Name: _____ Date: _____ Period: _____

Genetics Project

★ We have spent a great deal of time learning about DNA and how your DNA controls everything in your body. We have learned how traits can be passed on to offspring and we have learned how genetic diseases are traced through families. You will now have a chance to study one particular genetic disorder/condition in more detail.

Project requirements:

1. What is it? - This should be a detailed, but brief explanation of your disease. What happens to the body; what part of the body is generally affected?
2. What causes it? – What happens in the body to cause the disease? Is it a mutation, genetic tendency, chromosomal change, etc?
3. How is it inherited? - This should explain how the disease is passed on from generation to generation. Use as much of your knowledge from class as possible. Is it sex-linked, particular chromosome, dominant, recessive, etc?
4. How is it diagnosed? - This should explain how an individual determines if they have the disorder.
5. How is it treated? - Once a person knows they have the disorder, how to they deal with it? Medications, gene therapy, etc?
6. Prognosis of individual with disorder – What is the life expectancy of a person with the disorder, limitations they may face, etc. How does this disorder impact the person who has it? How might this disorder impact family members?
7. Any More information - What else is interesting/shocking/important about your disorder?
8. Graphics that help explain the disorder and its inheritance – Punnett squares, pedigree chart, karyotype, etc.

★ Once you have all the information you need to complete this project, you will create a PowerPoint to present the information. (if you have experience with, and easy access to another type of presentation tool, you may use that as an alternative if you clear it with me – ex: Google Slides, Keynote, Prezi, etc.). The basic requirement is that the project be *digital* and involve no paper other than rough draft notes.

★ You will have 3 class periods to access the internet to research your information as well as complete your presentation. I would like all the work done in class (the exception is running out of time towards the end) so that I can see your progress and check your information as you go. For this reason, I would like you to take written notes prior to beginning your digital presentation. You will be expected to turn in your rough draft/written notes for credit.

★ Your grade will be based on the information provided for the above 7 topics. You will be expected to explain each aspect in as much detail as possible. I would expect 1 slide per topic is enough to adequately cover the information. Keep in mind the design and layout of your presentation. Too much text on a slide can be overwhelming to the audience.

★ Be sure to cite your sources as well. You should have a minimum of 3 sources for this project. Sources should be included on a slide at the end in proper MLA format. Be sure to put information into your own words. If you do not understand the information, ask me to help you decipher what is being said. Absolutely no copy and pasting.

★ You will be presenting you information to the class. Your presentation should showcase your expertise on the topic. You should be familiar with your slide format, order and information. I expect that you will talk to the class while presenting, and you will not be reading from your slides the entire time. You may use cue cards to help you.

★ Your topic: _____

★ Project will be emailed to me at bbrawley@srcs.k12.ca.us by 8am _____

Possible topics and useful websites

Huntington's Disease
Cystic Firbrosis
Hemophilia
Duchene Muscular Dystrophy
Phenylketonuria
Albinism
Down Syndrome
Turners Syndrome
Klinefeter's syndrome
Progeria
Adrenoleukodystrophy,
Alzheimer Disease, familial,
Angleman Syndrome
Burkitt's Lymphoma

Cat Eye Syndrome
Cri-du-chat (Cat's Cry Syndrome)
Cystic Fibrosis
DiGeorge Syndrome
Down Syndrome (Trisomy 21)
Duchenne Muscular Dystrophy
Edwards Syndrome
Fabry Disease
Jacobson Syndrome
Marfan Syndrome
Monsomy 9p or Alfi's Syndrome
Hemochromatosis
Polycystic kidney disease
Xeroderma Pigmentosum

Mytonic Dystrophy (Steinert Disease)
Neurofibromatosis
Patau Syndrome or Trisomy 13
PKU
Prader-Willi Syndrome
Rentinitis pigementosa
Rett Syndrome
Sickle Cell Anemia
Smith-Magenis Syndrome
Von Hippel-Lindau Syndrome
Wolrf Hirschhorn Syndrome
Tay-Sachs disease
Achondroplasia
Osteogenisis imperfecta
Fragile X syndrome

*****Remember that this is just the beginning. If you don't find a disorder you are curious about on this list, keep looking. If you don't find the information for your particular disorder on the websites below, keep looking. The below websites will be more helpful for general information and the most common genetic diseases.******

http://learn.genetics.utah.edu/content/disorders/

https://www.nlm.nih.gov/medlineplus/geneticdisorders.html

http://www.geneticdiseasefoundation.org/genetic-diseases/

http://www.kumc.edu/AMA-MSS/Study/table_of_genetic_disorders.htm

http://www.yourgenesyourhealth.org/

http://www.mayoclinic.org/tests-procedures/genetic-testing/multimedia/genetic-disorders/sls-20076216

http://www.jewishgeneticdiseases.org/jewish-genetic-diseases/

http://www.childrenshospital.org/conditions-and-treatments/conditions/genetic-disorders