

Biology 3201 Unit Checklist

Each student is expected to be able to do the following from Unit Three (Part “A”) : “Mendelian Genetics”

You should be able to...

- Define heredity and genetics
- Explain what a “unit” or “factor” is and Mendel’s beliefs on how they are inherited (the Blend Theory)
- Be able to define any term we ever read, saw, or discussed ! ANYTHING
- Explain Mendel’s famous three “Principles” (Dominance, Segregation, and Independent Assortment)
- Carry out monohybrid or dihybrid crosses with Punnett squares and summarize the results with genotypic and phenotypic ratios
- Do blood type crosses
- explain what a test cross is and why they are used
- Explain what Walter Sutton, Thomas Morgan did, what their major conclusions were
- How these new conclusions, and the discovery of “linked genes” changed how we look at Mendel’s ideas
- Know how a karyotype is prepared, and why they are used
- Know names and major discoveries leading up to the discovery of DNA’s structure in 1953
- Explain the structure of a DNA molecule
- Know how DNA is replicated in general terms (4 stages)
- Be thoroughly familiar with the process of making a protein from DNA’s instructions (processes of transcription and translation)