Genetics Assignment /30

The purpose of this project is to explore real world examples of genetic traits. Choose a trait from the list below. Using the terminology from both the genetics and cell notes create a poster or powerpoint. Each of the traits is an example of one of the following types of inheritance: *complete dominance, incomplete dominance, co-dominance,* *sex linked inheritance,* or a *mutation that occurs during meiosis.*

Your presentation should include the following:

1. Provide background information on the gene you have chosen
2. What possible phenotypes and genotypes exist for your trait?
3. What type of inheritance does your gene exhibit (ie. Incomplete dominance)?

+ Include a definition of the type of inheritance your gene exhibits

1. Include a punnet square showing inheritance in your gene OR if you have a sex linked gene or a mutation that occurs during meiosis draw an image of the step during which the mutation occurs

Genetic Traits:

1. Snapdragon flowers incomplete dominance
2. Brindle coat in dogs
3. Hyperelastosis Cutis in horses
4. Blood type
5. Tay-Sachs disease
6. Colourblindness
7. Cystic fibrosis
8. Huntington’s
9. Sickle cell anemia
10. Muscular dystrophy
11. [Klinefelter syndrome](https://en.wikipedia.org/wiki/Klinefelter_syndrome)
12. Cri du Chat Syndrome
13. Down Syndrome
14. Kermode Bear
15. spinal muscular atrophy
16. Mosaic Turner Syndrome
17. Check in with Ms. Smyth if you have an idea for a different genetic condition or trait you would like to look in to

**Marking Key**

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| **Research Skills**

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| Highly Effective5 | Effective4 | Capable/Confident3 | Capable2 | Partial/Developing1 |
| Content from sources in in own words.Biological terms are defined. | Content from sources is partially in own words.Biological terms are defined. | Content is partially in own words.Some terms not defined. | Content is partially in own words.Terms not defined. | Content taken directly from resource. |
| Information from resources is organized clearly and logically. | Information from resources is partially organized but not logically. | Information from resources is not logically organized. | Very little organization of information. | No attempt to organize content from resources. |
| Excellent use of resources and references cited correctly. | Good use of resources and references cited correctly. | Good use of resources but references not cited correctly. | Narrow range of references used and not cited correctly. | Poor choice in references used or no references cited. |

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| **Basic Content**

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| Highly Effective5 | Effective4 | Capable/Confident3 | Capable2 | Partial/Developing1 |
| Describes trait’s inheritance thoroughly with complete understanding. | Describes trait’s inheritance thoroughly but minor gaps in understanding. | Describes trait’s inheritance somewhat but a few gaps in understanding. | Describes trait’s inheritance somewhat but many gaps in understanding. | Does not Describes trait’s inheritance and many gaps in understanding. |
| Uses biological terms from the unit in a concise and accurate manner. | Uses biological terms from the unit but not in a concise or accurate manner. | Uses biological terms from the unit but some terms used inaccurately. | Partial use of biological terms from the unit or terms used inaccurately. | Missing many of the biological terms from the unit. |
| Excellent explanation of underlying genetics with complete understanding | Good explanation but missing an element of underlying genetics | Good explanation but missing key elements of the underlying genetics | Good explanation but missing key elements of the underlying genetics. | Does not show a clear understanding of underlying genetics |

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