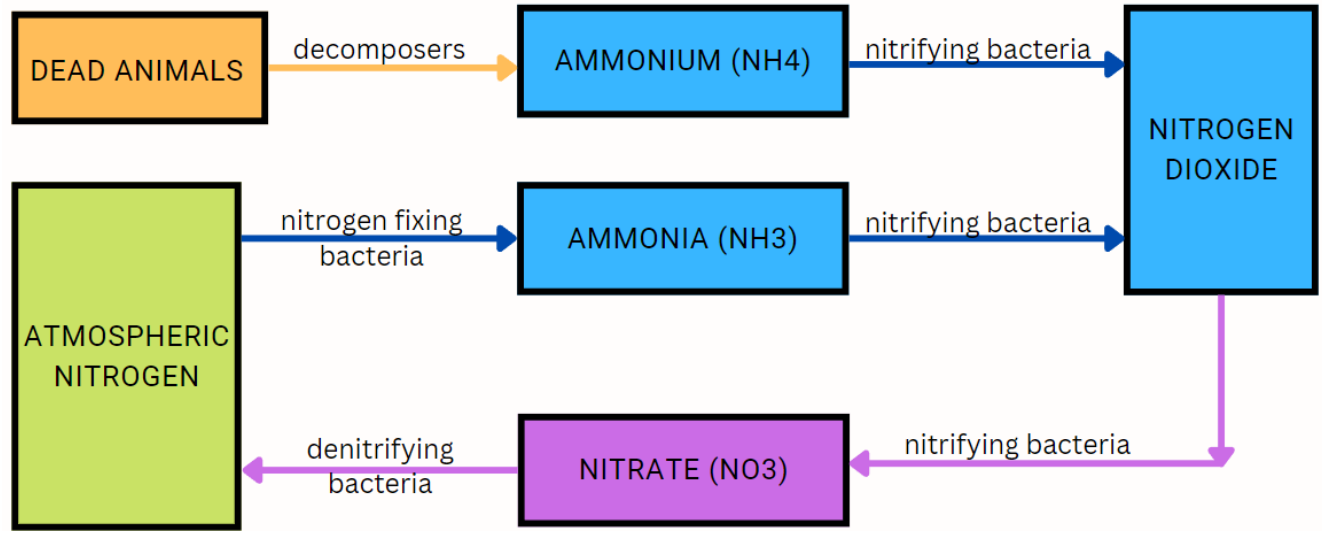
Nitrogen Cycle

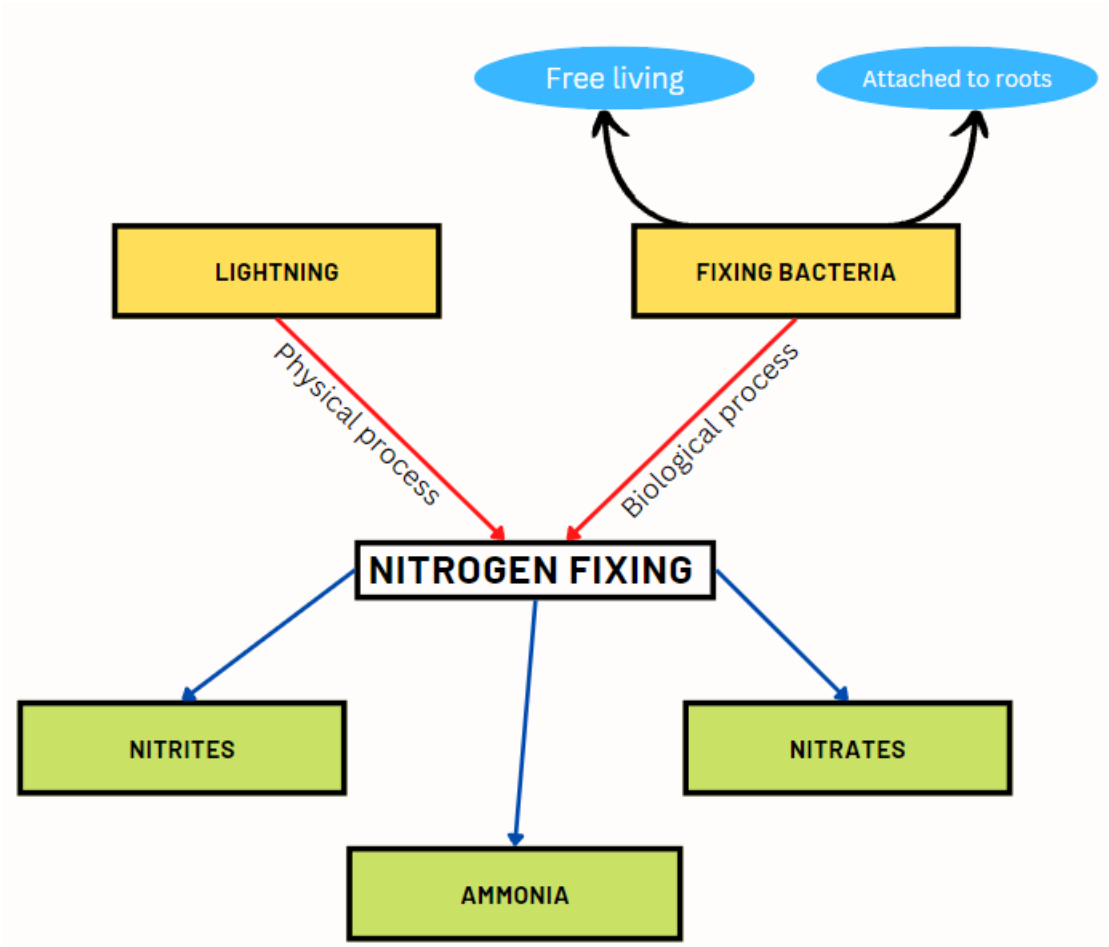
Nitrogen:
a. Most abundant gas in the atmosphere, approximately 78%
b. Part of proteins, nucleic acids like RNA and DNA
c. Nitrogen is usually inert, it does not react with most chemicals
d. Plants and animals cannot process atmospheric nitrogen directly

