Genetic Disorder Mini-Poster Project

Overview

Create a mini-poster for a doctor's office waiting room. The mini-poster should provide patients with information about one of the genetic disorders listed below. Assume that most of the patients of your audience are adults with a typical high school science background.

The mini-poster should be creative as well as informative. You want people to pick it up and read through it. Be sure to include accurate, up-to-date information and graphics that illustrate important ideas. **You should reference at least four sources of information on a separate "works cited" page to hand in along with your mini-poster. These sources need to be specific, Google DOES NOT count.**

Procedure

You will research the genetic disorder of your choice and use the following questions as a guide to the type of information you will need for your mini-poster.

1. What other names are there for this disorder? (Any common names?)
2. What type of mutation causes the disorder?
3. Can this disorder be inherited?
4. Is this disorder autosomal or sex-linked?
5. What gene or chromosome is affected by this disorder? (X, Y, #21)
6. Is this a dominant or recessive disorder? (Inherited mutations only)
7. What are the symptoms?
8. What kind of medical assistance will the affected child need? Will further assistance be needed, as the child grows older?
9. Are there any treatments or cures?
10. What is the life expectancy of this disorder?
11. Could this disorder have been prevented?
12. What is the current status of research on this disorder? Is there a cure coming soon?

Mini- Poster

After researching the disorder, make an informational poster that could be given to patients. The poster will be completed on mini-poster board. This mini-poster should be of **professional quality**. It must **fully inform** the reader of all issues pertaining to the genetic disorder. Again, use the questions provided to guide your research. Your mini-poster will be graded based on accuracy, completeness, and creativity. **Do NOT copy information from your sources and paste it onto your poster. Your research should be in your own words.**

Visual representations (pictures, graphs, etc.) should be incorporated into the mini-poster. If you chose to use visuals from online sources, be sure to give credit for the graphics you did not make.

Works Cited Page

You will need to prepare, on a separate sheet, a works cited page that identifies **all** sources used to make the mini-poster. **At least four sources are required** for this project. More **than four is acceptable, and encouraged!** (Be sure to use proper MLA format; **do not just list websites**, list author, title, date, etc.) You may use easybib.com to create your works cited page.

Here is an example of how you record your reference:

Huntington's Disease Society of America website, Living with Huntington's, article by Pat Pillis.

Presentation

You will present your mini-poster to the class. In your presentation, you must explain what genetic disorder you researched, including the name, symptoms, and the type of chromosome mutation (autosomal or sex-linked). You also need to describe treatment options and any research or cures scientists are working on. During your presentation, you must be loud and clear, and be prepared to answer any questions your peers may have at the end of your presentation.

Possible Internet Resources (use google.com to find other sites)

- Center for Disease Control Genetic Information
- National Center for Biotechnology Information
- Disease Info Search
- Howard Hughes Medical Institute
- National Institute of Health Office of Rare Diseases
- National Genetics and Genomics Education Centre

List of Genetic Disorders

(Circle the one you have been assigned)

Adrenoleukodystrophy

Albinism, oculocutaneous

Alzheimer Disease, familial, type 5

Cat Eye Syndrome

Cri-du-chat (Cat's Cry Syndrome)

Cystic Fibrosis

DiGeorge Syndrome

Duchenne Muscular Dystrophy

Edwards Syndrome

Ehlers-Danlos syndrome

Fragile X syndrome

Huntington's Disease

Jacobson Syndrome

Klinefelter syndrome

Marfan Syndrome

Monosomy 9p or Alfi's Syndrome

Myotonic Dystrophy (Steinert Disease)

Neurofibromatosis

Patau Syndrome or Trisomy 13

PKU

Prader-Willi Syndrome

Retinitis pigmentosa

Rett Syndrome

Smith-Magenis Syndrome

Tay-Sachs Disease

Triple X Syndrome

Turner syndrome

Von Hippel-Lindau Syndrome

Waardenburg syndrome

Wolf Hirschhorn Syndrome

Genetic Disorder Notes

1. What other names are there for this disorder? (Any common names?)

2. What type of mutation causes the disorder?

3. Can this disorder be inherited?

4. Is this disorder autosomal or sex-linked?

5. What gene or chromosome is affected by this disorder? (X, Y, #21)

6. Is this a dominant or recessive disorder? (Inherited mutations only)

7. What are the symptoms?

8. What kind of medical assistance will the affected child need? Will further assistance be needed, as the child grows older?

9. Are there any treatments or cures?

10. What is the life expectancy of this disorder?

11. Could this disorder have been prevented?

12. What is the current status of research on this disorder? Is there a cure coming soon?

Sources:

Genetic Disease Mini-Poster Rubric

Research- Critiquing Reasoning

Category	4	3	2	1
Content- Accuracy	All facts in mini-poster are accurate	99-90% of the facts in the mini-poster are accurate	89-80% of the facts in the mini-poster are accurate	Fewer than 80% of the facts in the mini-poster are accurate.
Content- Analysis	All information is correctly summarized and put into the student's own words	Most information is correctly summarized and put into the student's own words	Less than half of the information is correctly summarized and put into the student's own words	Information is copied and pasted directly from sources
Content- Sources	At least 4 sources are used and cited correctly	3 sources are used and cited correctly	2 sources are used and cited correctly	0-1 source(s) are used and are not cited correctly

Total: ____/12

Mini-Poster- Investigations

Category	4	3	2	1
Writing- Organization	Each section in the mini-poster has a clear beginning, middle, and end	Almost all sections of the mini-poster have a clear beginning, middle, and end	Most sections of the mini-poster have a clear beginning, middle, and end	Less than half of the sections of the mini-poster have a clear beginning, middle, and end
Writing- Vocabulary	The student correctly uses required vocabulary and defines words/terms unfamiliar to the reader	The student correctly uses most of the required vocabulary and defines most words/terms unfamiliar to the reader	The student attempts to use required vocabulary but uses 1-2 words incorrectly and defines few words/terms unfamiliar to the reader	The student does not incorporate new vocabulary and fails to define words/terms unfamiliar to the reader
Visuals	Pictures, graphs, charts, or other visuals are correctly used and labeled	Pictures, graphs, charts, or other visuals are correctly used but incorrectly labeled	Pictures, graphs, charts, or other visuals are incorrectly used and incorrectly labeled	Pictures, graphs, charts, or other visuals are not used at all

Total: ____/12

Presentation- Scientific Understanding

Category	4	3	2	1
Knowledge Explained	Content is clearly, accurately, and appropriately explained	Student displays some understanding of content and key ideas, but information is not clearly explained	Less than half of the content and key ideas are clearly explained	Student displays very little understanding of content and key ideas
Knowledge Gained	Student has demonstrated the ability to accurately answer all questions about the selected disease	Student has demonstrated the ability to accurately answer most questions about the selected disease	Student has demonstrated the ability to accurately answer less than half of the questions about the selected disease	Student appears to have little knowledge about the selected disease
Presentation Skills	Student is loud, clear, and easy to understand	Student is loud, clear and easy to understand over half of the time	Student is loud, clear and easy to understand less than half of the time	Student is not loud or clear and is difficult to understand

***You will lose points for talking or being on your phone during other students' presentations!**

Total: ____/12