Non-Mendelian Genetics Notes

Incomplete Dominance:

- neither allele is completely ______ over the other.
- If both alleles are inherited, then the result is a ______ of traits.
- Since neither trait is completely dominant, the alleles are expressed as two ______ capital letters.
- Example: People Eaters can have red or blue eyes. A people eater with an allele for each color will be ______

THIS IS NOT REALLY HOW TEETH OR DIET WORKS. THIS IS COMPLETELY FROM MY IMAGINATION FOR PEOPLE EATERS. WHICH AREN'T REAL...AS FAR AS I KNOW.

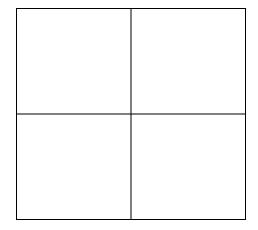
Multiple Alleles:

- There are ______ two alleles for a trait that can be inherited. Each individual still only gets 2 alleles for a trait.
- Usually two of the alleles are codominant and one is recessive
- Example: Human blood types are controlled by three alleles; ______.

° _	and	are codominant and	is recessive	
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A blood:______ or _____ B Blood:_____ or _____ AB Blood:_____

O Blood:_____



Sex-Linked Traits:

- The gene that controls that trait is located on the _____ chromosome.
- Traits are usually ______.

Female:_____

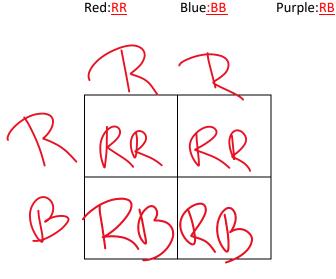
- These will tend to be more common in ______.
- Example: Color blindness is a sex-linked trait controlled by ______.
 Normal Vision:
 Female: ______ or _____ Male: _____
 Colorblind:

Male:_____

Non-Mendelian Genetics Notes

Incomplete Dominance:

- neither allele is completely <u>dominant</u> over the other.
- If both alleles are inherited, then the result is a <u>blending</u> of traits.
- Since neither trait is completely dominant, the alleles are expressed as two different capital letters.
- Example: People Eaters can have red or blue eyes. A people eater with an allele for each color will be purple



Show the cross between a purple-eyed people eater and a redeyed people eater RB x RR

Codominance:

- Both traits are equally dominant
- If both alleles are inherited, then the result is <u>both traits</u> are expressed
- Since neither trait is completely dominant, the alleles are expressed as two different capital letters.
- Example: People Eaters can have sharp teeth or flat teeth. A people eater with an allele for each will have <u>sharp</u> and <u>flat</u> teeth. We would call them an <u>omnivore</u>

Sharp Teeth: SS

Flat Teeth: FF

Sharp and Flat Teeth:<u>SF</u>

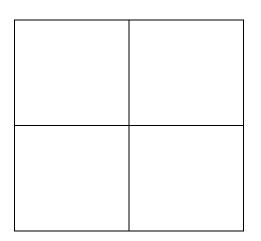
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Multiple Alleles:

- There are more than two alleles for a trait that can be inherited. Each individual still only gets 2 alleles for a trait.
- Usually two of the alleles are codominant and one is recessive
- Example: Human blood types are controlled by three alleles; <u>A, B, and O</u>. Sometimes expressed as I<sup>A, I^B, or i
 </sup>
 - <u>A</u> and <u>B</u> are codominant and <u>O</u> is recessive

A blood: AA or AO B Blood: BB or BO AB Blood: AB

O Blood:00



Sex-Linked Traits:

- The gene that controls that trait is located on the \underline{X} chromosome.
- Traits are usually <u>recessive</u>.
- These will tend to be more common in <u>males</u>
- Example: Color blindness is a sex-linked trait controlled by <u>a gene on the X chromosome</u> Normal Vision:

Female: X^cX^c or X^cX^c (carrier)Male: X^cYColorblind:Female: X^cX^cMale: X^cYMale: X^cY

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