

Biology Research Project
Genetic Disorders and Diseases
Standards – 3.1-3.4

A genetic disorder is a disease caused by a different form of a gene (variation) or an alteration of a gene (mutation).

- Some, including many cancers, can occur randomly or because of an environmental exposure such as cigarette smoke.
- Other genetic disorders are inherited. A mutated gene may be passed down through a family and each generation of children can inherit the gene that causes the disease.
- Still other genetic disorders are due to problems with the number of packages of genes called chromosomes. Genetic testing can be done to determine if your baby might be affected.

Here is a list of some common genetic disorders. There's more!

Alpha-1 Antitrypsin Deficiency	Alzheimer's Disease
Breast Cancer	Colon Cancer
Cri Du Chat Syndrome	Cystic Fibrosis
Down Syndrome	Fragile X Syndrome
Hemophilia	Huntington's Disease
Klinefelter Syndrome	Krabbe Disease
Marfan Syndrome	Parkinson Disease
Phenylketonuria (PKU)	Progeria
Sickle Cell Disease	Skin Cancer
Tay-Sachs	Trisomy (8, 13, or 18)
Turner's Syndrome	Wilson Disease

This is the type of information you should be looking for this week. You will be provided class time and Library resources / databases to do your research. Make good use of your time. Late projects will lose points. Here's a list of the information you will be researching. A detailed rubric will be provided.

- Description of the disorder
- How many people are affected? Incidence.
- Interesting facts!
- Identify the specific cause; the chromosome, gene, and protein affected.
- What environmental factors may contribute or trigger this disorder?
- How do you know you have it? What are the signs?
- Prevention, Treatment, Cure

CP2 Biology Research Project

Genetic Disorders and Diseases

Create a Google Slides presentation *using the following bolded headings*:

Name of the disease / disorder (*title page*) (10 points)

- ✓ include your full name and class section
- ✓ include a picture

Description (30 pts)

- ✓ overview of the disorder, describe / explain what it is **in depth**
- ✓ how many people are affected by it (incidence)
- ✓ interesting facts

Cause (30 pts)

- ✓ identify the specific cause (**the chromosome, gene, and protein**)
- ✓ what **environmental factors** may contribute or trigger this disorder?

Diagnosis / symptoms (10 pts)

- ✓ how do you know you have it?
- ✓ what are the signs?

Prevention / Treatment / Cure - *Include all three* (10 pts)

- ✓ can it be **prevented**? if so, how can we avoid it?
- ✓ any **treatment** available?
- ✓ is there a known **cure**?

Sources (10 pts)

- ✓ identify **multiple** sources of information (links, etc.)

Grading: Follow the rubric, use the headings provided above and tips below. Grade is also based on depth of content, creativity, and professionalism

- ✓ all work should be your own...summarize in your own words. no plagiarism!
- ✓ be creative.. use bullets and graphics...it's a presentation!
- ✓ check for grammar and spelling
- ✓ **print** it out in **handout** form (2 slides per page).
- ✓ Please, no text over graphics

Due date: Friday, May 26, 2017 (*points off for late projects...zero after 5 days*)