

## Human Genetic Disorders Presentation Rubric

Names:

Disorder:

This analytic rubric is used to verify specific tasks performed. If the task has been successfully completed, all points are awarded. If the task is incomplete half points may be awarded. No points are awarded if the task is not attempted.

Category	Scoring Criteria	Points	Group Evaluation	Teacher Evaluation
<b>Background Information</b> <i>20 points</i>	Chapter concepts for the topic are well covered. <i>DNA, RNA, Genes, Traits, Meiosis, Alleles, Chromosomes</i>	<b>10</b>		
	The project uses the most current scientific information. <i>(Your ideas must be included, not just dictionary definitions.)</i>	<b>5</b>		
	Information in the project is presented in the student's own words, not "cut and pasted" from research sources. <i>(complex terms are explained)</i>	<b>5</b>		
<b>Disorder Specifics</b> <i>20 points</i>	1. The symptoms of the disease and its prognosis	<b>4</b>		
	2. How the disorder is diagnosed	<b>3</b>		
	3. Inheritance of the disorder is explained	<b>4</b>		
	4. Presymptom testing. If so how is the test performed?	<b>3</b>		
	5. Treatments for disorder/ ways to minimize symptoms	<b>3</b>		
	6. Current and future cures	<b>3</b>		
<b>Auditory</b> <i>10 points</i>	A thesis statement makes the purpose of the presentation clear. <i>(Thesis statements do not begin, "this is about".)</i>	<b>5</b>		
	All presenters spoke clearly, loudly, and effectively	<b>5</b>		
<b>Visual</b> <i>25 points</i>	Presenters maintained eye contact and proper body posture	<b>5</b>		
	Visual aids (posters, PowerPoint) are informative and used to increase understanding (Not just a printout of facts or pictures).	<b>15</b>		
	Visual aids are neatly made, easy to read and generally free of distractions (no laser beam sounds, dancing babies etc).	<b>5</b>		
<b>Overall</b> <i>25 points</i>	Presentation is well-prepared and organized with all materials present and ready to go (no "Ohh we forgot it at home").	<b>10</b>		
	Appropriate responses to audience question	<b>10</b>		
	There are no spelling errors or visible corrections.	<b>5</b>		
<b>Quiz</b> <i>10 points</i>	10-question multiple choice quiz with answer key emailed to <a href="mailto:sotterspoor@darienps.org">sotterspoor@darienps.org</a>			
<b>Citations</b> <i>10 points</i>	Citations shared on NoodleTools. Works cited contains the appropriate numbers of book, internet and electronic sources.	<b>10</b>		
<b>Score</b>	<b>Total Points</b>	<b>125</b>		
<b>Self-evaluation</b>	Students are expected to honestly evaluate their own work. If the difference between the student evaluation and the teacher evaluation is less than 5 points, 5 points will be added to the final score when the grade is recorded.			
<b>Deadline</b>	<b>All projects will be completed by the assigned deadline.</b> Materials submitted the day after the class period will receive 1/4 credit. Materials turned in after that time will be mulched for use in the greenhouse. The due date for this assignment is: _____			

## Human Genetic Disorders – Research Project

Your research team will be assigned a human genetic disorder to research. Through the various materials available to you in the Darien High School Library, you must answer the following questions:

1. What are the symptoms of the disease and the prognosis for someone with the disorder?
2. How is the disease diagnosed?
3. How is the disease inherited?
4. Is there a way to determine if a person carries the gene for the trait prior to showing symptoms of the disease or before passing the trait on to his or her offspring? If so, how is the test performed?
5. What, if any, treatment exists for the disease?
6. What, if any, potential cure is there for the disease?

After completing the background research your research, team will present a FIVE- (cinco) to SEVEN- (VII) minute presentation on the disease. In the presentation you **MUST** provide the class with the information that fully and correctly answers all of the questions listed above. Your group will also need to be prepared to answer questions from your peers. You will need to use visual aids to help explain the inheritance of the disease or to illustrate symptoms, etc.

In addition to your presentation, your group must prepare a 10-question multiple choice quiz based upon what you think are the most important facts. You must turn in your typed quiz with a separate answer key. **YOU MUST KEEP YOUR QUIZ QUESTIONS SECRET.** Revealing your questions or answers to the rest of the class will be considered cheating and result in a zero for your group.

You will have **two class** periods in the library to work on the research portion of this assignment.

You will need 2 books, two internet sites and 1 electronic database **per team member**

**You will not have any other group time provided during class or lab.**

Your presentations, along with a completed rubric, will be due on \_\_\_\_\_

## HUMAN GENETIC DISORDERS PROJECT

Name: \_\_\_\_\_ Period \_\_\_\_

1. What are the symptoms of the disease?
2. What is the prognosis (expected outcome of the disease) for someone with the disorder?
3. How is the disease diagnosed?
4. How is the disease inherited? (include the chromosome number where it is found)
5. Is there a way to determine if a person carries the gene for the trait prior to showing symptoms of the disease or before passing the trait on to his or her offspring? If so, how is the test performed?
6. What, if any, treatment exists for the disease?
7. What, if any, potential cure is there for the disease?

## Information Source Sheet

**TYPE OF SOURCE:**

PRINT:  Book  Encyclopedia  Encyclopedic Reference (Multi Volume)  
 Magazine/Newspaper  Video  Interview  Other

ONLINE:  Encyclopedia  ProQuest  Database  World Wide Web  Other

AUTHOR(S) of book or article: \_\_\_\_\_

TITLE of article: \_\_\_\_\_

COMPLETE TITLE of source of information: \_\_\_\_\_

EDITOR(S): \_\_\_\_\_

CITY PUBLISHED: \_\_\_\_\_ PUBLISHER: \_\_\_\_\_

DATE PUBLISHED: \_\_\_\_\_ DEWEY NUMBER: \_\_\_\_\_

PAGE NUMBERS: \_\_\_\_\_ VOLUME NUMBER: \_\_\_\_\_

URL: \_\_\_\_\_

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URL: \_\_\_\_\_

ACCESS DATE: \_\_\_\_\_

## Otterspoor's Human Genetic Disorders List

1. Achondroplasia : Mutated FGFR3 gene chromosome 4 Dominant (homozygous is fatal)
2. Down Syndrome: Trisomy 21 – nondisjunction
3. Edwards Syndrome: Trisomy 18 – nondisjunction
4. Turner's Syndrome: Nondisjunction
5. Huntington's disease: triplet repeat (IT15 gene on chromosome 4)
6. Klinefelters syndrome: extra X (can be Nondisjunction)
7. Color Blindness: X-linked Recessive
8. Cri du chat Syndrome: deletion on chromosome 5
9. Tay Sachs: mutation of Hex-A gene chromosome 15 recessive
10. Maple Syrup Urine Disease: Chromosome 19 Y438N Allele recessive affects the metabolism of the branched chain amino acids

Achondroplasia	Achondroplasia
Down Syndrome: Trisomy 21	Down Syndrome: Trisomy 21
Edwards Syndrome: Trisomy 18	Edwards Syndrome: Trisomy 18
Turner's Syndrome:	Turner's Syndrome:
Huntington's disease:	Huntington's disease:
Klinefelters syndrome:	Klinefelters syndrome:
Color Blindness:	Color Blindness:
Cri du chat Syndrome:	Cri du chat Syndrome:
Tay Sachs:	Tay Sachs:
Maple Syrup Urine Disease:	Maple Syrup Urine Disease: