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Semester - II

TOPIC:-BIOGEOCHEMICAL CYCLES

(Nitrogen cycle, carbon cycle)

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✓ NITROGEN CYCLE

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BIOGEOCHEMICAL CYCLE

■ **DEFINITION:** The cyclic pathways through which chemical elements travel in the Environment continuously are called Biogeochemical Cycles.

Types of Biogeochemical Cycles

The Biogeochemical Cycles are of two types:

- ◆ **Gaseous Cycles:** Air is reservoir. Ex: nitrogen cycle, oxygen cycle, carbon cycle etc.
- ◆ **Sedimentary Cycles:** Lithosphere/ Earth crust is reservoir. Ex: sulphur cycle, phosphorus cycle.

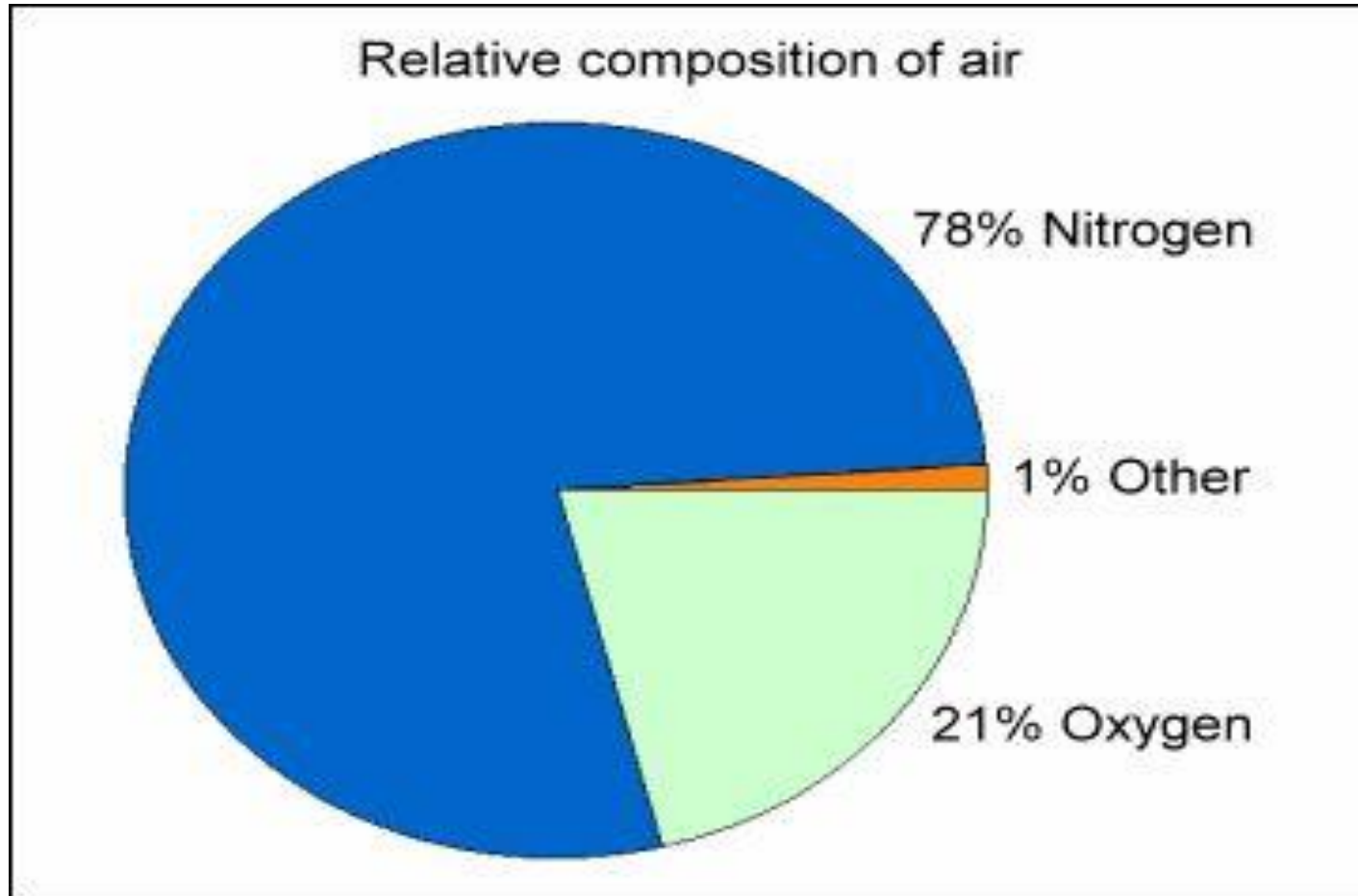
Significance of Biogeochemical Cycles

Along with energy, water and several other chemical elements cycle through ecosystems and influence the rates at which organisms grow and reproduce.

