

BIOGEOCHEMICAL CYCLES

Name _____ KEY _____

Name the 4 biogeochemical cycles you learned about:

CARBON

NITROGEN

PHOSPHORUS

WATER (HYDROLOGIC)

NAME THE CYCLE DESCRIBED:

CARBON

Cycle in which photosynthesis and cellular respiration participate

PHOSOPHORUS

Only cycle which does not pass through the atmosphere

WATER

Cycle that involves transpiration

NITROGEN

Cycle which is dependent on bacteria for nitrogen fixation and denitrification

CARBON

Cycle in which volcanic activity and burning fossil fuels plays a role

HYDROLOGIC

Another name for the water cycle

CARBON

Cycle which includes an underground reservoir in the form of fossil fuels

NAME THE STEP IN A BIOGEOCHEMICAL CYCLE:

NITROGEN FIXATION

Process in which nitrogen gas from the atmosphere is converted into ammonia by bacteria that live in the soil and on the roots of plants called legumes

DENITRIFICATION

Process in which soil bacteria convert nitrogen compounds in soil back into nitrogen gas which is released into the atmosphere

PHOTOSYNTHESIS

Process in which sunlight is used to change atmospheric carbon into biomolecules used for energy by living things

TRANSPIRATION

Process in which water evaporates from the surface of plant leaves

DECOMPOSITION

Process in which nutrients in dead organisms are returned to the soil

CELLULAR RESPIRATION

Process in which the break down of sugars in living things returns carbon to the atmosphere as CO_2

EVAPORATION

Process in which liquid water changes into gas form

CONDENSATION

Process in which water vapor (gas) changes into liquid water

PRECIPITATION

Process in which condensed water in clouds falls to the Earth's surface

RUNOFF

Process ALL of the cycles have in common that links land and surface water

Tell the group of organisms that all the cycles have in common which keeps matter cycling between living (organic) and nonliving (inorganic) parts of the ecosystem.

DECOMPOSERS

Tell 2 human activities by which carbon can enter the atmosphere as CO_2 during the carbon cycle

BURNING FOSSIL FUELS, CELLULAR RESPIRATION,

Name 2 NON-human activities by which carbon can enter the atmosphere or oceans during the carbon cycle.

VOLCANIC ACTIVITY, DECOMPOSITION, DISSOLVING IN WATER

Tell one way carbon leaves the atmosphere during the carbon cycle.

PHOTOSYNTHESIS, DISSOLVING IN WATER,

Tell 2 ways water enters the atmosphere in the water cycle

EVAPORATION AND TRANSPIRATION

Tell something humans do to return nitrogen to the soil for the nitrogen cycle.

DECOMPOSITION, FERTILIZER USE

Although almost 80% of the atmosphere is made up of nitrogen gas, most living things don't have the enzymes necessary to use nitrogen directly from the atmosphere. Tell how we get the nitrogen we need to make proteins and DNA if we can't get it from breathing.

We don't have the enzymes necessary to remove nitrogen from the atmosphere; we get our nitrogen from the FOOD WE EAT.