

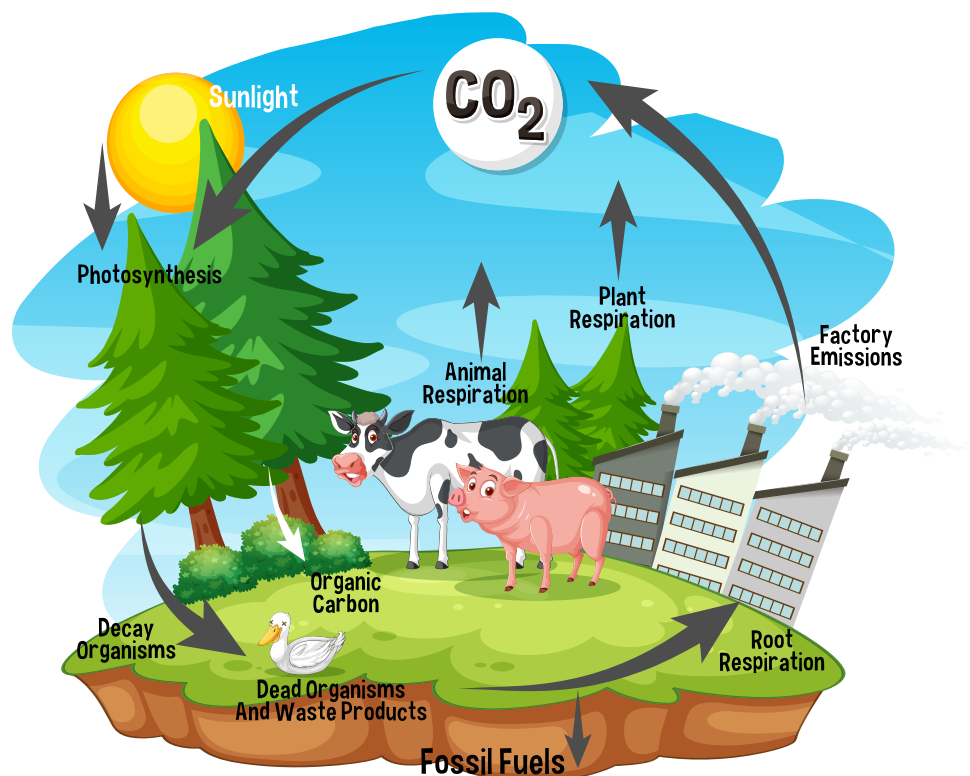
# CARBON CYCLE

The carbon cycle is a natural process that involves the movement of carbon between living organisms and the environment. Carbon is an essential element for life on Earth and exists in various forms, such as carbon dioxide in the air and carbon compounds in living organisms.

Plants play a crucial role in the carbon cycle through photosynthesis. They take in carbon dioxide from the atmosphere and, with the help of sunlight, convert it into glucose and oxygen. This process not only provides energy for plants but also releases oxygen, which is vital for animals and humans.

Animals, in turn, consume plants, transferring the carbon compounds through the food chain. When living organisms die, their bodies can become fossil fuels over millions of years, such as coal, oil, and natural gas. These fossil fuels contain carbon that has been stored for a very long time.

