**Genetic Disorders Brochures**

**Introduction**

There are thousands of **genetic disorders** that affect humans, some of which can have profound effects on a person's quality of life. Genetic disorders are **passed from parents to offspring in the genetic code**, and in some cases, a person may be a **carrier** for a disease and pass it to their children without knowing. Because genetic diseases are usually caused by errors or **mutations** in the genetic code, it is extremely difficult to cure the condition, and in most cases, doctors can only treat the symptoms.

**TASK:**

You have been selected by a local doctor to design a **genetic disease brochure** (trifold, see class page for template) for her office. She asked that you select a genetic disease that would present information for patient education. The brochure should be designed so that it can be folded into thirds and displayed in her waiting room.

**Procedure:**

**Step 1.** Choose which disease you will research. There are many genetic diseases to choose from, and a list of links that you can use to explore the known human genetic diseases can be found on the class page.

Some examples of genetic diseases are:

|  |  |
| --- | --- |
| * Sickle-Cell Disease * Hemophilia albinism * Phenylketonuria (PKU) * Cystic Fibrosis * Tay Sachs Disease * colorblindness * Adrenoleukodystrophy (Lorenzo’s Oil) * Herditary Deafness * Coffin-Lowry Syndrome * Achondroplasia (dwarfism) * Fragile X Syndrome * Huntington’s Disease | * Marfan Syndrome (Alton Giant) * Trisomy 13 (Edward’s Syndrome) * Rett Syndrome * Klinefelter Syndrome * Turner Syndrome * Progeria (premature aging) * Xeroderma pigmentosum * Gaucher Disease * Prader-Willi Syndrome * Duchenne Muscular Dystrophy |

Disease chosen\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Step 2.** Use the following questions to guide you in your research:

Medical

1. How does a person inherit it? Is it dominant or recessive?

2. What are the possible genotypes of the parents? If the disease is a chromosomal abnormality, describe the abnormality.

3. How prevalent is the disease in the population (include statistics)?

4. What are the chances of a person with this disease passing the disease to their offspring (include possible scenarios)?

5. How is the disease diagnosed?

6. What are the physical symptoms of the disease?

7. What is the life expectancy of someone with the disease? 8. How can the disease be treated?

Personal

1. What is everyday life like? What is the quality of life?

2. What limitations does the person have?

3. What are some organizations that can help a family cope with a child's disorder (give web links or contact information) 4. How possible is it that a cure will be found (latest research)?

**Step 3: Create your brochure!** See class page for a template

Genetic Disorders Brochure Rubric

Student Name:     \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Class: \_\_\_\_\_\_\_\_\_\_\_

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| --- | --- | --- | --- | --- |
| CATEGORY | 4 | 3 | 2 | 1 |
| **Content - Accuracy**  **X2** | All content throughout the brochure is accurate. **Symptoms** of the disease, **diagnosis**/**prognosis**, **treatments**/**cures**, and **inheritance** pattern are all discussed thoroughly | Most of the content is accurate but there is one piece of information that is inaccurate or missing. | The content is generally accurate, but more than one piece of information is inaccurate or missing. | Content is missing or contains more than one factual error. |
| **Required Elements** | The brochure includes all *applicable* information as outlined by the guiding questions in part 2 | The brochure includes all but 2 pieces of *applicable* information as outlined by the guiding questions in part 2 | The brochure includes all but 3 pieces of *applicable* information as outlined by the guiding questions in part 2 | The brochure is missing 3 or more pieces of *applicable* information as outlined by the guiding questions in part 2 |
| **Use of Graphics** | All **graphics** are attractive (size and colors) and **support the theme/content** of the brochure. | A few graphics are not attractive but all support the theme/content of the brochure. | All graphics are attractive but a few do not seem to support the theme/content of the brochure. | Several graphics are unattractive AND detract from the content of the brochure. |
| **Spelling and Grammar** | Brochure has 0-3 **misspellings** or **grammatical** **errors**. | Brochure has 4-6 misspellings, but no grammatical errors. | Brochure has 7-10 grammatical errors but no misspellings. | Brochure has more than10 grammatical and/or spelling errors. |

Total Points Earned \_\_\_\_\_\_\_\_\_\_ out of 20