**GENETIC DISEASES PROJECT**

**Required topics/headings to cover:**

* **Name of Disease**
  + Include both a scientific and common name
    - *For some diseases there will only be a scientific name, but if yours is referred to multiple ways, be sure to include all of the possible names for the disease*
* **General Information (Genetic Basis)**
  + Is the disease autosomal, sex-linked, nondisjunction, or chromosomal deletion?
  + If autosomal or sex-linked, is the disease dominant or recessive?
  + If applicable, has a gene been located that causes the disorder?
  + What chromosome is affected?
* **Individual Effects**
  + How is the individual with the condition affected?
    - What organ systems are affected?
    - How are the organ systems affected?
    - Is there a loss of organ function?
  + Is the person mentally impaired? How so?
  + Is the person physically impaired? How so?
  + What is the life expectancy of the individual affected?
* **Disease Statistics**
  + How many people suffer from the disease? What is the number of people born with the condition per *X* births?
  + Does the disease affect a specific population of people (or region) more so than another?
    - Is there a reason that the population is affected more than another?
* **Diagnosis & Treatment**
  + How is a person diagnosed with the condition?
    - What is the type of test done?
  + Are there treatments for the condition? What are they?
* **History & Current Research**
  + What is the history (both time and scientists) of the disease discovery and advancements?
  + What research is currently being done on this disease?
* **Graphics (must include AT LEAST 3)**
  + All graphics must be relevant and must include a caption explaining its relevance to the disease.
* **References *(as stated above, you must have at least three sources- one of which MUST be a print source)***
  + Your references must be placed on the BACKSIDE of your presentation and must be typed in APA format (see “Useful Internet Resources” below for a website that will help you format these)

**Useful Internet Resources**

*(Remember, you must use at least ONE print resource, only two of your required three resources may be from the internet)*

**National Human Genome Research Institute**

<http://www.genome.gov/10001204>

**Exploring Genes and Genetic Disorders**

http://www.ornl.gov/sci/techresources/Human\_Genome/posters/chromosome/

**Genes and Diseases**

http://www.ncbi.nlm.nih.gov/books/bv.fcgi?call=bv.View..ShowTOC&rid=gnd.TOC&depth=2

**The Genetic Science Learning Center – Genetic Disorders Library**

<http://learn.genetics.utah.edu/units/disorders/whataregd/>

**Understanding Genetics: Human Health and the Genome**

[http://www.thetech.org/genetics/index.php#](http://www.thetech.org/genetics/index.php)

**MedLine Plus – Genetic Disorders**

<http://www.nlm.nih.gov/medlineplus/geneticdisorders.html>

**NOAH (New York Online Access to Health) – Genetic Disorders**

<http://www.noah-health.org/en/genetic/>

**Your Genes Your Health – DOLAN DNA Learning Center, Cold Springs Harbor Laboratory**

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

**March of Dimes – Fact Sheets on Genetic Disorders**

<http://www.marchofdimes.com/professionals/681_1116.asp>

**References**

*Citation Machine* is a website that helps you format references into either APA or MLA format.

While you research, you need to keep track of the references you use:

For your ***print sources*** you need to make sure to write down:

* Title
* Author
* Publisher
* Copyright Date
* Copyright Location
* Volume (if in a series)

For your ***internet sources***, you need to make sure to write down:

* The tile of the site (it is usually listed at the top of the internet window)
* The publishing group
  + For this project you should not be using sites done by yahoo, or google, your site should be from reputable organizations like NIH (National Institutes of Health), March of Dimes, Human Genome Project, etc.
* Last Date modified (this is usually given at the end of the webpage you are looking at)
* Date Accessed
* URL Address (you need to record the FULL URL address path

Type the following URL into your address window: <http://citationmachine.net/>

* Click on 
* Then select the type of source you are referencing and then fill in each field.