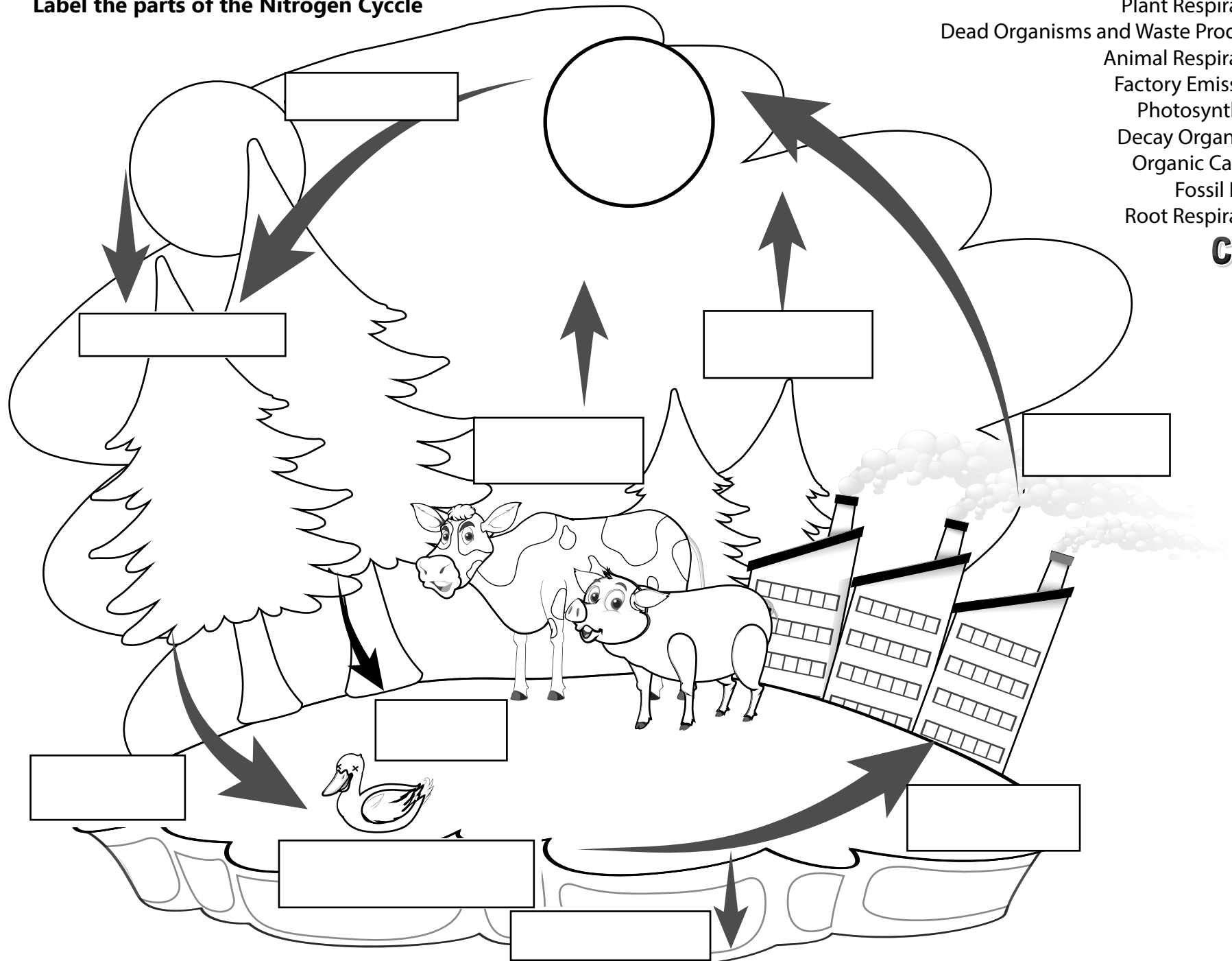
Human activities, such as burning fossil fuels for energy and deforestation, have increased the amount of carbon dioxide in the atmosphere, contributing to the greenhouse effect and climate change.



