

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

### Genetic Disorders

Go to the following website and follow the directions below:

<http://learn.genetics.utah.edu/content/disorders/>

#### **Part 1 – Multifactorial disorders**

Choose one multifactorial disorder and fill out the table:

Disorder	Basic description of the disorder	What is wrong with the DNA?	What problem does the DNA defect cause?

#### **Part 2 – Chromosome abnormalities**

Fill out the table for each one and then do one other chromosome abnormality of your choice:

Disorder	What is wrong with the DNA?	What problems does the DNA defect cause?
Klinefelter Syndrome		
Turner Syndrome		
Down's Syndrome		
Your choice:		

### **Part 3 – Single-Gene Disorders**

Fill out the table for each disease and then do one other single-gene disorder of your choice:

Disorder	What is wrong with the DNA?	What problems does it cause?	Is it a dominant or recessive gene?
Huntington's Disease			
Maple Syrup Urine Disease (MSUD)			
Phenylketonuria (PKU)			
Cystic Fibrosis			
Your choice:			

Questions:

1. If one parent had Huntington's disease (genotype = Hh), what are the chances that their kids would have the disease? Assume that the other parent is normal (hh). Make a punnett square to show the chances. Remember that Huntington's is a dominant gene (H).
2. If you were in this situation (where you are one of the parents), would you take the risk of having a child? Explain why you would or wouldn't.
3. Are these diseases inherited or acquired?
  - a. The flu
  - b. Down's syndrome
  - c. Huntington's
  - d. A cold
4. How is Down's syndrome different than Huntington's disease?