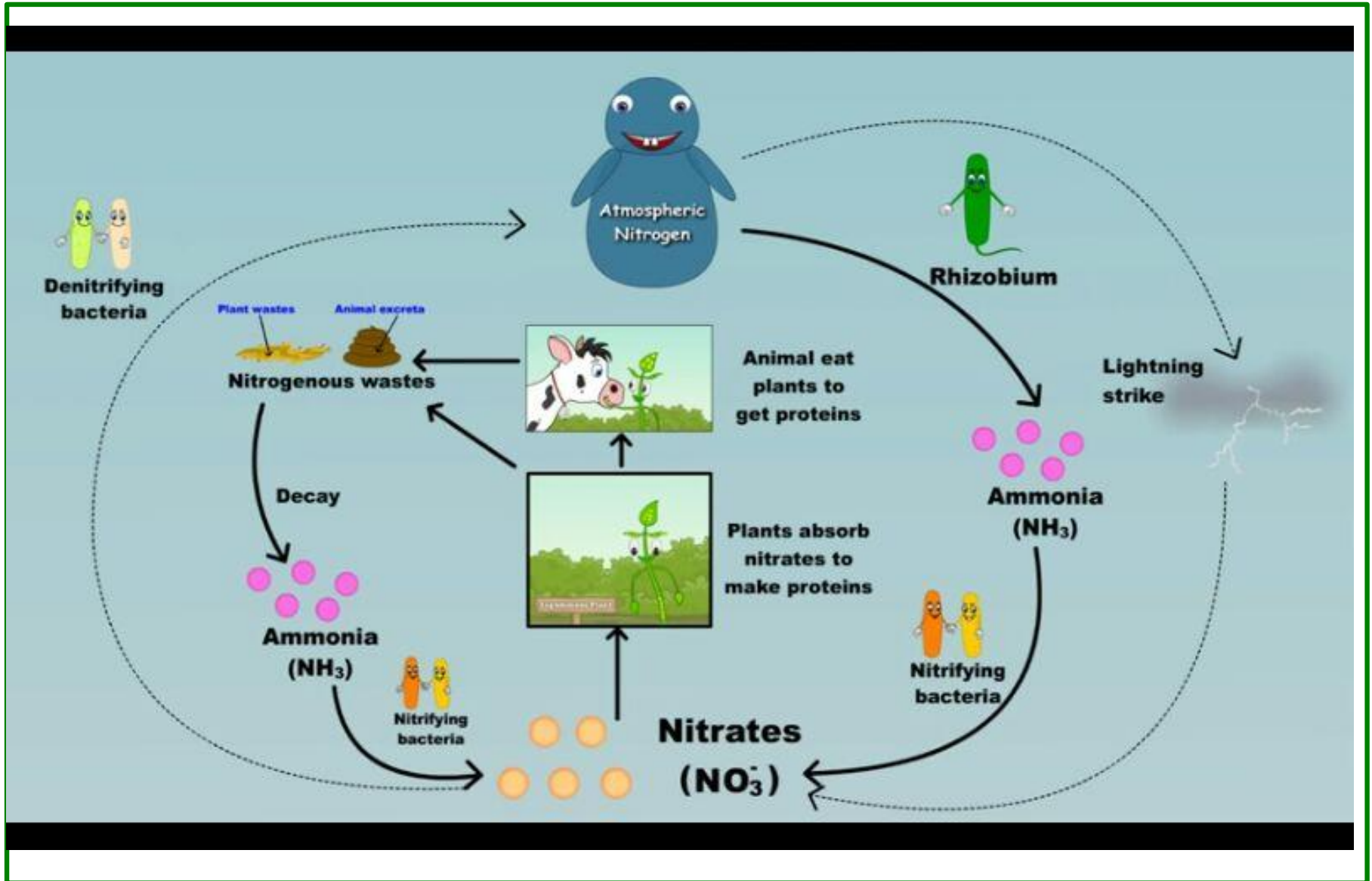
NITROGEN CYCLE

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