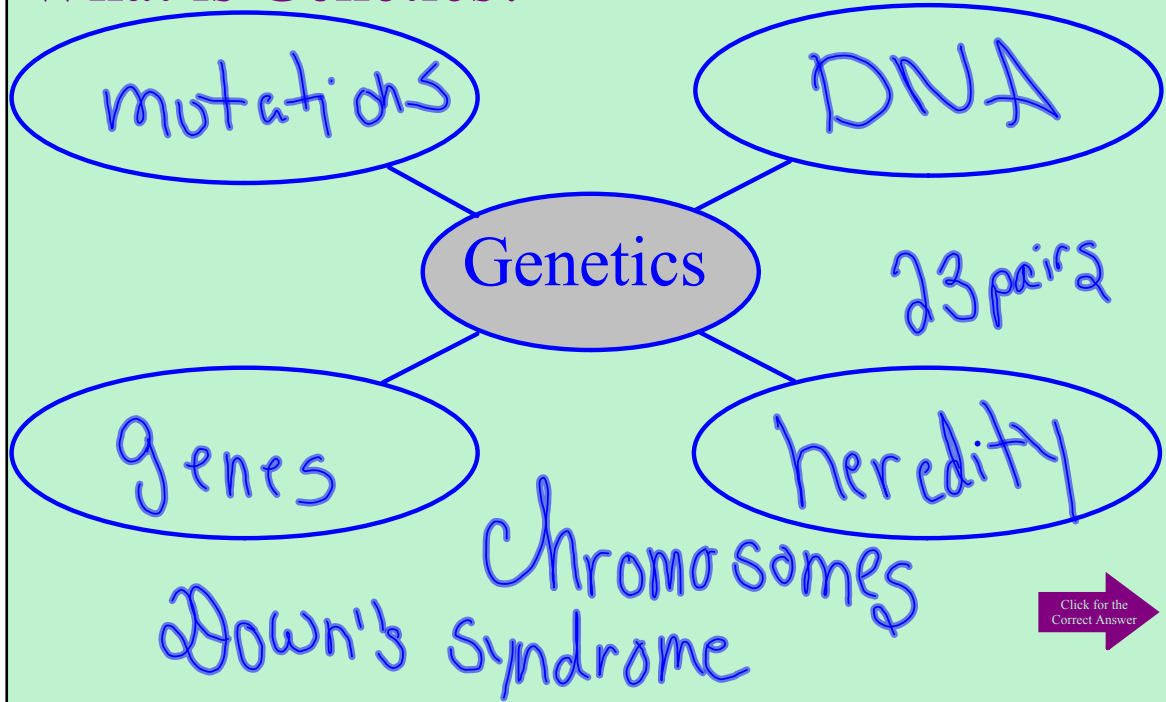


What is Genetics?



Brainstorm

Genetics is both the branch of biology that studies heredity and the interaction of genes.

Definition

Which are genetics diseases?

Click on a disease to see if you are correct.

- | | |
|---|-----------------------------------|
| yes Adrenoleukodystrophy (ALD) | Hemophilia yes |
| AIDS | yes Huntington disease |
| yes Albanism | Influenza |
| Botulism | Leprosy |
| Cancer yes/no | Sickle cell anemia yes |
| yes Cri-du-Chat | Small Pox |
| yes Down syndrome | Tay-Sachs yes |
| Encaphalitis | Turner Syndrome yes |

Genetic Diseases

New cells are made by cell division.

The adult human body makes

1,000,000,000,000

cells every day.

100

100,000

1,000,000

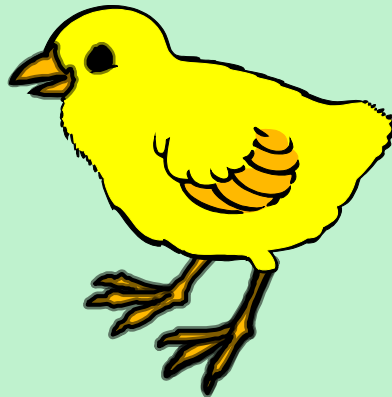
Place the correct answer on the line.

