KARYOTYPING ACTIVITY

Using the following website:
http://learn.genetics.utah.edu/content/begin/traits/

Click on **Heredity**
a. Define Heredity

Click on **What is a Trait**
a. Define Trait.

Click on **How Do Scientists Read Chromosomes:**
a. What three factors do scientists look at when reading chromosomes?

Click on **Telomeres**. Answer the following questions:
a. What is a telomere?
b. What two conditions are telomeres associated with? Explain.
c. Describe what is an immortal cell and possible uses of immortal cells.

Click on **What is a Chromosome**:
a. What are chromosomes made of?
b. Where are chromosomes located?
c. If chromosomes are so long, how do they fit inside the cell?
d. How many chromosomes are in a human cell? Why are they in pairs?
e. Describe which chromosomes determine if you are a male vs. a female.

Click on **Using Karyotypes to Predict Genetic Disorders**. Then click on all the possible buttons. They will run you through a series of different screens that will allow you to answer the following questions:

Meiosis:
1. What does this process produce?
2. What is the common name for gametes?
3. How many chromosomes are in each type of gamete for humans?

Fertilization
1. What is a zygote?
2. How many chromosomes are in the zygote?
3. Why are the chromosomes in pairs?

How Can Cells End up With Too Many or Too Few? Complete the chart:

Define	Example (Name of Disorder)/ How This Can Occur?
Trisomy	
Monosomy	
Terminal Deletion	
Interstitial Deletion	
Reciprocal Translocation	
Robertson Translocation	

Using the following website:
http://www.biology.arizona.edu/human_bio/activities/karyotyping/karyotyping.html

Click on the icon, “Vocabulary” to define the following terms:
Define:

1. Karyotype:
2. Chromosome
3. Centromere:
4. Autosomal
5. Homologous
6. Gene:

Click on the icon, “patient histories” to answer the following questions:

Patient A

# of Chromosomes:	Abnormality with Karyotype:
Name of Disorder:	Symptoms of Disorder:

Patient B

# of Chromosomes:	Abnormality with Karyotype:
Name of Disorder:	Symptoms of Disorder:

Patient C

# of Chromosomes:	Abnormality with Karyotype:
Name of Disorder:	Symptoms of Disorder: