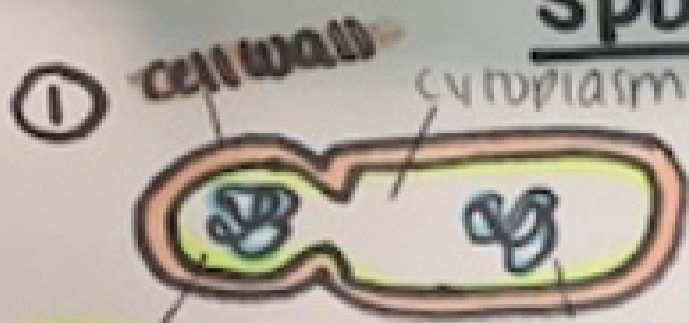
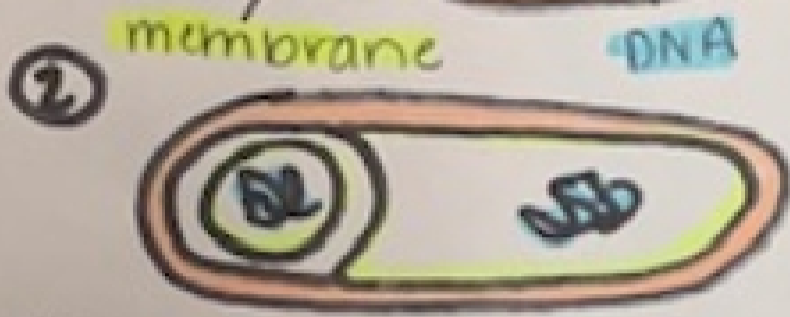


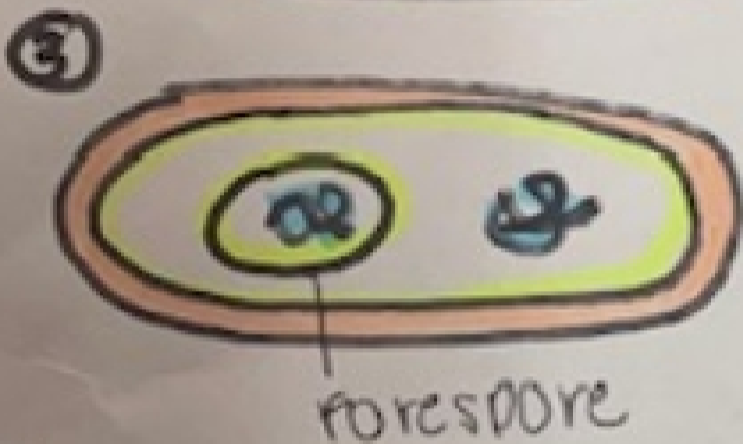
Sporulation



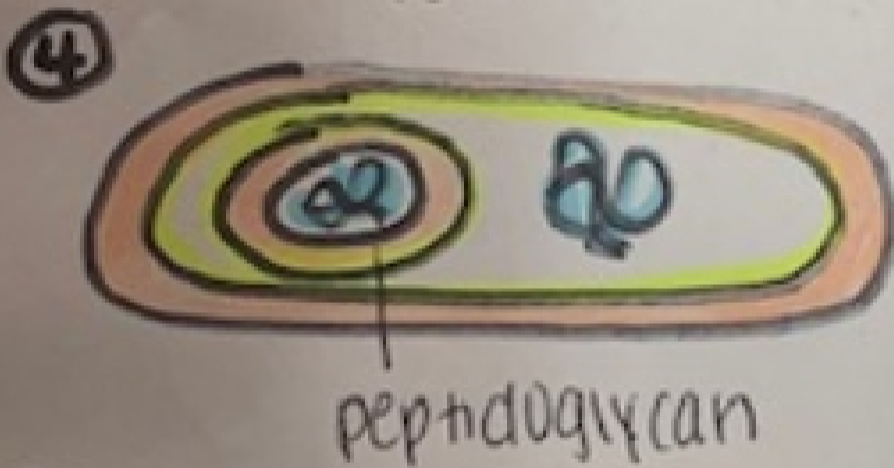
- DNA replicates
- Septum forms
- small section of cytoplasm separates



