

Student Name:

Illustrating Biogeochemical Cycles

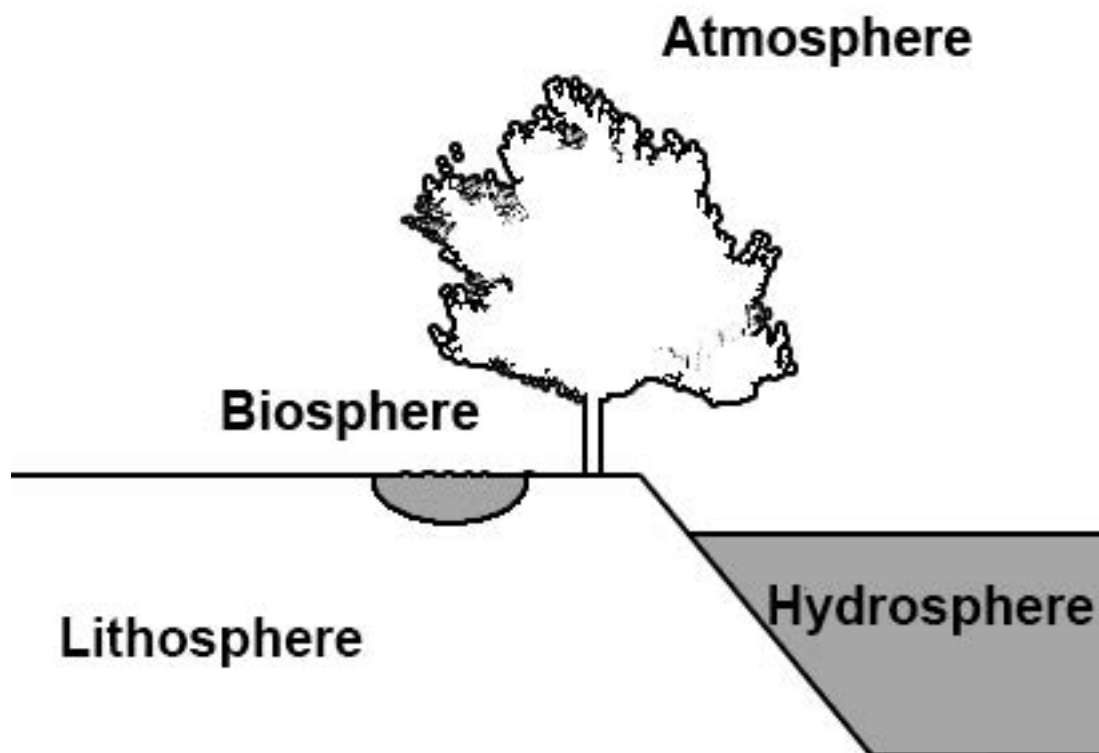
Matter moves through an ecosystem in biogeochemical cycles. In this activity, you will illustrate two biogeochemical cycles.

Part One: The Hydrologic Cycle

1) In the table below, place each of the following processes in the correct row of column 1: condensation, precipitation, evaporation, and transpiration.

Process	Main sphere where water moves from	Sphere(s) that water moves to
	Hydrosphere	Atmosphere
	Atmosphere	Atmosphere
	Biosphere	Atmosphere
	Atmosphere	Lithosphere, biosphere, and hydrosphere

2) Illustrate the hydrologic cycle by placing each process in column 1 of the table above into the correct place on the diagram below. Also, draw arrows to represent the direction that the water moves from and to.



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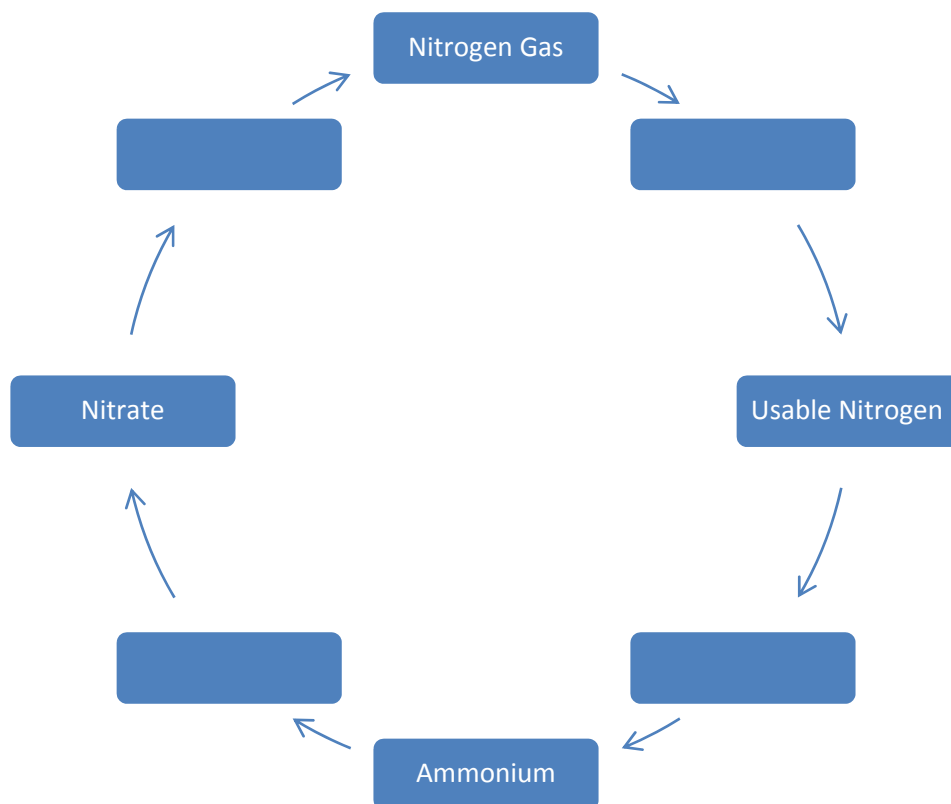
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Part Two: The Nitrogen Cycle

1) In the table below, place each of the following processes in the correct row of column 1: nitrification, fixation, ammonification, and denitrification.

Process	Description
	Ammonium is converted into nitrates.
	Nitrates are converted into nitrogen gas and released into the atmosphere.
	Nitrogen gas from atmosphere is converted into a usable form.
	Animal waste and dead tissue are converted into ammonium by bacteria and other decomposers

2) Illustrate the nitrogen cycle by placing each of the four processes from the table above into the correct place on the diagram below.



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3) Answer each of the following questions.

- a) In what “sphere” of the earth is eutrophication a problem?
 - b) What “sphere” is the largest reservoir of nitrogen?
 - c) Where and how does ammonification/nitrification take place?
 - d) In what two ways is nitrogen “fixed”?
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