

Genetics Vocabulary

Chapter 6

Big Question

- * Why do offspring differ from their parents?

Vocab Words

Quiz Friday

1. Traits
2. Genetics
3. Gene
4. Allele
5. Homozygous
6. Heterozygous
7. Genome
8. Genotype
9. Phenotype
10. Dominant
11. Recessive

Traits

- * Distinguishing characteristics that are inherited, such as eye color or leaf shape

Traits



Widow's peak or not?



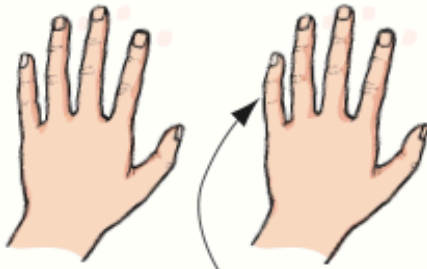
Can roll the tongue or not?



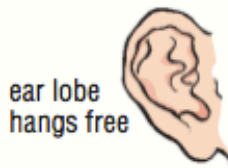
Which thumb is on the top?



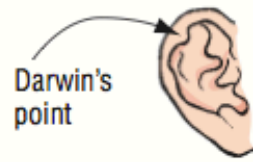
Length of second toe?
Is it longer than your big toe
or not?



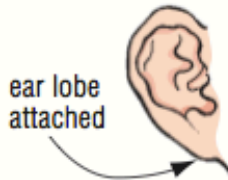
Little finger straight or crooked?



ear lobe
hangs free



Darwin's
point



ear lobe
attached



no Darwin's
point



front teeth close together



front teeth with a definite gap

Heredity

HEREDITY

the passing of genetic traits
from parent to offspring



Children look similar to their parents because of the traits they inherit.

© 2011 - Kim Grier

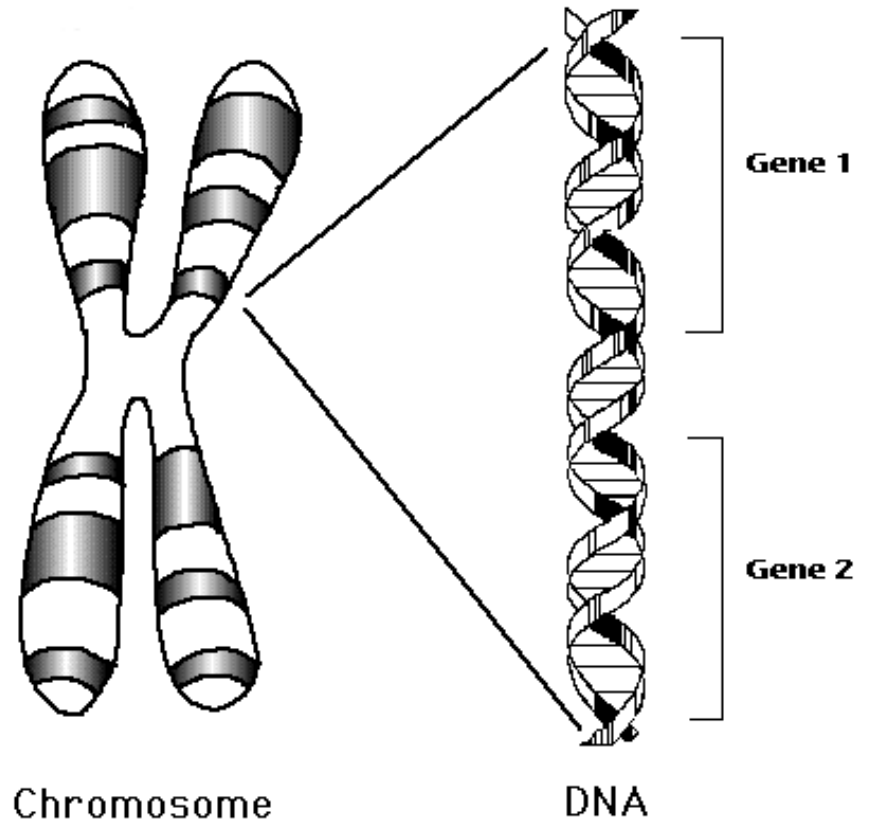
Genetics

- * The study of biological inheritance patterns and variation in organisms.
- * (The study of how genes are passed on and expressed in offspring)