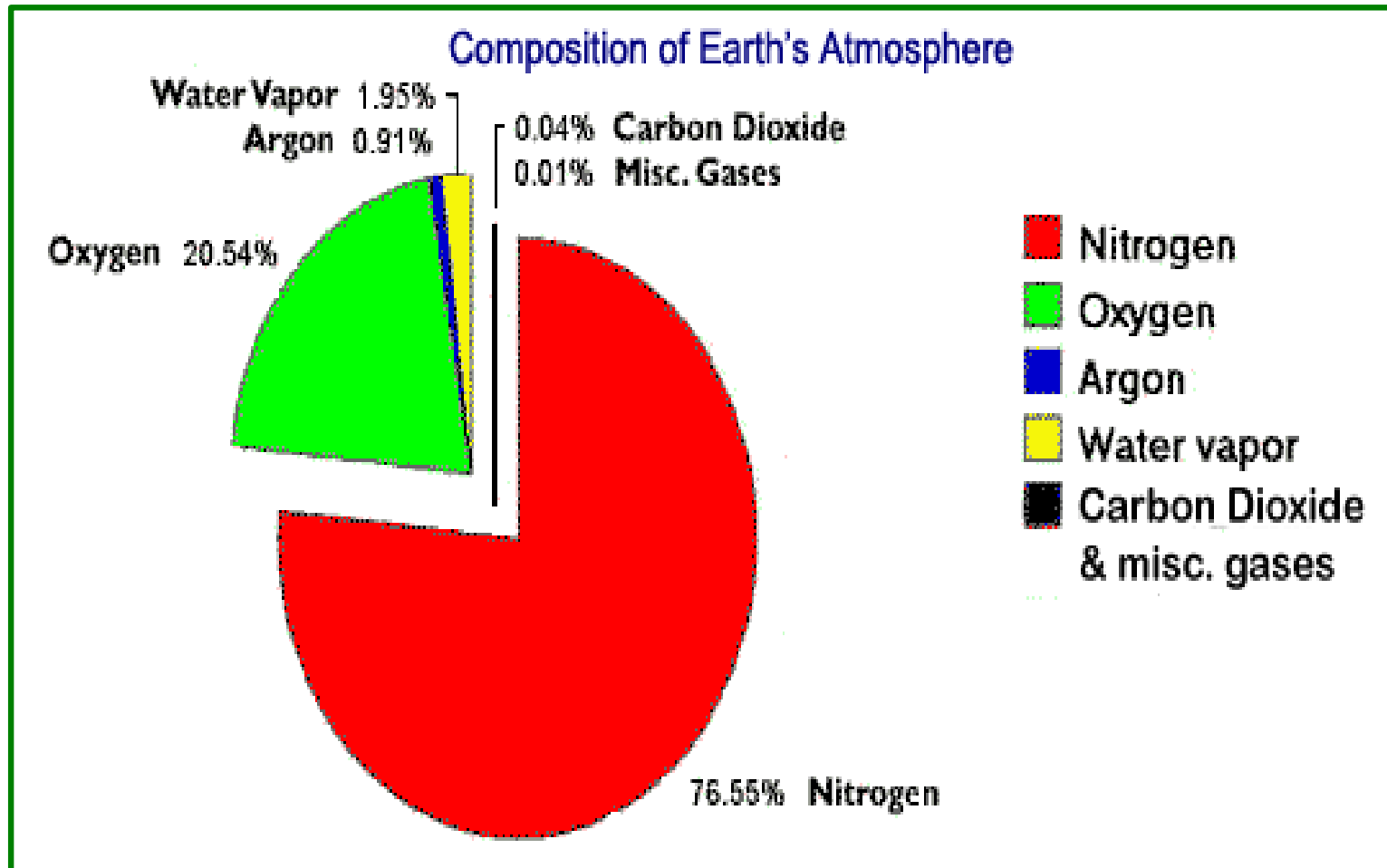
Composition of Nitrogen:



