

Genetics Student Worksheet #3

Drosophila Worksheet (Answer Sheet)

Male Drosophila (XY) – dark, rounded abdomen Female Drosophila (XX) – Long, pointy, striped abdomen

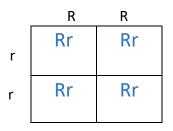


Drosophila traits –

Eye color: red (dominant), white (recessive), sepia or brown (recessive) Body color: yellow (dominant), black (recessive), grey (recessive) Wing type: long wings (dominant), no wings (recessive), short wings (recessive)

Punnett Square Practice:

1. Cross a female, red-eyed fly with a male, white-eyed fly.



Phenotype result (physical trait description): 100% red eyes Genotype result (genetic makeup): 100% Rr

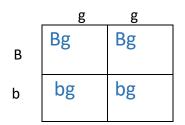


2. Cross a male homozygous short-winged fly with a female heterozygous long-winged fly.

| | W | w |
|---|------|----|
| | Ww | ww |
| W | | |
| | Ww | |
| w | VVVV | WW |
| | | |

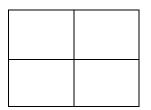
Phenotype result: 50% long wings, 50% short wings Genotype result: 50% Ww, 50% ww

3. Cross a homozygous, grey female with a heterozygous, black male.

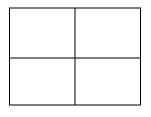


Phenotype result: 50% black bodies, 50% black and grey bodies Genotype result: 50% Bg, 50% bg

- 4. Cross a male and female randomly selected from your card piles.
- 5. Cross a male and female randomly selected from your card piles.



Phenotype result: Genotype result:



Phenotype result: Genotype result: