

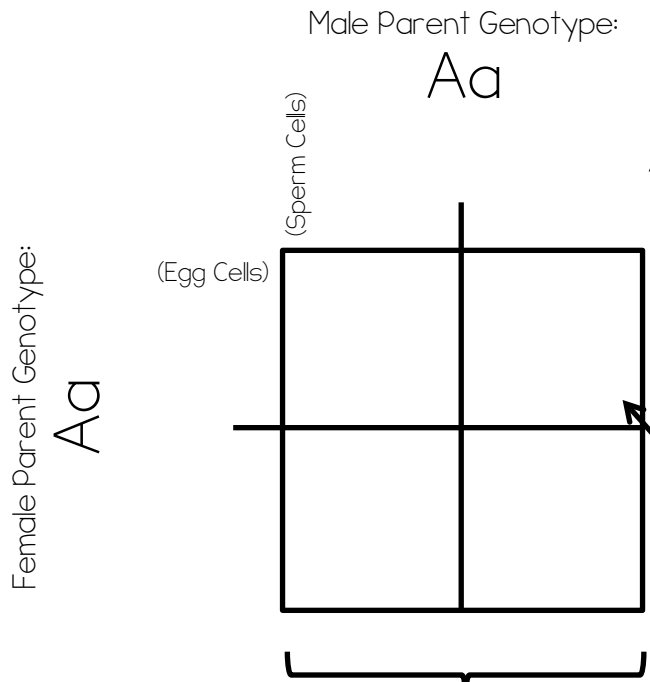
Name: _____ Period: _____

5.3 Punnett Squares and Mendel's Laws

Part I: Punnett Squares

----- Passing of genetic information (genes) from parent to offspring.		
Chromosome vs. Gene vs. Allele		
Chromosome	Gene	Allele
Phenotype vs. Genotype		
----- Combination of two alleles found in an organism's chromosomes	----- Physical appearance of an organism's alleles	
Dominant Allele vs. Recessive Allele		
----- Allele that will always be expressed (show up) in an organism's phenotype (Does NOT mean more common!) Symbolized with: _____	----- Allele that will only be expressed with no dominant alleles are present; masked by dominant alleles Symbolized with: _____	
Heterozygous Genotype vs. Homozygous Genotype		
----- ----- means same Combination of two alleles where both are either dominant or recessive Symbolized as: _____	----- ----- means different Combination of two alleles where one is dominant and the other is recessive Symbolized as: _____	

Punnett Squares:



Why is there only one letter?

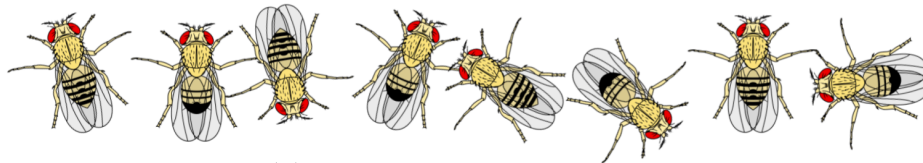
•which letter do you use?

- The letter that is used to symbolize an allele is commonly the first letter of the DOMINANT PHENOTYPE.
- Example: if purple flowers are dominant the allele symbol would be "P". and if white flowers are recessive, then the allele symbol would be "p"

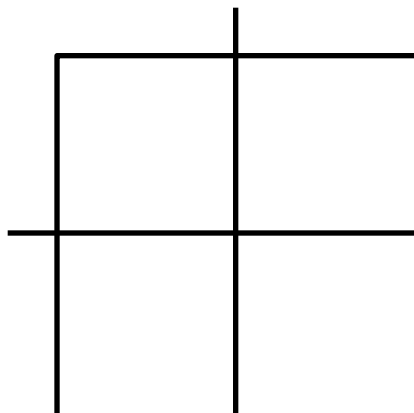
Why are there two letters?

ALL POSSIBLE Offspring Genotypes
 (write them as a ratio!)

Example:



Red fruit fly eyes are dominant (R) and white fruit fly eyes (r) are recessive. Cross (sexually reproduce) a homozygous dominant and a heterozygous fruit fly.



ALL POSSIBLE Offspring
GENOTYPES
 (write them as a ratio!)

ALL POSSIBLE Offspring
PHENOTYPES
 (write them as a ratio!)