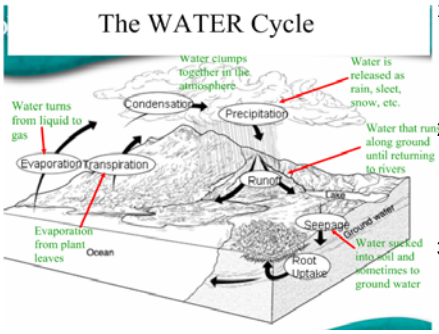
A) Define ecology and related terminology.

Vocabulary Word	Link Word	Reminds me of?
Ecology		
Ecosystem		
Biotic		
Abiotic		

B) Summarize how water, carbon, and nitrogen cycle between biotic and abiotic factors of an ecosystem.

The WATER Cycle: Analyze the following

List at least 3 examples of water moving between biotic and abiotic factors:

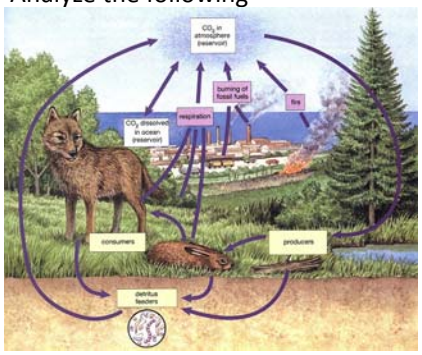


1.
2.
3.

B) Summarize how water, carbon, and nitrogen cycle between biotic and abiotic factors of an ecosystem.

The Carbon Cycle
Analyze the following

Look at both ends of the arrows to help
List two or more examples of



Abiotic Factors:

1.

2.

Biotic Factors:

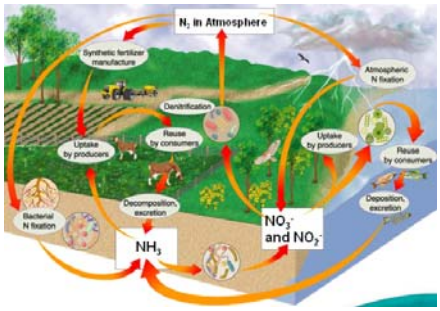
1.

2.

B) Summarize how water, carbon, and nitrogen cycle between biotic and abiotic factors of an ecosystem.

The Nitrogen Cycle
Analyze the following

Look at both ends of the arrows to help
List three or more examples of



Abiotic Factors:

1.

2.

3.

Biotic Factors:

1.

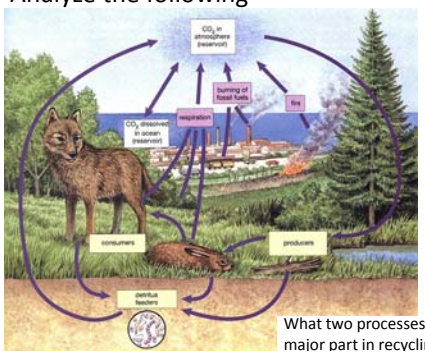
2.

3.

B) Summarize how water, carbon, and nitrogen cycle between biotic and abiotic factors of an ecosystem.

The Carbon Cycle
Analyze the following

List at least 3 examples of carbon moving between biotic and abiotic factors:



1.

2.

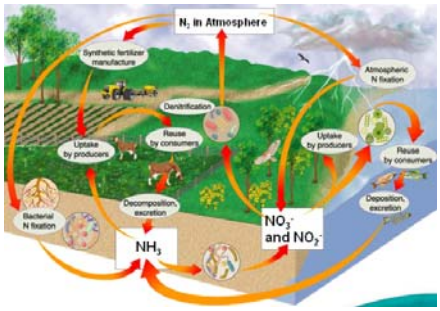
3.

What two processes play a major part in recycling carbon?

B) Summarize how water, carbon, and nitrogen cycle between biotic and abiotic factors of an ecosystem.

The Nitrogen Cycle
Analyze the following

List at least 3 examples of nitrogen moving between biotic and abiotic factors:



1.

2.

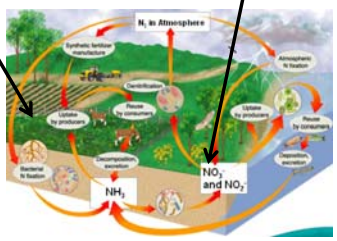
3.

B) Summarize how water, carbon, and nitrogen cycle between biotic and abiotic factors of an ecosystem.

The Nitrogen Cycle

Nitrogen Fixation – some _____(legumes) can take nitrogen from the _____ and convert it to _____ (NH3). This is added to _____.

Denitrification – Conversion of _____ to atmospheric _____.



C) Summarize the results of nutrient limitations.

Nutrient Limitation

- Limiting Nutrient – whatever nutrient is the most _____
- Limits growth of _____
- Producers grow quickly when more of limiting nutrient is _____
- _____
- _____– when excess nitrogen or phosphates cause an _____ of _____

Why is this a bad thing?

Understanding Check – Write a 3-2-1 Summary

- 3 things I learned were
- 2 things I want to know more about or still have questions about are
- 1 thing I will never forget is