

Genetics Part II

- Gregor Mendel was one of the first scientists to study genetics
 - Austrian monk who was studying pea plants in the monastery's garden
 - Discovered that some traits cover up other traits
 - Dominant traits-are the trait that covers the other trait
 - Recessive traits-are the traits that are covered up
- Pea Plants have seven traits that are easy to observe and have 2 different forms
 - The different forms of a gene are called **Alleles**

- Mendel used different letters to represent each trait
 - Capital letters show the dominant trait
 - Lower case letters to show the recessive trait
 - Flower Position
 - Axial (A) or Terminal (a)
 - Flower Color
 - Purple (P) or White (p)
 - Seed Shape
 - Round (R) or Wrinkled (r)
 - Seed Color
 - Green (G) or Yellow (g)
 - Pod Shape
 - Inflated (I) or Constricted (i)
 - Pod Color
 - Green (G) or Yellow (g)
 - Height
 - Tall (T) or dwarf (t)



- Most organisms have 2 copies of each gene, one from each parent
 - If both copies are the same, the organism is **homozygous**
 - TT, tt, GG, gg and PP are all homozygous
 - If both copies are different, the organism is **heterozygous**
 - Tt, Gg, Pp, Ii and Rr are all heterozygous