

Genetic Disorder Symposium

SC.F.2.4.2; SC.H.1.4.1

Your Disorder _____

Presentation Due Date: _____

Teams will be chosen to present randomly, therefore everyone must be prepared to present on day 1.

Points will be deducted from overall score for being late and unprepared.

- Project must be presented via PowerPoint
 - 10 – 15 slides
 - Open Office file (.odp) must be converted to PowerPoint (.ppt) prior to submission
 - Save to flash drive or CD, or you may email it to Mrs. King as an **attachment**
- Each group will be graded using a rubric.
- All team members must take part in the presentation as well as research. 3-5 minute presentation (timed).
- Team names must be clearly listed on the title page of PPT (first and last name)
- Research assigned genetic disorder using any outside, reputable resource
 - Do not use Wikipedia
- Project must be factual, **not** fiction.
- Reference page with all citations as the last page in *alphabetical order*

Team Project Guidelines:

You must address the following using the outline below, which are designed to provoke thought and to help you determine what is significant and what is not.

1. Introduction

What is the name of the disorder?

Are there any other names by which it is commonly known?

2. Mode of inheritance

All genetic disorders are inherited. There are several different ways in which they can be inherited. Determine whether your disorder is an autosomal dominant trait, an autosomal recessive trait, an X-linked recessive trait, a chromosomal error or a multi-factorial trait (polygenic disorder). Chromosomal error may take several types: a particular missing chromosome (e.g. a missing X chromosome), an extra chromosome (e.g. an extra chromosome 21), or a damaged chromosome (e.g. part of a chromosome deleted). A multi-factorial disorder is one that is caused by several genes or by a combination of genetic and environmental factors.

3. Clinical description of the disorder

What are the features of the disorder? How does it affect the victim? What is it like to have the disorder? How would you describe the disorder to someone else? What is the disorder like externally, internally, biochemically, psychologically, etc. What problems are associated with the disorder? Is the disorder physically limiting? Is it life-threatening? Is it invariably fatal? Is it found more commonly in certain groups of people, such as a particular ethnic or religious group or particular sex?

4. Treatment

Can anything be done for the disorder? Can the basic defect be treated? Can the symptoms or results of the disorder be treated? Is there a cure for the disorder? Is there any gene therapy for the disorder?

5. Detection

Can the disorder be detected before its symptoms appear? If so, how? Can it be detected prenatally? If so, how? Is there any way to detect a carrier of the disorder? If so, how?

Helpful resources:

- [Biology Project](http://www.biology.arizona.edu/human_Bio/activities/karyotyping/karyotyping2.html) http://www.biology.arizona.edu/human_Bio/activities/karyotyping/karyotyping2.html
- [Case studies](http://bluehawk.monmouth.edu/~bio/karyotypes.htm) http://bluehawk.monmouth.edu/~bio/karyotypes.htm
- [Human Genome Project](http://www.genome.gov/25019885) http://www.genome.gov/25019885
- [23 and me](https://www.23andme.com/) https://www.23andme.com/
- [Genetic Disorders](http://www.nlm.nih.gov/medlineplus/geneticdisorders.html) http://www.nlm.nih.gov/medlineplus/geneticdisorders.html

Symposium Grading Rubric:

Genetic Disorder Team Presentations

Team Members:	Genetic Disorder:
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Actual Time: _____

Topic:		5 highest	Total
Title Page w/ group members names	x 2	5 4 3 2 1 0	
Organization		5 4 3 2 1 0	
Followed Directions		5 4 3 2 1 0	
Works Cited/ References	x 2	5 4 3 2 1 0	
Curriculum Alignment:			
Subject Knowledge /Content Based		5 4 3 2 1 0	
Evidence of Research	x 2	5 4 3 2 1 0	
Accuracy and Clarity of Information		5 4 3 2 1 0	
Mode of Inheritance (Sex linked/autosomal)		5 4 3 2 1 0	
Clinical Description		5 4 3 2 1 0	
Mechanics & Structure:			
Flow: Page Transition & Sound (Aid or distract from presentation)		5 4 3 2 1 0	
Graphics Support Content		5 4 3 2 1 0	
Length/Timing (3-5 min) 1 pt/min		5 4 3 2 1 0	
PowerPoint/Poster Construction Neatness & completeness		5 4 3 2 1 0	
Miscellaneous:			
Oral Presentation – Delivery/ voice projection		5 4 3 2 1 0	
Group Participation/ Teamwork		5 4 3 2 1 0	
PPT submitted in proper format	x2	5 4 3 2 1 0	
Total			

Teacher Comments: