-Gram-positive retain crystal violet stain, appears blue or purple under a microscope
-Gram-negative has thinner cell walls and therefore loses the stain
It's then stained with safranin dye, a counterstain
This bacteria will appear red
-Gram-positive bacteria are susceptible to the antibiotic penicillin, which inhibits formation of cell walls
-Gram-negative bacteria have thinner cell walls that aren't susceptible to penicillin

Acid-fast technique
-Differentiates species of mycobacterium from other bacteria
-Lipid solvent carries carbolfuchsin dye into cells being studied
-Then cells are washed with a dilute acid-alcohol solution
-Mycobacterium aren't attracted by acid-alcohol and retain carbolfuchsin stain (bright red)
-Other bacteria lose stain and are exposed to methylene blue stain (blue)
-Stages involved in the production of making these slides
Fixing - chemicals like formaldehyde are used to preserve specimens as near-natural state as possible
Sectioning - specimens are dehydrated with alcohols, then placed in a mould with wax or resin to form a hard block, then sliced with a microtome (knife)
Staining - specimens are treated with multiple stains to show different structures
Mounting - specimens are secured to a microscope slide with a cover slip

Risk management
-Stains are toxic or irritants
-Carry out risk assessment

List of rules for producing good scientific drawings
-Title
-State magnification
-Use sharp pencils (labels and drawing)
-White, plain paper
-Use as much paper possible for drawing
-Smooth, continuous lines
-No shading
-Clearly defined structures
-Correct proportions
-Label lines should not cross or have arrowheads
-Label lines should be parallel to the top of the page, drawn with a ruler