

Unit 11 – Mendelian & Molecular Genetics (Includes Biotechnology)

B4.1A

Draw and label a homologous chromosome pair with heterozygous alleles highlighting a particular gene location.

**B4.1c**

**Differentiate between dominant, recessive, co-dominant, polygenic, and sex-linked traits.**

**B4.1d**

**Explain the genetic basis for Mendel's Laws of Segregation and Independent Assortment.**

B4.1e

Determine the genotype and phenotype of monohybrid crosses using a Punnett Square.

B4.2h

Recognize that genetic engineering techniques provide great potential and responsibilities.

**B4.4a**

**Describe how inserting, deleting, or substituting DNA segments can alter a gene. Recognize that an altered gene may be passed on to every cell that develops from it and that the resulting features may help, harm, or have little or no effect on the offspring's success in its environment.**

**B4.4a.a I can describe how changes in DNA can alter a gene.**

**B4.4a.b I can recognize that only a sex cell (gamete) can pass genetic changes onto offspring.**

**B4.4a.c I can recognize that an altered gene may be passed onto every cell that develops from that gene.**

**B4.4a.d I can recognize that an offspring's success may be affected (helped or harmed) by an altered gene.**