

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 _____

Red: _____ Blue: _____ Purple: _____

Codominance:

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

Sharp Teeth: _____ Flat Teeth: _____ Sharp and Flat Teeth: _____

*****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

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 _____.
- These will tend to be more common in _____.
- Example: Color blindness is a sex-linked trait controlled by _____.

Normal Vision:

Female: _____ or _____ Male: _____

Colorblind:

Female: _____ Male: _____

Non-Mendelian Genetics Notes

Incomplete Dominance:

- neither allele is completely dominant over the other.
- If both alleles are inherited, then the result is a blending 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

Red:RR

Blue:BB

Purple:RB

	R	R
R	RR	RR
B	RB	RB

Show the cross between a purple-eyed people eater and a red-eyed people eater

RB x RR

Codominance:

- Both traits are equally dominant
- If both alleles are inherited, then the result is both traits 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 sharp and flat teeth. We would call them an omnivore

Sharp Teeth:SS

Flat Teeth:FF

Sharp and Flat Teeth:SF

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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; A, B, and O. Sometimes expressed as I^A , I^B , or i
 - A and B are codominant and O is recessive

A blood: AA or AO

B Blood: BB or BO

AB Blood: AB

O Blood: OO

Sex-Linked Traits:

- The gene that controls that trait is located on the X chromosome.
- Traits are usually recessive.
- These will tend to be more common in males
- Example: Color blindness is a sex-linked trait controlled by a gene on the X chromosome

Normal Vision:

Female: $X^C X^C$ or $X^C X^c$ (carrier) Male: $X^C Y$

Colorblind:

Female: $X^c X^c$ Male: $X^c Y$
