Inheritance Project: Special Report!

1. Select one of the traits on the next page – we will do this in class together.
2. Research papers must include the following:
    a. Project Title
    b. Author
    c. Paragraph 1: Background information about the trait being investigated
        i. Genotype (Brief description of the trait as it relates to genetics)
        ii. Phenotype (Brief description of what the trait looks like)
        iii. Frequency in the population
        iv. Susceptible populations
    d. Paragraph 2: In-depth analysis of genotype (what is known about the genetic cause(s) of the trait being investigated? Discuss known genes, changes in chromosome number and/or structure, or any other important genetic factors.
    e. Paragraph 3: In-depth analysis of phenotype (explain whether it is possible to visually know if someone has the trait being investigated, and what the range of those expressed traits are). Include a discussion of whether the trait alters lifespan or fertility. Are there any scenarios you can think of where possessing the trait might give someone a survival advantage?
    f. Paragraph 4: Discuss any possible changes to the genotype and/or phenotype. Consider medical options, lifestyle changes, etc. If options are available, are they necessary? If you possessed the trait, how would it affect you?
3. Email your completed document to david.swart@highlineschools.org. Your document should be saved as a Microsoft Word document (.doc or .docx). Use one inch margins, size 12 Times New Roman font, and 1.5 line spacing. Cite your sources using MLA style. Hint: http://www.citationmachine.net is a useful resource for quickly creating MLA-style citations.
4. Papers are due by 2:05 PM on Monday, February 24. High-quality reports will be posted on the class blog at http://davidswart.wordpress.com. All names will be removed to protect confidentiality.

Possible Inherited Traits

1. XXY (Klinefelter's Syndrome)
2. XXX (Triple-X Syndrome)
3. XYY (XXY Syndrome)
4. Trisomy 21 (Down Syndrome)
5. Trisomy 18 (Edwards Syndrome)
6. Trisomy 13 (Patau Syndrome)
7. Trisomy 9
8. Trisomy 8 (Warkany Syndrome 2)
9. Trisomy 22
10. Fragile X Syndrome
11. X (Turner's Syndrome)
12. Cri du chat Syndrome
13. 1p36 Deletion Syndrome
14. Eye color
15. Skin color
16. Blood Type
17. Sickle-cell Anemia
18. Cancer
19. Cystic Fibrosis
20. Height / Weight
21. Intelligence
22. Sleep Pattern
23. Aging / Lifespan
24. Parkinson's Disease
25. Riley-Day Syndrome
26. Alzheimer's Disease
27. Progeria
28. Type 1 Diabetes