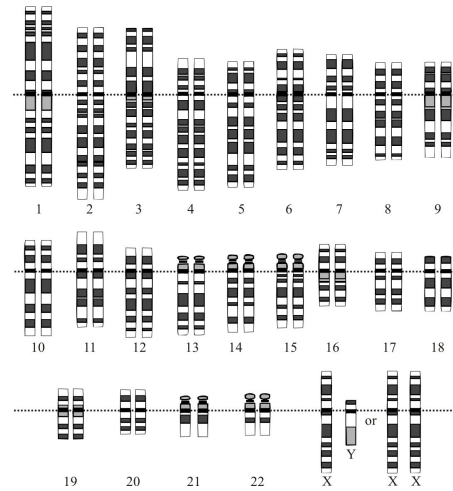


Genetics

Homologous Chromosomes

- ★ When female and male gametes meet during fertilization, the genetic material combines
- ★ A diploid cell forms
- ★ Homologous chromosomes and associated alleles pair up
- ★ Offspring inherits one set of chromosomes and its alleles from biological mother, and the other set of chromosomes and its alleles from biological father
- ★ Together, these sets of chromosomes form a set of homologous chromosomes

















Important Vocabulary

Hybrid	Results from mating or crossing of two purebred plants that have different traits Example: purple flower x white flower
Monohybrid	Refers to a crossbreeding experiment that follows the inheritance of a single characteristic across one or more generations
Dominant	Trait is fully expressed in the offspring, even in a hybrid
Recessive	Trait is not expressed in a hybrid, meaning that the recessive trait is not visible
Allele	A different form of the same gene
Traits	An inherited characteristic, such as eye colour or hair colour

Pea Plants and Colour of Flowers

Dominant allele is a capital letter : B
Recessive allele is a small letter: b
Homozygous (2 of same alleles) : BB or bb Homozygous Dominant: BB Homozygous Recessive: bb
Heterozygous (2 different alleles): Bb
Phenotype (physical description): purple flower petal
Genotype: Bb or BB or bb

Mendel Studied 7 Characteristics in Peas:

Seed		Flower	Pod		Stem	
Form	Cotyledon	Color	Form	Color	Place	Size
						
Round	Yellow	White	Full	Green	Axial pods	Tall
						
Wrinkled	Green	Violet	Constricted	Yellow	Terminal pods	Short
1	2	3	4	5	6	7