



# Human Chromosomes

Why we look somewhat like our parents, but not exactly.

Centers Activity ©

## Center 1: DNA

- <u>Click here</u> for an animation showing the relationship between cells, nuclei, chromosomes and DNA. (<u>http://learn.genetics.utah.edu/content/basics/</u>)
  - Then click on "What is DNA?" & Watch all parts.

#### Respond to the following Questions:

- 1. Put the following items in order from largest to smallest: *chromosomes, DNA, cell, nucleus*
- 2. How does the cells know their role in the body?
- 3. Describe the structure of DNA (Include ALL parts!)
- 4. What are genes and their functions?
- 5. How do proteins have a role in this?

## Center 2: Chromosomes

Click here to see more about chromosomes.
<u>Then click on "What are Chromosomes?</u>
(http://learn.genetics.utah.edu/content/chromosomes/intro/)

Respond to the following questions:

List three words that describe a chromosome.

- 1. How many chromosomes does a human cell have?
- 2. What can we learn from looking at chromosomes?
- 3. List the members of your group, what sex chromosomes do they each have?
- 4. Why do you think there is such a difference between how many chromosome a mosquito has versus a human?

### Center 3: Karotypes Go to each of the links provided.

Link 1: http://learn.genetics.utah.edu/content/chromosomes/readchromosomes/

Questions:

1.Describe the three features of a chromosome scientists look at for identification.

2. What are centromeres; how can they aid in identification of chromosomes?

Link 2: <u>http://learn.genetics.utah.edu/content/chromosomes/karyotype/</u> (practice matching chromosomes!! ③ )

Questions:

1.Rate the difficulty of this activity with an explanation as to why. 2.What tools did you use to help you match the chromosomes?

Link 3: http://learn.genetics.utah.edu/content/chromosomes/diagnose/

Questions:

1. Thinking about the prefix, what is a homologous chromosome?

2.Describe each of the three possible errors in chromosome distribution.

3. Choose one type of Genetic Disorder to look into further (click link)

- 1. How do people get this disorder?
- 2. What are the symptoms?
- 3. Include Statistics