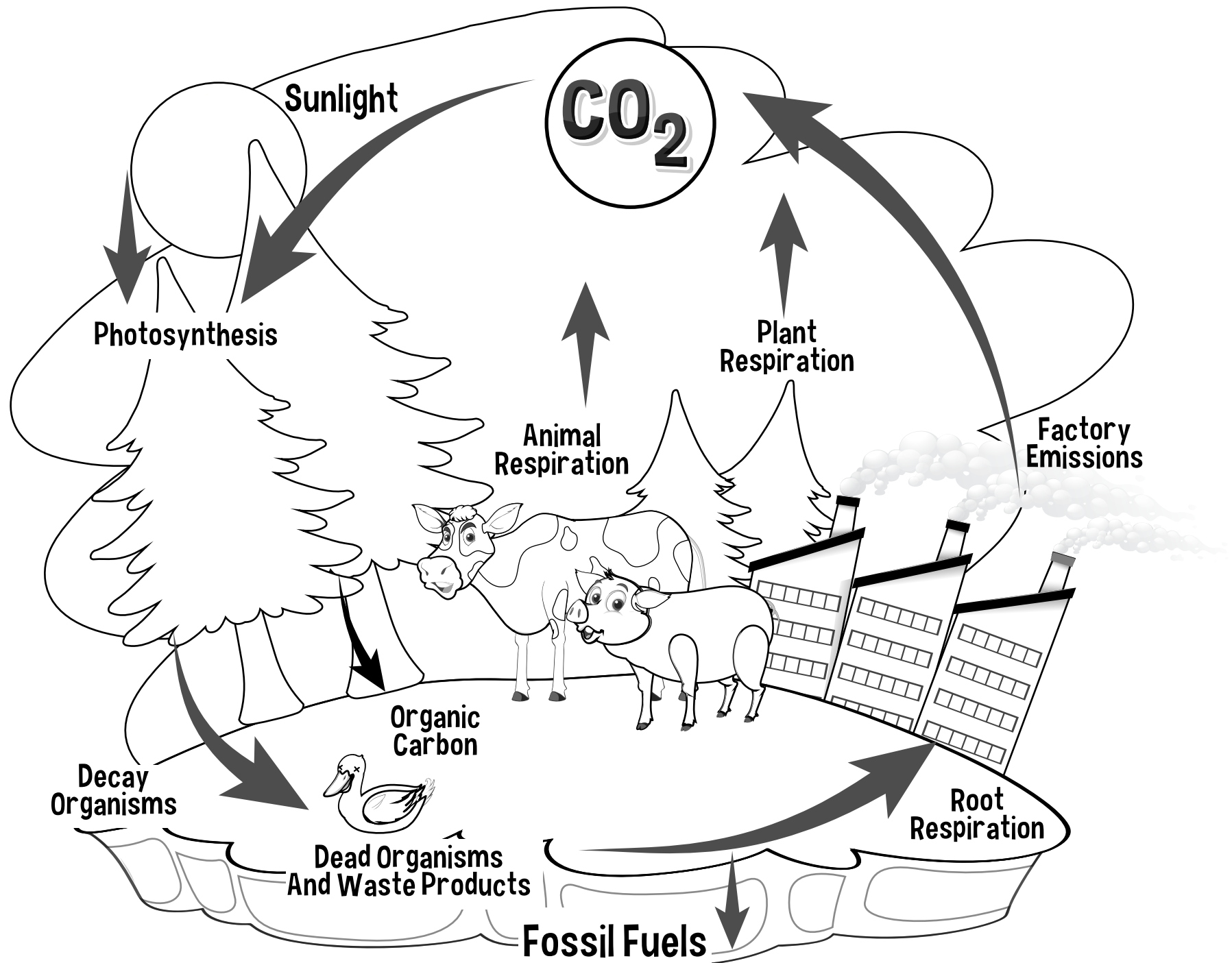
# CARBON CYCLE

Label the parts of the Nitrogen Cycle

Sunlight  
Plant Respiration  
Dead Organisms and Waste Products  
Animal Respiration  
Factory Emissions  
Photosynthesis  
Decay Organisms  
Organic Carbon  
Fossil Fuels  
Root Respiration  
**CO<sub>2</sub>**



# CARBON CYCLE



# NITROGEN CYCLE

The nitrogen cycle is the process by which nitrogen, an essential element for life, is transformed and recycled in the environment.

Nitrogen is found in the air we breathe, the soil, and in living organisms. The nitrogen cycle helps ensure that plants and animals have enough nitrogen to survive and grow.

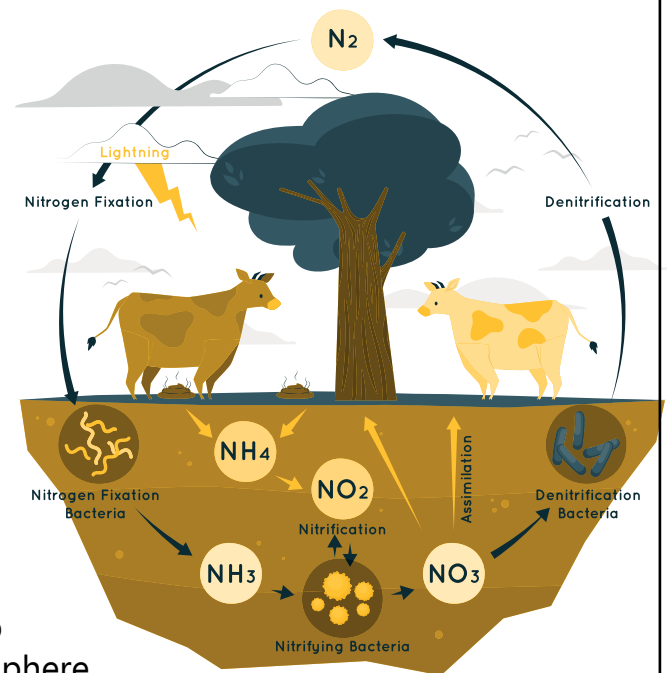
The nitrogen cycle has four main stages: nitrogen fixation, nitrification, ammonification, and denitrification.