Diagrammatical representation of Nitrogen Cycle



COMPOSITION OF CARBON DIOXIDE

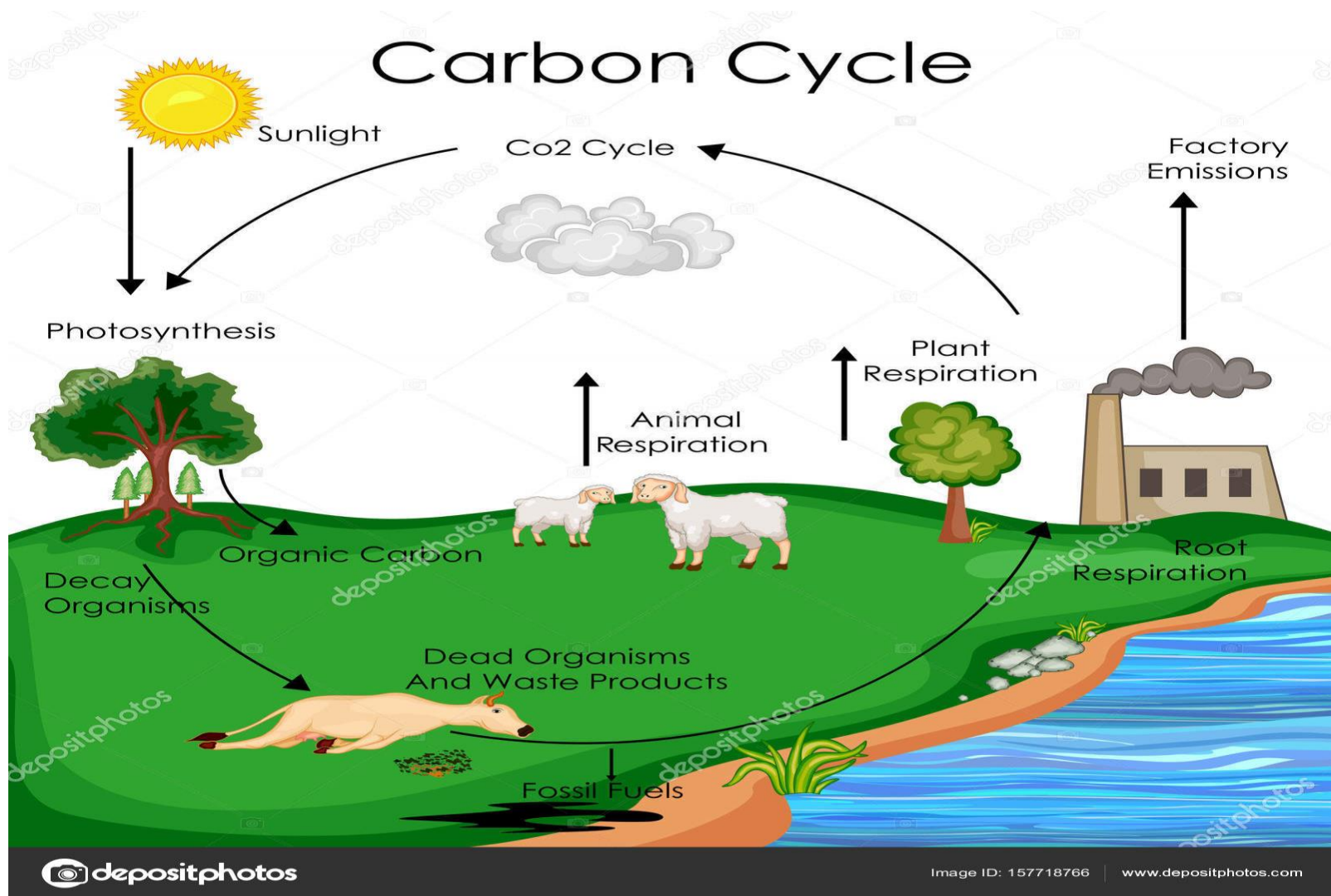


SOURCES OF CARBON-DIOXIDE EMISSIONS

There are both Natural and Human Sources of Carbon-dioxide emissions:

- **Natural Sources-** Volcanic eruptions, Decomposition, plants and animals respiration etc.
- **Human Sources-** Deforestation, Burning of fossil fuels(coal, oil & natural gas), Industrial activities, Automobile exhaust etc.

Diagrammatical representation of Carbon Cycle



Reference and Websites

- ✓ Wikipedia
- ✓ Google
- ✓ Fundamentals of ecology by: M.C Dash.
- ✓ Environmental chemistry and pollution control by: Dr. S.S Dara and Dr. D.D Mishra.

The image features a white background with a green border. In the top-left and bottom-right corners, there are illustrations of pink flowers with red centers and green leaves. The text "Thank you!" is written in a black, cursive font in the center of the page.

Thank you!