

Research question

1. **c p n states relationship as: $DV=f(IV)$**
2. **c p n states IV range that can be manipulated (How much? How many?)**
3. **c p n states directly measureable DV (Quantifiable?)**
4. **c p n focuses question (specific outcome-not too broad)**
5. **c p n names organisms w/binomial nomenclature (*Drosophila melanogaster*)**

How do we determine the body color genotypes of a yellow male crossed with wild female *drosophilae* by looking at the phenotypes ratio of their 2 generations offspring?

- 1.
- 2.
- 3.
- 4.
- 5.

Are brown eyes a dominant or recessive trait in fruit flies (*drosophila melanogaster*), and is the trait sex-linked or autosomal?

- 1.
- 2.
- 3.
- 4.
- 5.

Is the "wild" type phenotype dominant over the black body colour phenotype in *drosophila melanogaster* and is it sex-linked?

- 1.
- 2.
- 3.
- 4.
- 5.

How do we determine the body colour genotypes of offspring of a black male mated with a wild type female fruit fly by observing the phenotype ratio of their F2 generation?

- 1.
- 2.
- 3.
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- 5.

What is the inheritance pattern of a male wild type fruit fly (*Drosophila melanogaster*) mating with a female purple eyed fruit fly?

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- 2.
- 3.
- 4.
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What would be phenotype ratio of generations F1 and F2 when crossing a female fruit fly (*Drosophila Melanogaster*) of purple eyes with a male fruit fly with wild eyes?

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- 2.
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- 4.
- 5.

What would the phenotypes of the F1 and F2 generations be when crossing a female fruit fly with purple eyes with a male fruit fly with wild eyes?

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- 2.
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- 4.
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In *drosophila melanogasters* (fruit flies), if we mate a male vestigial winged with a female wild-type, while changing no other characteristics, what will be the ratio of vestigial to wild-type in the F1 and F2 generations? Is the trait of vestigial wings sex-linked or autosomal?

- 1.
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- 4.
- 5.

How many affected offspring's are present when a purple-eyed fruit fly is cross=bred with a wild-eyed fruit fly?

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- 2.
- 3.
- 4.
- 5.

How does mating a homozygous dominant, female, wild type *Drosophila melanogaster* (the common fruit fly), with a homozygous recessive, white-eyed fruit fly affect the phenotypic and genotypic ratio (in number of offspring) of eye color in the F1 and F2 generation offspring? Is this a sex-linked or autosomal trait?

- 1.
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Comparing the wild type wing with the apterous wing, which wing has more dominance and how does this affect the inheritance of F1 generations and F2 generations?

- 1.
- 2.
- 3.
- 4.
- 5.

How can we determine the body colour genotypes of 1 yellow male and 1 wild (orange) female *Drosophila melanogaster* (fruit fly), by observing the phenotype ratios of two generations of their offspring?

- 1.
- 2.
- 3.
- 4.
- 5.

What is the inheritance pattern of a purple-eyed female Fruit Fly crossed with a wild type male Fruity fly?

- 1.
- 2.
- 3.
- 4.
- 5.

If a homozygous white eyed male fruit fly (*Drosophila melanogaster*) is mated with a homozygous wild type red-eyed female fruit fly (*Drosophila melanogaster*), what would the ratio be for the F1 and F2 generations produced for the number of offspring with red eyes to the number with white eyes? Hence, would the ratios reveal that the trait for white eyes is recessive and sex-linked?

- 1.
- 2.
- 3.
- 4.
- 5.

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