Cell Division

Cells are undergoing cell division.

For example: Cells divide when cuts are healing or when an animal is growing.

Make the baby chick grow.



Would there now be:

- a. Bigger Cells
- b. More Cells

Cell Division 2

Circle the correct part of the picture with the color the word is written in.

Chromatids

Chromosome

Centromere

Centrosome



Chromosome Picture

Match the correct term to its definition.

Chromatids

region joining
two chromatids

Chromosome

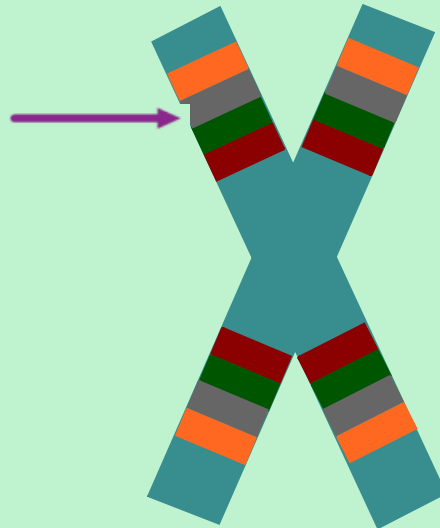
one pair of a DNA,
strands of DNA to
make a chromosome

Centromere

structure of made
DNA on which genes
are located.

Defination 2

A *gene* is a
section of a
chromosome
that codes for a
protein or RNA
molecule



Move the arrow to point to a gene.

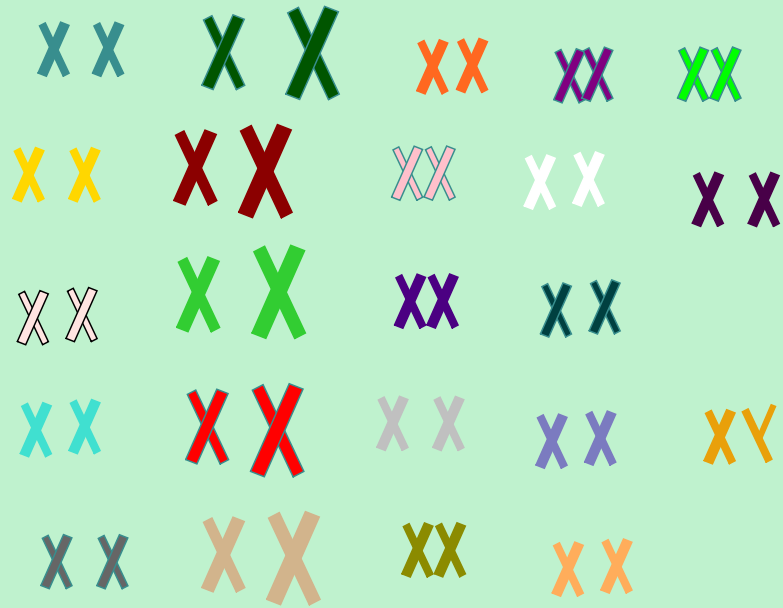
Gene

How many chromosomes does a human have?

Count the chromosomes

46

Number of Chromosomes



Number of Chromosomes

What do you notice about these two chromosomes?

1. color
2. genes
3. size



Homologous Chromosomes

Homologous Chromosomes

Chromosomes that are similar in:

1. size
2. shape
3. genetic content



Homologous Chromosomes

Eraser over the line to find the definition.

x	X	x	x	x					
x	X	x	x	x					
x	X	x	x	x					
x	X	x	x	x					
x	X	x	x	x					

Haploid
egg, sperm
1 copy

	xx	X X	xx	xx	xx
	xx	X X	xx	xx	xx
	xx	X X	xx	xx	xx
	xx	X X	xx	xx	xx
	xx	X X	xx	xx	xx

Diploid
2 copies

Haploid vs. Diploid

Correct!



Correct

Incorrect!

TRY AGAIN



Incorrect