

- 1.) Legumes are special types of plants with swelling nodules in their roots. These swelling nodules are home to [REDACTED] Our atmosphere is over 75 nitrogen; most organisms
- 2.) [REDACTED] is a type of bacteria that is capable of "fixing" the nitrogen in the atmosphere and making it usable for other organisms. It begins by absorbing the nitrogen.
- 3.) Once [REDACTED] has absorbed the nitrogen, a certain enzyme in the [REDACTED] cleaves the bonds in the N_2 . The now-singular nitrogen is ready to be bonded to something else at this stage.
- 4.) The nitrogen is bonded oxygen and hydrogen to form an ammonium compound. (NH_4OH) This process is called nitrogen fixation.
- 5.) The ammonium compounds are absorbed by the legume and converted to amino acids.
- 6.) The nitrogen in the amino acids is now usable for other organisms; we can eat the legume and acquire nitrogen in this way. Once the organism that eats the legume defecates or dies, other bacteria can break down the amino acids and turn them back into ammonium compounds.