

Name _____

Fruit Fly Genetics Worksheet

Record the traits that were selected for your flies here:

Dominant Traits

Recessive Traits

Body Color _____

Body Color _____

Eye Color _____

Eye Color _____

Wing Type _____

Wing Type _____

First Generation

Punnett Squares:

Body Color

B b

B		
b		

Eye Color

E e

E		
e		

Wing Type

W w

W		
w		

Predicted

Results:

	Body	Eyes	Wings
Heterozygous Ff	%	%	%
Homozygous Dominant FF	%	%	%
Homozygous Recessive ff	%	%	%

Real

Results:

	Body	Eyes	Wings
Heterozygous Ff			
Homozygous Dominant FF			
Homozygous Recessive ff			

Record the genotypes that were selected for your flies here:

Male Genotypes

Female Genotypes

Body Color _____

Body Color _____

Eye Color _____

Eye Color _____

Wing Type _____

Wing Type _____

Second Generation

Punnett Squares:

Body Color

Eye Color

Wing Type

Predicted

Results:

	Body	Eyes	Wings
Heterozygous Ff	%	%	%
Homozygous Dominant FF	%	%	%
Homozygous Recessive ff	%	%	%

Real

Results:

	Body	Eyes	Wings
Heterozygous Ff			
Homozygous Dominant FF			
Homozygous Recessive ff			

Definitions and Examples

- Allele - One member of a pair of genes that make up an organism's trait.
Example: b is an allele of Bb.
- Genotype - The combination of two alleles that make up an organism's trait.
Example: BB is a genotype.
- Phenotype - The observable characteristics of an organism that make up a trait.
- Homozygous - Having identical alleles for a single trait.
Examples: Dominant Homozygous: BB
Recessive Homozygous: bb
- Heterozygous - Having two different alleles for a single trait.
Example: Bb

Punnett Square Example:

	B	B
b	Bb	Bb
b	Bb	Bb

Predicted

Results:

	Percentage
Heterozygous Ff	100%
Homozygous Dominant FF	0%
Homozygous Recessive ff	0%