|  |  |  |  |
| --- | --- | --- | --- |
| [Achondroplasia](http://www.genome.gov/19517823) | [Hemochromatosis](http://www.genome.gov/10001214) | [Gaucher Disease](http://www.genome.gov/25521505) |  |
| [Alpha-1 Antitrypsin Deficiency](http://www.genome.gov/19518992) | [Hemophilia](http://www.genome.gov/20019697) | [Spinal Muscular Atrophy](http://www.genome.gov/20519681) |  |
| [Antiphospholipid Syndrome](http://www.genome.gov/17516396) | [Holoprosencephaly](http://www.genome.gov/12512735) | [Tay-Sachs](http://www.genome.gov/10001220) |  |
| [Autism](http://www.genome.gov/25522099) | [Huntington's disease](http://www.genome.gov/10001215) | [Thalassemia](http://www.genome.gov/10001221) |  |
| [Autosomal Dominant Polycystic Kidney Disease](http://www.genome.gov/20019622) | [Klinefelter syndrome](http://www.genome.gov/19519068) | [Trimethylaminuria](http://www.genome.gov/11508983) |  |
| [Charcot-Marie-Tooth](http://www.genome.gov/11009201) | [Marfan syndrome](http://www.genome.gov/19519224) | [Turner Syndrome](http://www.genome.gov/19519119) |  |
| [Cri du chat](http://www.genome.gov/19517558) | [Myotonic Dystrophy](http://www.genome.gov/25521207) | [Velocardiofacial Syndrome](http://www.genome.gov/25521139) |  |
| [Crohn's Disease](http://www.genome.gov/25521854) | [Neurofibromatosis](http://www.genome.gov/14514225) | [WAGR Syndrome](http://www.genome.gov/26023527) |  |
| [Cystic fibrosis](http://www.genome.gov/10001213) | [Noonan Syndrome](http://www.genome.gov/25521674) | [Wilson Disease](http://www.genome.gov/27532725) |  |
| [Dercum Disease](http://www.genome.gov/17516629) | [Osteogenesis imperfecta](http://www.genome.gov/25521839) | [Sickle cell disease](http://www.genome.gov/10001219) |
| [Down Syndrome](http://www.genome.gov/19517824) | [Parkinson's disease](http://www.genome.gov/10001217) |  |
| [Duane Syndrome](http://www.genome.gov/11508984) | [Phenylketonuria](http://www.genome.gov/25020037) |  |
| [Duchenne Muscular Dystrophy](http://www.genome.gov/19518854) | [Poland Anomaly](http://www.genome.gov/14514230) |  |
| [Factor V Leiden Thrombophilia](http://www.genome.gov/15015167) | [Porphyria](http://www.genome.gov/19016728) |  |
| [Familial Hypercholesterolemia](http://www.genome.gov/25520184) | [Progeria](http://www.genome.gov/11007255) |  |
| [Familial Mediterranean Fever](http://www.genome.gov/12510679) | [Retinitis Pigmentosa](http://www.genome.gov/13514348) |  |
| [Fragile X Syndrome](http://www.genome.gov/19518828) | [Severe Combined Immunodeficiency (SCID)](http://www.genome.gov/13014325) |  |

**GRADING RUBRIC**

**GENETIC DISEASE PROJECT**

|  |  |  |  |
| --- | --- | --- | --- |
| Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Disease\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | **Points Earned** | **Points Possible** | **COMMENTS** |
| **REQUIRED SECTIONS** |  |  |  |
| **Name of Disease**  Include both a scientific and common name |  | 5 |  |
| **General Information (Genetic Basis)**   1. Is the disease autosomal, sex-linked, nondisjunction, or chromosomal deletion? 2. If autosomal or sex-linked, is the disease dominant or recessive? 3. If applicable, has a gene been located that causes the disorder? 4. What chromosome is affected? |  | 10 |
| **Individual Effects**  1. How is the individual with the condition affected?  -What organ systems are affected?  + How are the organ systems effected?  + Is there a loss of organ function?  2. Is the person mentally impaired? How so?  3. Is the person physically impaired? How so?  4. How is the person’s daily life affected as they cope with the disease?  5. What is the life expectancy of the individual affected? |  | 10 |
| **Disease Statistics**  1. How many people suffer from the disease?  2. What is the number of people born with the condition per *X* births?  3. Does the disease affect a specific population of people (or region) more so than another?  -Is there a reason that the population is affected more than another? |  | 10 |
| **Diagnosis & Treatment**  1. How is a person diagnosed with the condition?  - What is the type of test done?  2. Are there treatments for the condition? What are they? |  | 10 |
| **History & Current Research**  1. What is the history (both time and scientists) of the disease discovery and advancements?  2. What research is currently being done on this disease? |  | 10 |
| **Graphics (must include AT LEAST 3)**   1. All graphics must be relevant 2. All graphics must include a caption explaining its relevance to the disease. |  | 10 |
| **References**  1 Must have AT LEAST 3 references (one of which must be a print source)  2. All references must be listed in APA format and placed on the back of the presentation |  | 5 |
| **ADDITIONAL CRITERIA** |  |  |  |
| Creativity |  | 5 |  |
| Knowledge of Disease |  | 5 |
| Easy to Understand |  | 5 |
| Neatness |  | 5 |
| Participation |  | 5 |
| Peer rating |  | 5 |
| **TOTAL** | **\_\_\_\_\_** | **/100** |
|  |  |  |
|  |  |  |