

Genotypes vs. Phenotypes

Vocabulary

Phenotype - the way an organism looks or behaves as a result of inherited traits; Example: brown or blue eyes

Allele - one of a pair of genes that control a trait

Alleles - the pair of genes; one comes from the mother, one comes from the father

Genotype - using letters, the allele combinations or genes representing a phenotype; Example: BB, Bb or bb

NOTE: If looking at the phenotype, if the first letter is capital, you cannot say what the second allele is. The only chance of figuring out the second allele is if you can see BOTH parents' phenotypes.

Review

Traits are ...

Genes are ...

Phenotypes vs. Genotypes

Phenotypes – memory hook:




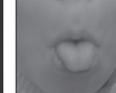



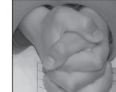
Examples from the Trait Charts:

Genotypes – memory hook:

Examples from the Trait Charts:

Traits Chart – Part 1

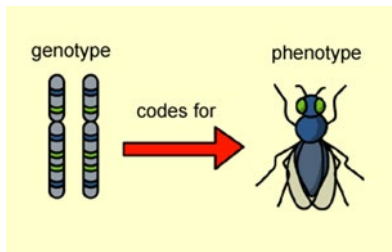
What are your PHENOTYPES?

Hairline	 Widow's Peak Hairline	 Straight Hairline	Tongue Rolling	 Can Roll Tongue	 Can't Roll Tongue
Earlobe Attachment	 Attached Earlobes	 Detached Earlobes	Hand Clasping	 Cross Left Thumb Over Right	 Cross Right Thumb Over Left
Freckles	Present or Absent		Handedness	Right or Left	
Cleft Chin	Present or Absent		Dimples	Present or Absent	

Traits Chart – Part 2

Complete the missing items

TRAIT	PHENOTYPE	GENOTYPE	PHENOTYPE	GENOTYPE
Hair Line	Widow's Peak	WW or <input type="text"/>	Straight hair line	ww
Tongue Rolling	Tongue Roller	TT or Tt	Non-Roller	tt
Earlobes	Detached	EE or Ee	Attached	<input type="text"/>
Hand Clasping	Left thumb on top	QQ or Qq	Right thumb on top	qq
Freckles	Freckles	FF or Ff	No Freckles	ff
Handedness	Right	<input type="text"/> or Rr	Left	rr
Cleft Chin	Cleft in Chin	CC or Cc	Smooth Chin	cc
Dimples	Dimples	DD or Dd	No Dimples	<input type="text"/>



Locus (loci, plural) – a specific, fixed position on a chromosome where a particular gene or genetic marker is located