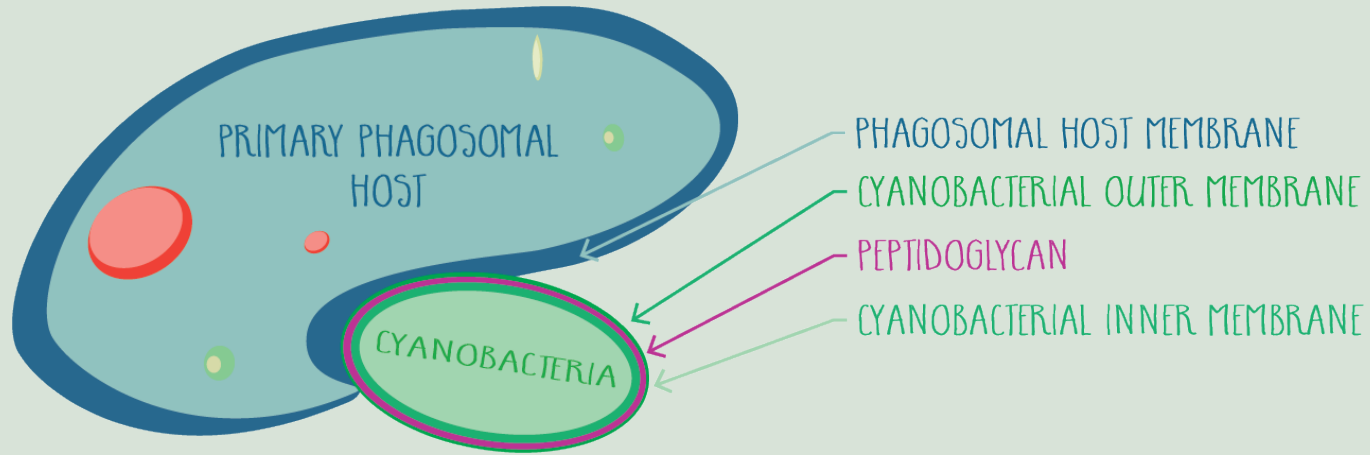


SO HOW DID WE GO FROM SIMPLE CYANOBACTERIA TO EUKARYOTIC PLANTS AND ALGAE?

PRIMARY ENDOSYMBIOSIS



PRIMARY PLASTID

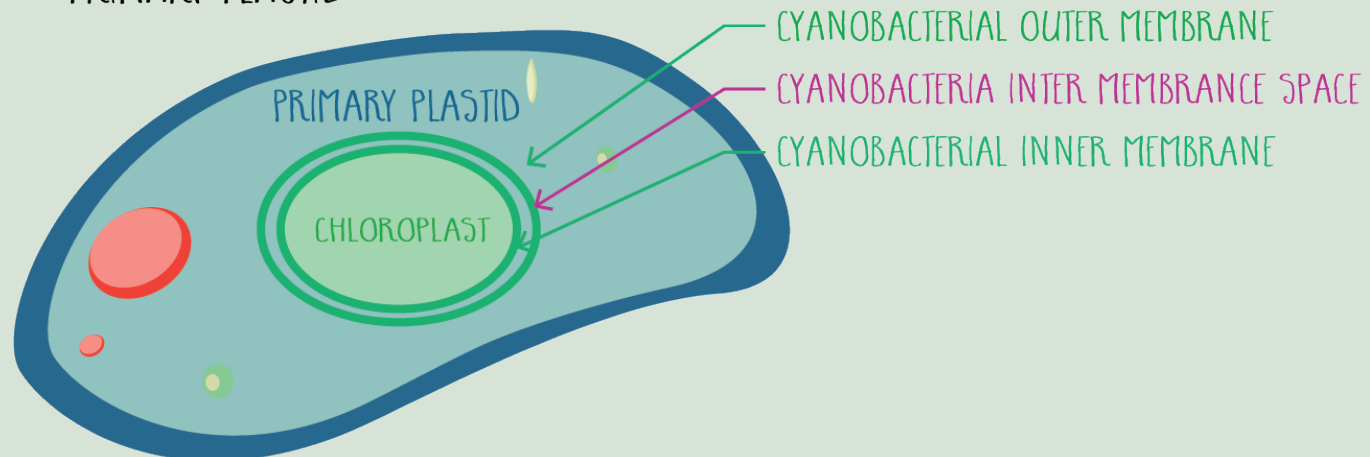


Image by Diane-Marie Brache-Smith

- Endosymbiosis!
- About 60 **million** years ago a eukaryotic heterotroph engulfed cyanobacteria.
- The cyanobacteria would not immediately be digested and would give nutrients to the host.
- Over time the host retained the bacteria forming a symbiotic relationship, leading to the bacteria becoming part of the organism.
- It is widely believed this was the ancestor to all eukaryotic photosynthesizers.