**RUBRIC FOR GENETIC DISEASE PROJECT**

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| 7. **GENETICS**   * Patterns of inheritance & mutation and its impact on person life and family | | | | |
|  | **Em**  **(1)** | **D**  **(2)** | **P**  **(3)** | **Ex (4)** |
| Which disease? |  |  | I present a disease related to a genetic problem: Chromosomal abnormalities or single gene inheritance disorders |  |
| Which chromosome and/or gene? |  |  | I name the chromosome affected and/or the gene(s) affected.  I add a picture/ diagram of the karyotype and/or gene to show where is the problem. |  |
| Which type of mutation? |  |  | I mention if it is a chromosomal mutation or a gene mutation. |  |
| What does the mutation look like? |  |  | I list the principal characteristics of the person with this disease. I include pictures and diagrams. |  |
| What can be done? |  |  | I list the possible treatments or cure for the disease. Is there anything new outcomes that can be expected with gene therapy? Other treatments or therapy? |  |
| How long can a person live? |  |  | I mention the life expectancy of a person with the disease. |  |
| Should we invest in research? |  |  | I consider economical\financial; improved health; better life quality, longer life expectancy for myself or others.  Why should we invest or not?  I make reasonable and intelligent suggestions? |  |
| How would my life change? |  |  | I can reflect on a possible life with a biological child with this disease.  What would I do if I was informed that I was a carrier of a dominant or recessive trait involved in the disease I have chosen?  What would I do if the result from the amniocentesis were showing that the baby has that disease? |  |

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| 1. **QUESTIONING & PREDICTING**  * Demonstrate a sustained intellectual curiosity about a scientific topic of personal interest | | | | |
|  | **Em**  **(1)** | **D**  **(2)** | **P**  **(3)** | **Ex (4)** |
|  |  |  | My oral presentation is with interest and is engaging for my classmates. |  |

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| 4. **EVALUATING**   * Exercise a healthy, informed skepticism, and use scientific knowledge and findings to form their own investigations and to evaluate claims in secondary sources. | | | | |
|  | **Em**  **(1)** | **D**  **(2)** | **P**  **(3)** | **Ex (4)** |
| WRITING and video selection |  |  | I present accurate and complete facts (with references) related to the topic. |  |

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| **6. COMMUNICATION: Use inquiry processes and skills to communicate findings and decisions** | | | | |
|  | **Em**  **(1)** | **D**  **(2)** | **P**  **(3)** | **Ex (4)** |
| WRITING |  |  | I present on a Goggle Slide presentation the important facts. |  |
| VIDEO |  |  | I present a video (4 minutes max) that support my learning and understanding of the situation. |  |
| QUESTIONS |  |  | * I have 3 questions related to the understanding of the disease * I have a question of deeper thinking, |  |
| BIBLIOGRAPHY |  |  | I copied the links of the website used. |  |

**Examples of diseases:**

Make sure you chose a disease that is falling under “Chromosomal abnormalities & single gene (Mendelian) inheritance disorders”

* Patau syndrome
* Edwards Syndrome
* Turner Syndrome
* Klinefelter Syndrome
* Huntingtons disease/ or danse de Saint-Guy
* Cystic fibrosis
* Hemophilia
* Albinism
* Stone man's disease
* The disease of glass bones
* Steinert's disease
* Gilles de la Tourette syndrome
* [Duchenne](http://www.doctissimo.fr/html/dossiers/myopathie-de-duchenne/myopathie-duchenne.htm) muscular dystrophia
* Hemochromatosis
* The disease of urine with the smell of maple syrup
* **Achondroplasia** dwarfism
* Leukodystrophy
* Phenylketonuria
* Wilson disease
* Williams syndrom
* L’ataxie de Friedreich
* etc

**More ideas**

National Human Genome Research Institute

<https://www.genome.gov/about-nhgri/Contact>

<https://www.genome.gov/For-Patients-and-Families/Genetic-Disorders>

Rx list

<https://www.rxlist.com/genetic_disease/article.htm>