

Genetics Counselor Project

Based on the tasks completed, there are a series of items that should be correctly completed for maximum points on this project.

Task 1: Research

You were required to use the links provided to research the six different genetic disorders and provide a summary, inheritance pattern, and symbols for usage in your Punnett squares.

The summary is worth 2 points per genetic disorder.

- 2 points
 - Student has given a brief summary about the disorder including a few common symptoms or occurrences with the disorder
- 1 point
 - Student have given a vague description that could apply to any disorder and was not specific to the genetic disorder summarizing
- 0 points
 - Student has neglected to complete the summary

The inheritance pattern is worth 1 point per genetic disorder.

- 1 point
 - Student correctly has identified whether the genetic disorder is inherited as an autosomal dominant or recessive.
- 0 point
 - Student has incorrectly identified the inheritance pattern of the disorder
 - Student has neglected to complete the inheritance pattern

The symbols are worth 1 point per genetic disorder.

- 1 point
 - Student has provided a logical symbol (the name of the disorder as capital letter for dominant and lower case for recessive) and it does not repeat among the other disorders.
- 0 points
 - Student uses a symbol that does not apply to the disorder
 - Student uses a symbol already used for another disorder
 - Student has neglected to complete the symbol identification

Task 2: Genetic Counselor

You are required to use the given information to complete a Punnett square between the parents. From this cross, you are to be able to determine the probability of an offspring to have a genetic disorder.

The Punnett squares are worth 3 points each.

- 1 point
 - Student has correctly identified the parental genotypes for the cross

- 1 point
 - Student has appropriately completed the Punnett square
 - Student may receive this point even if their parental genotypes are incorrect if it matches their parental genotypes
- 1 point
 - Student has appropriately determined the probabilities of an offspring (affected, carrier, normal)
 - Student may receive this point based on their Punnett square

Task 3: Educational Materials

You should have created an educational material to share information about the genetic disorder with the expecting parents.

The educational materials should have include a summary, symptoms, cause, inheritance, treatments, and prognosis of the disease. Each component is worth 1 point for 6 points per genetic disorder. Student should demonstrate an understanding of the component to receive full credit on each part. The educational material should be written well with no typos or grammatical issues. This component is worth 3 points.

- 3 points
 - There are no typos or grammatical errors.
 - Student has written an appropriate educational material to share the information about the genetic disorders.
- 2 points
 - There are a few typos or grammatical errors, but it does not inhibit the understanding of the text
- 1 point
 - Student has a large amount of typos or grammatical issues, or the issues draw away from the understanding of the text
 - Student has not demonstrated appropriate writing styles.
- 0 points
 - Student did not attempt to write any content in the educational material

The educational material should be visually pleasing to draw attention the components of the educational material. This is worth 2 points per genetic disorder.

- 2 points
 - The educational material is appropriate organized and visually pleasing
- 1 point
 - The educational material is not visually pleasing
 - The educational material is not organized and hard to read
- 0 point
 - Student has not completed a project

Task 1: Research

<i>Genetic Disorder</i>	<i>Summary (2)</i>	<i>Inheritance Pattern (1)</i>	<i>Symbols (1)</i>
Achondroplasia	2 1 0	1 0	1 0
Cystic Fibrosis	2 1 0	1 0	1 0
Huntington's Disease	2 1 0	1 0	1 0
Polydactyly	2 1 0	1 0	1 0
Sickle Cell Disease	2 1 0	1 0	1 0
Tay-Sachs Disease	2 1 0	1 0	1 0
Total			

Task 2: Genetic Counselor

Genetic Disorder	Parental Genotype (1)	Punnett Square (1)	Probability (1)
Achondroplasia	1 0	1 0	1 0
Cystic Fibrosis	1 0	1 0	1 0
Huntington's Disease	1 0	1 0	1 0
Polydactyly	1 0	1 0	1 0
Sickle Cell Disease	1 0	1 0	1 0
Tay-Sachs Disease	1 0	1 0	1 0
Correctly Identified the Two Disorders			2 1 0
Total			

Task 3: Educational Material

	<i>Genetic Disorder #1</i> <hr style="width: 80%; margin: auto;"/>	<i>Genetic Disorder #2</i> <hr style="width: 80%; margin: auto;"/>
Summary	1 0	1 0
Symptoms	1 0	1 0
Cause	1 0	1 0
Inheritance	1 0	1 0
Treatments	1 0	1 0
Prognosis	1 0	1 0
Grammatical Issues	3 2 1 0	3 2 1 0
Visually Pleasing	2 1 0	2 1 0
Total		