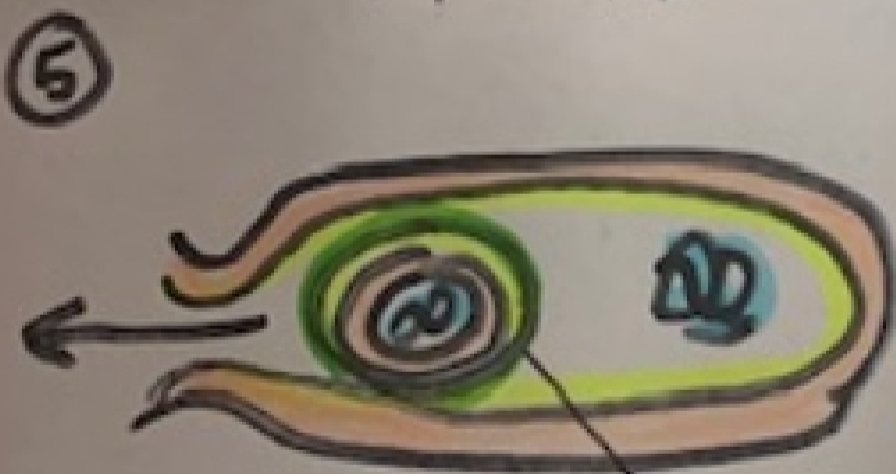
- membrane surrounds DNA and cytoplasm



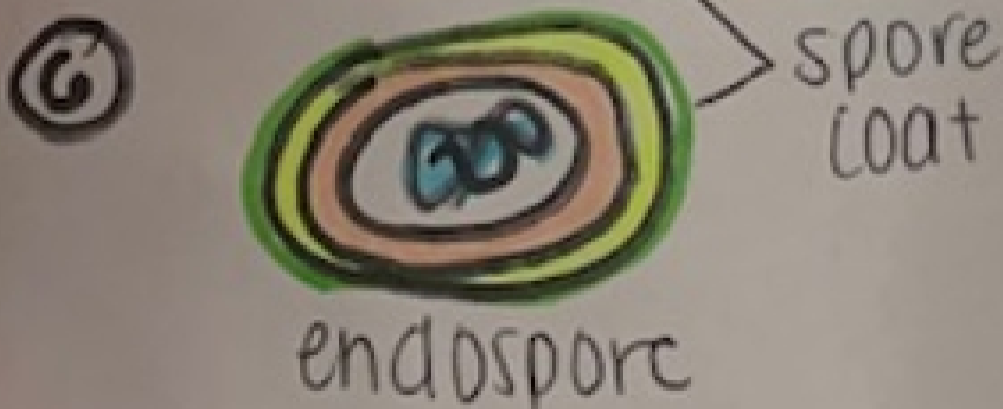
- spore septum surrounds separated portion
- forespore



- peptidoglycan develops




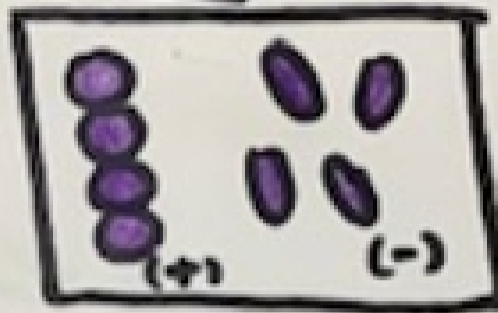
- formation of spore coat



- release of endospore

Gram Stains

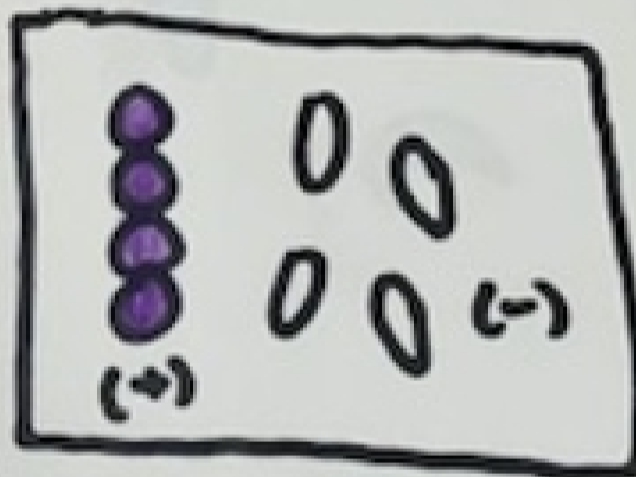
① Primary Stain
↳ crystal violet + 




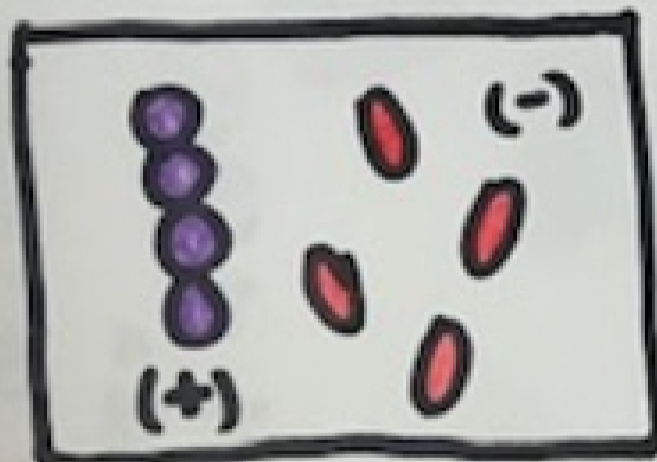
② Mordant
↳ Gram's Iodine
↳ large crystals of dye



③ Decolorizer
↳ alcohol / acetone
↳ removes primary stain from G- bacteria



④ Counterstain
↳ safranin (red) 
↳ stains G- cells



POSITIVE = Bacillus, Strep, Staph, Myco*

NEGATIVE = Escherichia, Helicobacter,
Pseudomonas, Salmonella

Major Shapes of Bacteria

Cocci

- spherical
- **diplococci** = pairs of cocci
- **Streptococci** = chains of cocci
- **Staphylococcus** = clusters of cocci
- **tetrads** = groups of 4 cocci

Bacillus

- rod-shaped
- **Vibrios** = curved rods
- **diplobacillus** = pairs of bacillus
- **Streptobacillus** = chain of bacillus

Spirilla

- spirals
- **Spirochetes** = flexible helix