The first stage, nitrogen fixation, is when nitrogen gas in the air is converted into ammonia. This can be done by lightning, bacteria, or nitrogen-fixing plants.

The second stage, nitrification, is when bacteria convert the ammonia into nitrite and then nitrate, which is a form of nitrogen that plants can easily absorb.

The third stage, ammonification, is when dead plants and animals are decomposed by bacteria, releasing nitrogen back into the soil in the form of ammonia.

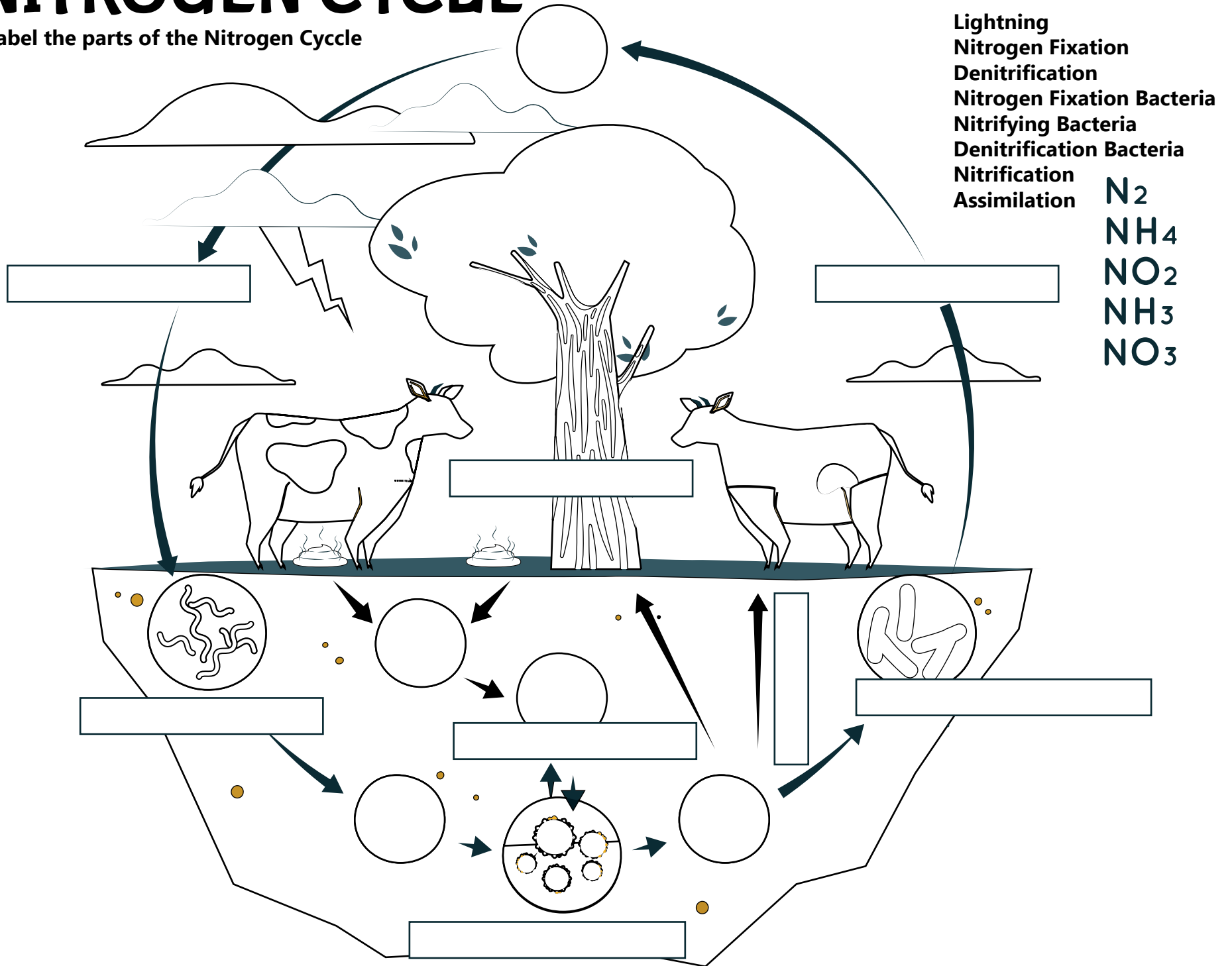
The final stage, denitrification, is when bacteria in the soil convert nitrates back into nitrogen gas, which is returned to the atmosphere.



