

# GENETICS

Chromosome		DNA	Gene	Allele	The study of inheritable traits is called Genetics. We now know that our phenotype is controlled by our genetic code. If an organism has two copies of the same allele then they are called Homozygous. If on the other hand they receive one copy of the Dominant Allele and one copy of the Recessive Allele then they are said to be Heterozygous. The probability of having a particular combination of traits in offspring can be found using a Punnett Square.
	DNA is found in the nucleus of all eukaryotic cells.				
Incomplete Dominance		Sex Linked Traits			
		Males cannot be a carrier for X linked traits because they are only found on the X chromosome and therefore only receive one copy of the allele. Superscripts are used to show the alleles. The notation is $X^A X^a$ or $X^A Y$			
Codominance		Multiple Alleles			
Chromosome Mutations		Gene Segregation			
<b>Translocation-</b> switching of genetic parts from nonhomologous chromosomes	<b>Inversion-</b> the reversing of the gene sequence on a section of a chromosome				
<b>Deletion-</b> loss of the genes within those regions	<b>Duplication-</b> multiple copies of chromosomal region	<b>Blood Types</b>	<b>Down Syndrome</b>	<b>Hemophilia</b>	
		A			
		B			
Nondisjunction		AB	<b>Color Blindness</b>	<b>Tay Sachs</b>	
		O			
<b>Mendel</b>	<b>Pedigree</b>	<b>P1, F1, F2</b>	<b>Trait</b>	<b>Genome</b>	
			A physical characteristic or feature of an organism. Traits are described as phenotypes and are controlled by genotypes	The human genome project is the attempt to record the complete DNA sequence for humans and other organisms	