

## Genetic Disorders Jigsaw Mini Project

### Directions:

1. Each group will be given a specific genetic disorder.
2. Using the links below, as a group you will create a Google Drawing Poster including the following information:
  - a. Explanation of your genetic disorder (“definition”)
  - b. Type of genetic disorder (autosomal dominant or recessive, sex-linked)
  - c. Specifics about how the disorder is genetically inherited
  - d. Symptoms
  - e. Possible Treatments
3. You need to email your completed Google Drawing to Ms. B ([biscarl@pitt.k12.nc.us](mailto:biscarl@pitt.k12.nc.us)) by the end of class on Friday April 13th.
4. As I receive the google drawings, I will post them on my website - you will need to fill in your table and answer the questions based on the google drawings.
5. Questions due on Tuesday April 17th

| Genetic Disorder                 | Article Link  | Video Link  |
|----------------------------------|---|---|
| <b>Sickle Cell Anemia</b>        | <a href="https://www.nhlbi.nih.gov/health/health-topics/topics/sca">https://www.nhlbi.nih.gov/health/health-topics/topics/sca</a>                                       | <a href="https://www.youtube.com/watch?v=tz--EMZuGCE">https://www.youtube.com/watch?v=tz--EMZuGCE</a> |
| <b>Cystic Fibrosis</b>           | <a href="https://www.cff.org/What-is-CF/About-Cystic-Fibrosis/">https://www.cff.org/What-is-CF/About-Cystic-Fibrosis/</a>   | <a href="https://www.youtube.com/watch?v=4IGz5p4n8Fg">https://www.youtube.com/watch?v=4IGz5p4n8Fg</a> |
| <b>Hemophilia</b>                | <a href="http://www.healthline.com/health/hemophilia#treatments7">http://www.healthline.com/health/hemophilia#treatments7</a>   | <a href="https://www.youtube.com/watch?v=XbuQCz3kZl0">https://www.youtube.com/watch?v=XbuQCz3kZl0</a> |
| <b>Huntington's</b>              | <a href="http://www.alz.org/dementia/huntingtons-disease-symptoms.asp">http://www.alz.org/dementia/huntingtons-disease-symptoms.asp</a>                                 | <a href="https://www.youtube.com/watch?v=JL9Y3P870jU">https://www.youtube.com/watch?v=JL9Y3P870jU</a> |
| <b>PKU</b>                       | <a href="https://www.healthline.com/health/phenylketonuria#treatments">https://www.healthline.com/health/phenylketonuria#treatments</a>                                 | <a href="https://www.youtube.com/watch?v=w3L2SPj7alQ">https://www.youtube.com/watch?v=w3L2SPj7alQ</a> |
| <b>Tay-Sachs</b>                 | <a href="https://ghr.nlm.nih.gov/condition/tay-sachs-disease">https://ghr.nlm.nih.gov/condition/tay-sachs-disease</a>   | <a href="https://www.youtube.com/watch?v=vEeTDm0VZGs">https://www.youtube.com/watch?v=vEeTDm0VZGs</a> |
| <b>Red-Green Color Blindness</b> | <a href="https://nei.nih.gov/health/color_blindness/facts_about">https://nei.nih.gov/health/color_blindness/facts_about</a>   | <a href="https://www.youtube.com/watch?v=1ZX12WbmLxA">https://www.youtube.com/watch?v=1ZX12WbmLxA</a> |
| <b>Muscular Dystrophy</b>        | <a href="https://www.genome.gov/19518854/learning-about-duchen-ne-muscular-dystrophy/">https://www.genome.gov/19518854/learning-about-duchen-ne-muscular-dystrophy/</a> | <a href="https://www.youtube.com/watch?v=DGOmN6rnsNk">https://www.youtube.com/watch?v=DGOmN6rnsNk</a> |

## Genetic Disorder Chart and Questions

| <b>Genetic Disorder</b>   | <b>Explanation/Description</b> | <b>Genetic Inheritance</b> | <b>Possible Treatments</b> |
|---------------------------|--------------------------------|----------------------------|----------------------------|
| <b>Sickle Cell Anemia</b> |                                |                            |                            |
| <b>Cystic Fibrosis</b>    |                                |                            |                            |
| <b>Hemophilia</b>         |                                |                            |                            |
| <b>Huntington's</b>       |                                |                            |                            |
| <b>PKU</b>                |                                |                            |                            |

|                                  |  |  |  |
|----------------------------------|--|--|--|
|                                  |  |  |  |
| <b>Tay-Sachs</b>                 |  |  |  |
| <b>Red-Green Color Blindness</b> |  |  |  |
| <b>Muscular Dystrophy</b>        |  |  |  |

**Analysis Questions:**

1. Draw a conclusion about the genetic disorders that are autosomal dominant and autosomal recessive. (What do you notice that differs between them?)
2. Describe how a sex-linked disorder is inherited and explain why males are more likely to inherit a sex-linked disorder than a female offspring.
3. Using TWO separate double bubble maps or venn diagrams, compare and contrast four genetic disorders with at least four differences for each disorder.
4. For each genetic disorder, pick keywords that will be helpful to remember the disorder. (ex: Muscular dystrophy - muscle control loss)