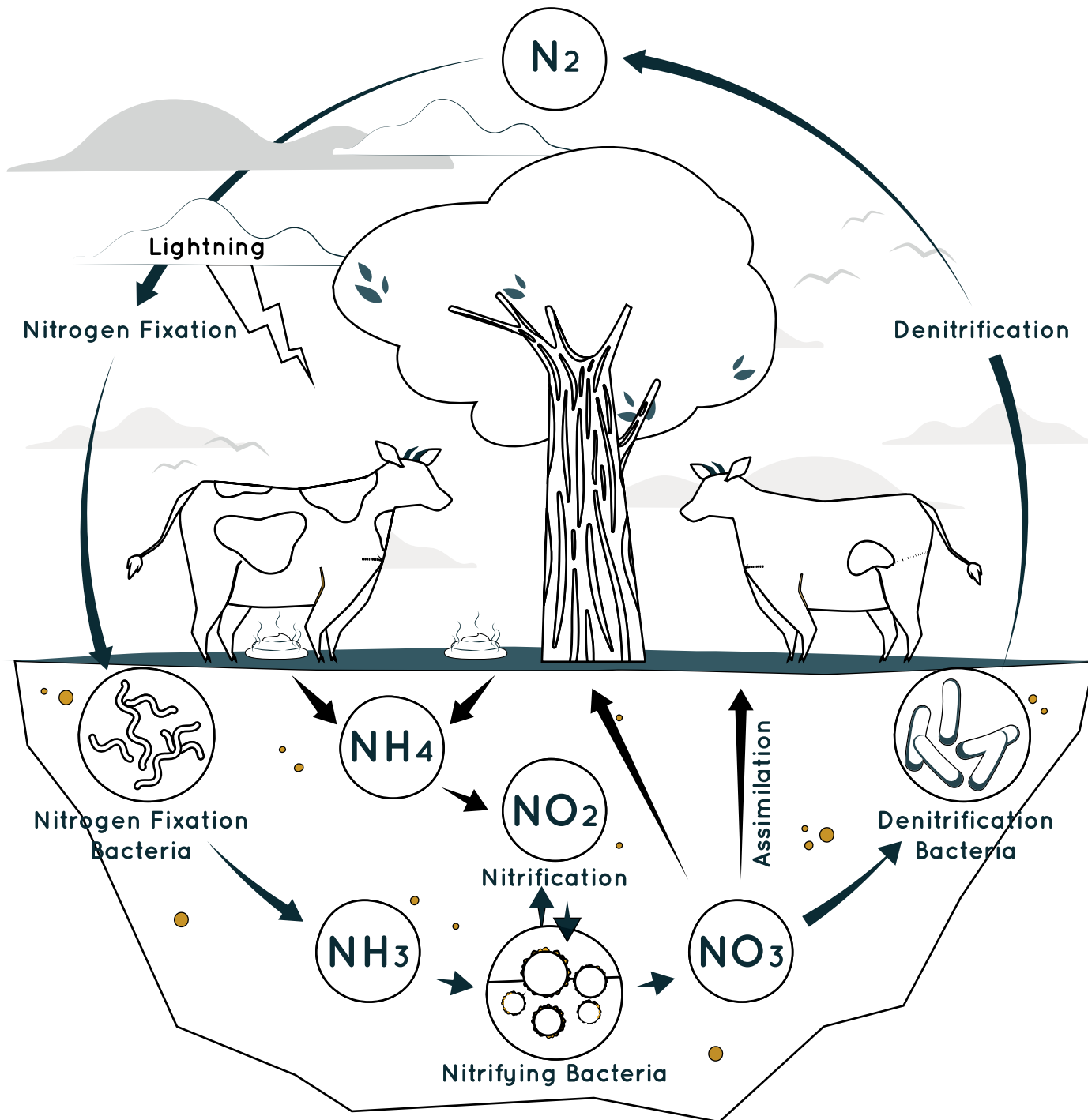
The nitrogen cycle is important because it helps keep the right amount of nitrogen in the environment. Without it, plants and animals would not have enough nitrogen to grow and survive.

# NITROGEN CYCLE

Label the parts of the Nitrogen Cycle



# NITROGEN CYCLE



# CARBON | NITROGEN VENN DIAGRAM

A Venn diagram is a visual representation of sets and their relationships to each other. It consists of two or more overlapping circles, where each circle represents a set, and the area of overlap represents the elements that are shared between the sets.

## Nitrogen Cycle

The nitrogen cycle deals with nitrogen elements and compounds.

The nitrogen cycle mainly occurs in the atmosphere, soil, and living organisms.

