Genetic Disorder

1. 

Brochure

1. 

Due Date: **\_. , 2016**

*Imagine you are sitting in a doctor’s office waiting room. You, your child or expected baby has been diagnosed with a genetic disease or disorder. You are clueless about this disorder, scared and have lots of questions. If only you had an* ***informative easy to read brochure*** *sitting on the table next to you that could help you understand what you are up against.*

**Recall:**

Genetic diseases/disorders are caused by changes to DNA. These changes either involve gene mutations (substitution, addition, or deletion of nucleotide bases in a sequence of DNA) or chromosomal mutations (result from improper separation of chromosomes during meiosis). Either way, the effect on how someone lives their lives can be dramatic. In this project you will need to determine if your genetic disorder affects the DNA itself (gene mutation) or results from a more devastating chromosomal mutation.

**Objectives:**

* **Research and investigate** the causes and problems associated with a genetic disorder and treatment options
* **Create** an **informative brochure** about your disorder

**Important things to consider:**

* You need to be able **to explain your disorder simply**. Avoid being too wordy or using undefined, difficult words in your brochure. Your audience is someone who knows very little about the disorder or genetics.
* **Be empathetic and caring in your delivery**
* **Your work will be original.** **You cannot cut and paste information from the internet** into your brochure. Pictures are acceptable to use. The pamphlet should reflect YOUR interpretation of your research, and be in your words. **Plagiarism will not be tolerated and will result in a zero on the project.**

**Requirements for Brochure**

1. You are to work with a partner. Include your name(s) and block on the brochure.
2. The name of the genetic disease must be displayed prominently on the front of the brochure.
3. The brochure must look like a standard tri fold brochure. Generally 8.5 X 11 (2 sided)
4. The brochure must be neatly done, well organized using subheadings and appropriate font and formatting. Images and pictures used must be coloured.
5. The brochure must include at least three appropriate illustrations/photographs that add meaning to the text.
6. The brochure must include the following headings and provide the corresponding information for each heading.

**HEADINGS**

* + - * **General Information**
	+ Give a quick summary and general description of the genetic disorder
	+ Does this genetic disease or disability mostly affect a certain age group, ethnic group, gender group, etc.? For example: It occurs only in males.
	+ Include pictures of individuals with this disability or pictures that show the disability?
		- * **Detection**
	+ Is there a way to screen for the disorder?
	+ What type of tests are used?
		- * **Genetic Cause (gene mutation, chromosome mutation, extra chromosome, missing chromosome)**
	+ Explain how the disease is caused
	+ Is the disease caused by a change to the DNA? (either insertion, deletion, or substitution of a nucleotide base)
	+ Is it a chromosomal disorder? (trisomy, nondisjunction, etc)
	+ Is the disease dominant, recessive, or sex linked?
	+ What gene or chromosome is affected by this disorder? (X, Y, chromosome #)
	+ How is it inherited? (Is it sex-linked, recessive, and/or dominant?)
	+ Include a graphic to help in explanation of inheritance and genetic cause
		- * **Symptoms and Lifestyle**
	+ What are the symptoms, side effects or harm caused to a person who has this disorder?
	+ What is the long-term outlook for the person with this disorder? Will the person be independent or require a caregiver? Will the person be able to have children?
	+ Is the disorder fatal? Life expectancy?
		- * **Treatment**
	+ What treatments or therapies are available to someone with the disease?
	+ Are there any medications to help regulate the disease? Is there a cure?
		- * **Future**
	+ Is there any research being done to find new treatments or a cure?
	+ Could stem cell research and gene therapy be a possible treatment/cure for the disease?
	+ Give at least 1 website and the name of an organization that could provide more information about the disorder.
	+ List at least one interesting and positive fact about the disorder (a famous person with disorder, evolutionary benefit etc.)
		- * **References**
	+ Provide a list of citations for all materials you used to research your genetic disease
	+ Minimum of four references from specialist sources. Avoid using Wikipedia!

*References can be included separate from the brochure if space is an issue! Use EasyBib, Refme.com or Bibme and proper format! URL must be included for all web sources!*

Genetic Disorders to choose from: Only one group per topic!

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| AchondroplasiaAlpha-1 antitrypsin syndromeAlzheimer’s diseaseCystic fibrosisDown syndromeDuchenne Muscular DystrophyFragile X SyndromeWilliams SyndromeStrickler SyndromeCharcot-Marie-Tooth DiseaseInheritable RetinoblastomaCri-Du-Chat | GalactosemiaHemophiliaHuntington DiseaseLeukemiaMarfan syndromePhenylketonuria Angelman syndromeSCID – Severe Combined ImmunodeficiencySickle Cell AnemiaSmith-Lemli-Opitz SyndromeTay-Sachs DiseaseKlinefelter’s SyndromeTurner’s Syndrome |

**Some Sites For Research**

* The Nemours Foundation
<http://kidshealth.org/parent/medical/>
* U.S. National Library of Medicine –Genetics Home Reference
<http://ghr.nlm.nih.gov/condition/>
* Center for Disease Control Genetic Information

<http://www.cdc.gov/genetics/info.htm>

* International Birth Defects Information Systems

<http://ibis-birthdefects.org/index.htm>

* National Center for Biotechnology Information

<http://www.ncbi.nlm.nih.gov/disease/>

* Genetic Alliance

<http://www.geneticalliance.org/>

* Howard Hughes Medical Institute

<http://www.hhmi.org/genetictrail/>

* National Institute of Health Office of Rare Diseases

<http://rarediseases.info.nih.gov/>

* Genetics Education Center

**If you really want one of above listed topics email me first to secure topic!** **mlysne@deltasd.bc.ca**