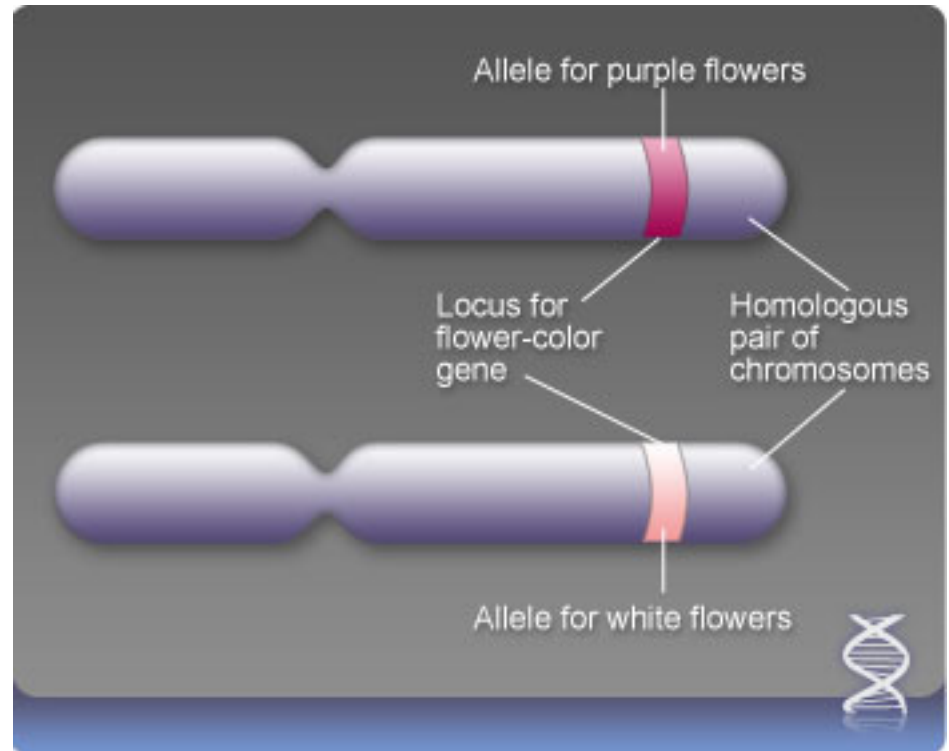
Gene

- * A piece of DNA that provides a set of instructions to a cell to make a certain protein.



Allele

- * Any alternative forms of a gene that may occur
- * Each parent gives one allele-they may be the same, they may be different



Homozygous vs Heterozygous

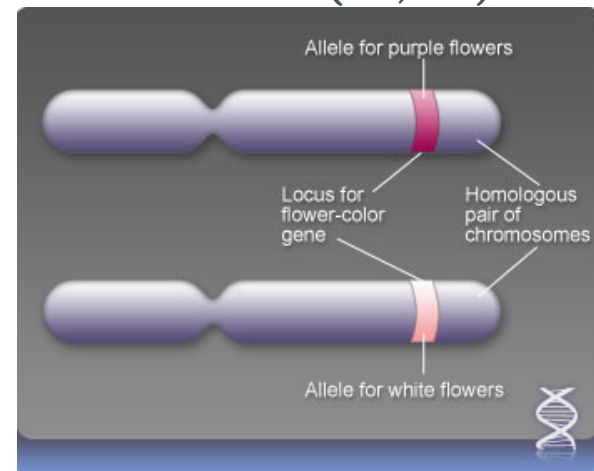
Homozygous

- * Two of the same alleles
- * Represented by two letters of the same case (AA, aa, BB, bb)



Heterozygous

- * Two different alleles
- * Represented by two letters of different cases (Aa, Bb)



Genome

- * All of an organism's genetic material
- * 100% unique UNLESS you have an identical twin



Genotype vs. Phenotype





Genotype

- * The genetic makeup of specific **genes**

Phenotype

- * **Physical** characteristics or traits of an individual

Genotype vs. Phenotype

		pollen ♂	
		B	b
pistil ♀	B	 BB	 Bb
	b	 Bb	 bb

Dominant vs. Recessive





Dominant

- * Allele that is expressed when present, even if there is only one copy (simple dominance)
- * Represented by capital letters (A, B)

Recessive

- * Allele that is only expressed when two copies are present
- * Represented by lowercase letters (a, b)

Dominant and Recessive

		pollen ♂	
		B	b
pistil ♀	B	 BB	 Bb
	b	 Bb	 bb

Don't Make the Mistake

- * Dominant does not equal stronger or better, it just means the allele is shown when present
- * It also doesn't mean that trait is necessarily more prominent in a population
 - * Huntington's Disease
 - * Some forms of polydactyly



BINGO Tomorrow

- * I will give you definitions or examples and you'll choose the right words