Name _____ Period _____

Biogeochemical Cycles Quiz

All major biological elements (H, O, C, N, P, and S) cycle between air, water, soil, and _____.

The Water Cycle

The Water Cycle is an example of a _____ cycle. Heat from the _____ evaporates water (H_20) from oceans, lakes, moist soil, the leaves of plants (called _____), and the bodies of animals (called _____). Water molecules from these sources are carried into the atmosphere by air currents. There they _____around the _____ and eventually fall to Earth as _____ in the form of rain, snow, hail, or fog. Rain replenishes Earth's ground, oceans, rivers, and lakes. Water filters down through the soil until it reaches solid rock in a reservoir called _____, which eventually reaches the ocean and the cycle starts over.

The Oxygen-Carbon Cycle

Oxygen and Carbon make up much of the body's chemistry. Like water, Carbon and Oxygen are recycled throughout the ecosystem, called the _____, which is driven by the sun. In _____, plants take in _____ (CO_2), which is split. The _____ is released into the atmosphere as a gas and the carbon is used to make _____, which is then made into _____, _____, and proteins. Animals eat plants and turn plant compounds into animal compounds, a process called _____. Animals also eat other animals. All these compounds in both plants and animals are _____ in the biosphere. Plants and animals break down carbohydrates, fats and proteins to use them for energy, a process called _____. Unused carbon is returned to the air as CO_2 or is released in solid waste. _____ break down wastes and dead tissue, releasing more CO_2.

The Nitrogen Cycle

Over 78 percent of the air is nitrogen gas (N2), but nitrogen in this form is _____ to organisms. Atmospheric nitrogen must be _____, or fixed, into useable molecules. The conversion of _____ (N_2) to nitrate (NO_3) is known as _____, which is carried out mainly by _____ found in the roots of _____ such as peas and beans. When animals eat these plants, the animals acquire _____. Both plants and animals need nitrogen to make _____ and _____. When plants and animals excrete waste or die, microorganisms convert their nitrogen compounds to _____ (NO_3), _____ (NO_2), or _____ (NH_3), which are recycled by other living organisms. Soil bacteria also convert ammonia, nitrite, and nitrate back into nitrogen gas - a process known as _____. Thus, nitrogen gas (N2) is returned to the _____.

ammonia	condense	glucose	photosynthesis
atmosphere	converted	groundwater	precipitation
bacteria	decomposers	legumes	proteins
biogeochemical	demtrification	nitrates	recycled
biota	digestion	nitrites	respiration
carbohydrates	DNA	nitrogen fixation	Sun
carbon	dust particles/aerosols	nitrogen gas	transpiration
carbon dioxide	evaporation	oxygen	useable nitrogen
CO_2	fats	oxygen-carbon cycle	useless