Involves processes like nitrogen fixation (conversion of nitrogen gas to usable forms), nitrification, denitrification, and assimilation.

## Carbon Cycle

The carbon cycle deals with carbon elements and compounds.

The carbon cycle primarily takes place in the atmosphere, oceans, and living organisms.

The carbon cycle involves processes like photosynthesis (plants converting carbon dioxide to glucose), respiration (organisms releasing carbon dioxide), decomposition (breaking down of organic matter), and fossil fuel burning (releasing carbon dioxide into the atmosphere).

Both the nitrogen cycle and carbon cycle are essential for life on Earth. They play crucial roles in maintaining the balance and sustainability of ecosystems.

Both cycles involve natural processes that take place in the environment, with no human intervention.

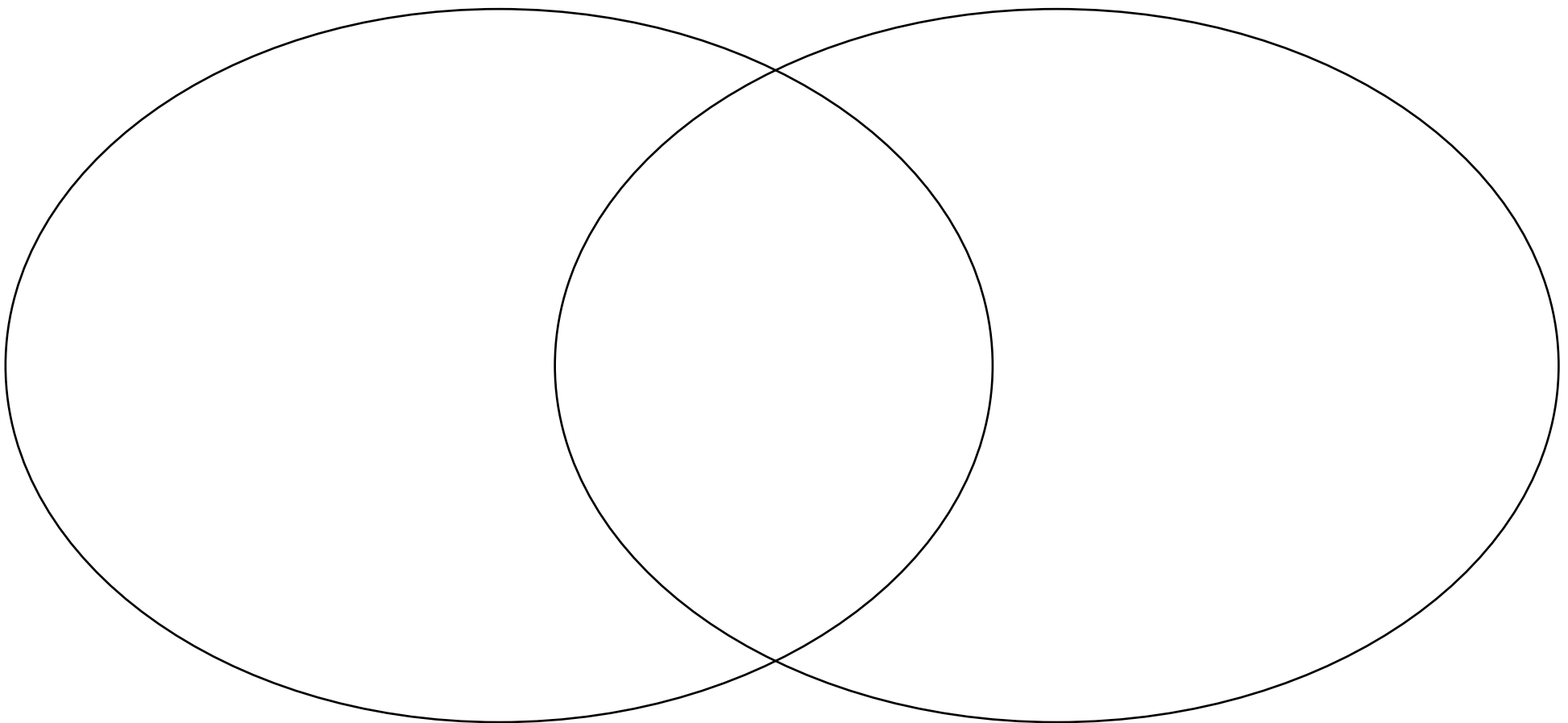
## Characteristics of Both

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Nitrogen Cycle

Carbon Cycle



Characteristics of Both