Types of bacteria in nitrogen cycle

Nitrogen fixing bacteria	Convert atmospheric nitrogen into nitrates
Nitrifying bacteria	Convert ammonia and ammonium into nitrogen dioxide
	Convert nitrogen dioxide into nitrates
Denitrifying bacteria	Convert nitrates into atmospheric nitrogen



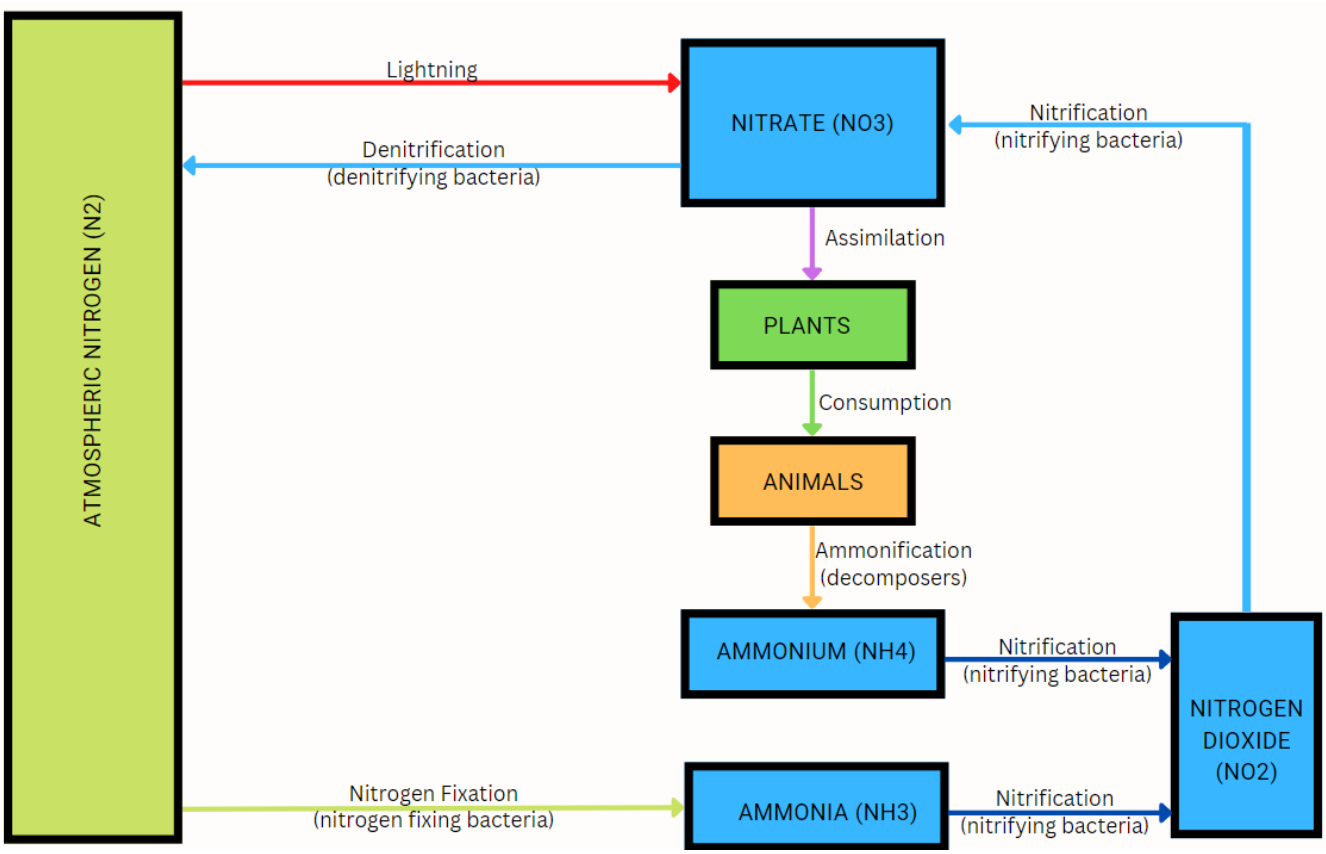
Nitrogen fixing:
a. It is the conversion of nitrogen gas into compounds like nitrates, nitrites and ammonia, for easy absorbing into the body of a living being (plants and animals)
b. Nitrogen fixing is done by:
   i. Nitrogen fixing bacteria in the soil
   ii. Lightning



Ammonification: Converting decayed matter into ammonium (NH_4)

Nitrification: Using nitrifying bacteria for -
a. Converting Ammonia (NH_3) and Ammonium (NH_4) into Nitrogen Dioxide (NO_2)
b. Converting Nitrogen Dioxide into nitrates (NO_3)

Nitrogen Cycle



Nitrites	**Nitrates**
NO_2 – Two atoms of oxygen	NO_3 – Three atoms of oxygen
Used in food preservatives	Used in explosives, fertilizers