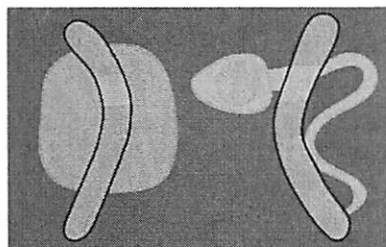
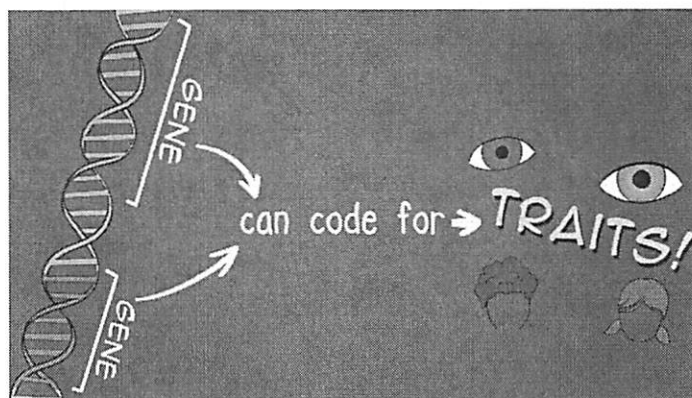
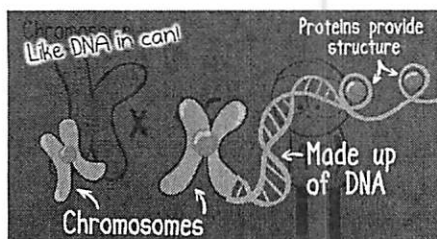
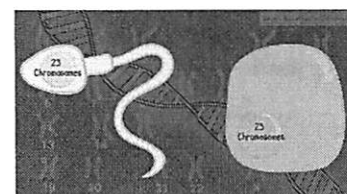


A \_\_\_\_\_ is a section of a chromosome/DNA which codes for a trait.

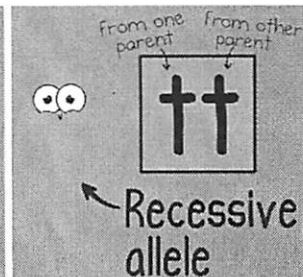
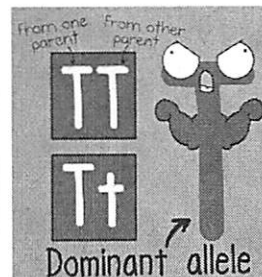
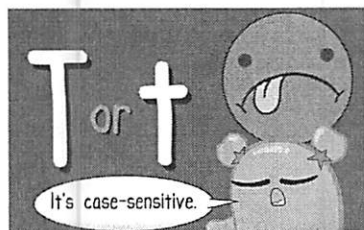
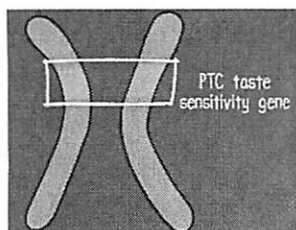


How many chromosomes from each pair are carried in the sperm and egg cells? \_\_\_\_\_ from each pair

Since humans have a total of 46 chromosomes which come in 23 pairs, 23 chromosomes are found in human sperm cells and 23 are carried in human egg cells.



## Alleles: Varieties of a Gene



T-taster

t- non-taster

If someone is a taster, what are their possible genotypes? \_\_\_\_\_

Why is their only one possible genotype for a non-taster? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

gene

allele

dominant

recessive

phenotype

genotype

homozygous / pure

heterozygous / hybrid

### How it all works.....

Phenotype-  
blue eyes  
Genotype-  
bb



Eye color alleles-bb

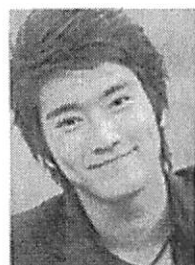
Each parent has a pair of alleles in their genetic make up to control their eye color.



**B**-brown  
dominant  
**b**-blue  
recessive



Phenotype-  
brown eyes  
Genotype-  
Bb



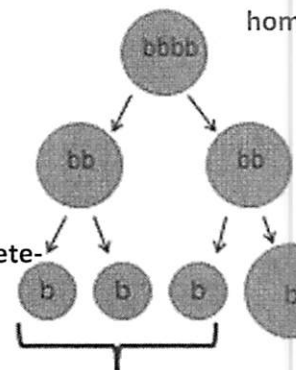
Eye color alleles-Bb

homozygous recessive

heterozygous

Before meiosis, DNA replicates; cells divide and alleles are assorted randomly into the resulting gametes

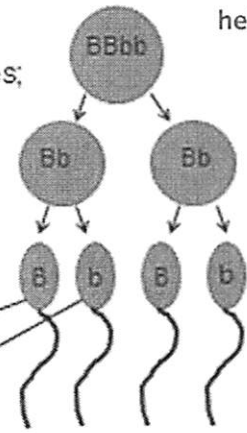
female gamete-  
egg



Polar bodies accept the chromosomes and then they break down and are absorbed by the body.

What are the possibilities for the offspring?

male gamete-  
sperm



Bb  
brown eyes  
bb  
blue eyes