

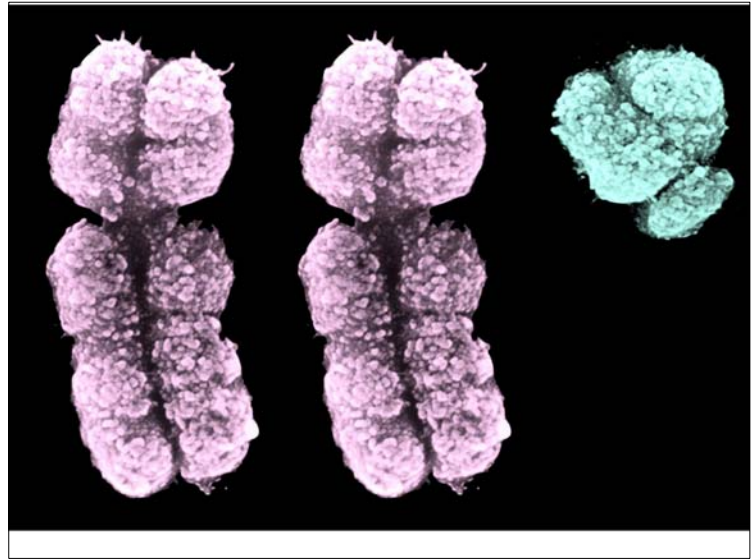
#1

Chromosomes

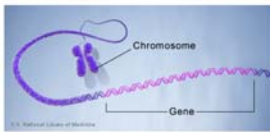


Threadlike structure that contains genetic information that is passed from generation to the next

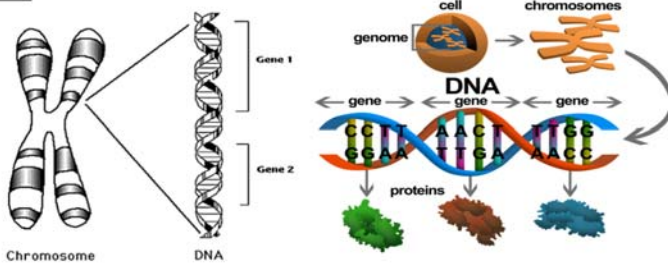
Composed of DNA - we have **23 pairs** of chromosomes (**46 total**) in each cell that reproduces asexually



#2



Genes



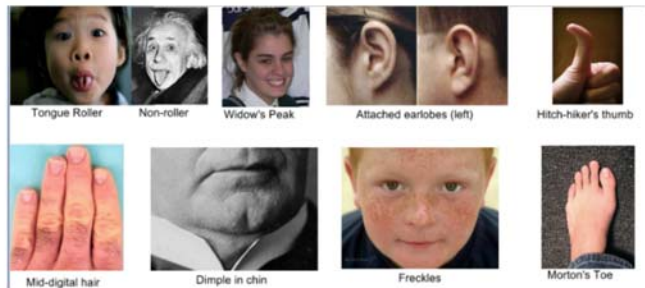
**Genes**

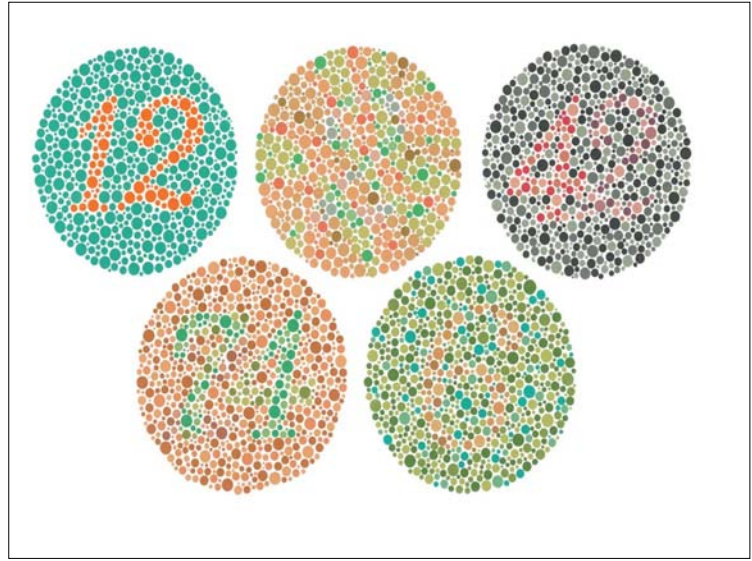
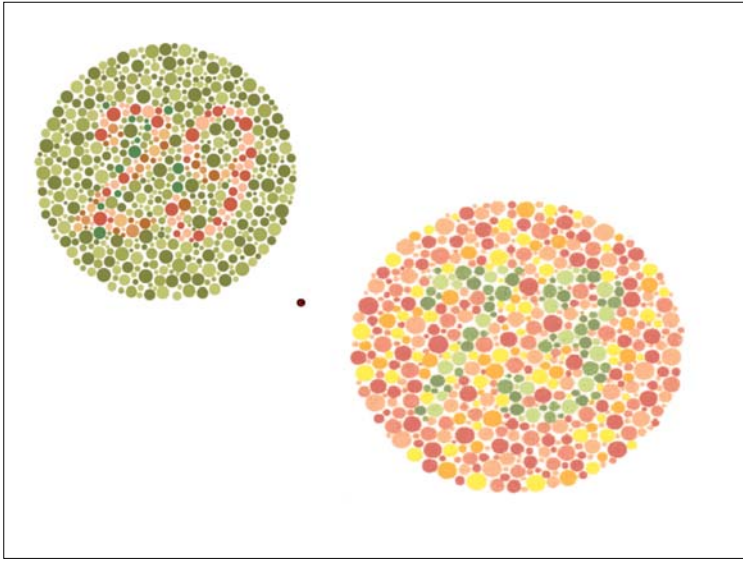
Sequence of DNA that codes for a protein and thus determines a trait

#3



Genetic trait - specific characteristic that varies from one individual to another





#4

Dominant traits

Expressed traits that mask other forms



Character	Dominant trait	Recessive trait	Character	Dominant trait	Recessive trait
Seed shape			Flower position		
Seed color				Stem height	
Flower color			Pod shape		
Pod color				Pod color	

Recessive traits

Traits that are masked by dominant traits; need 2 recessive traits from parents

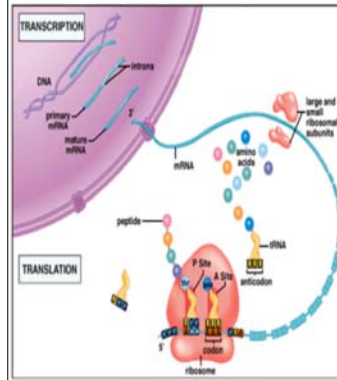


Character	Dominant trait	Recessive trait	Character	Dominant trait	Recessive trait
Seed shape			Flower position		
Seed color				Stem height	
Flower color			Pod shape		
Pod color				Pod color	

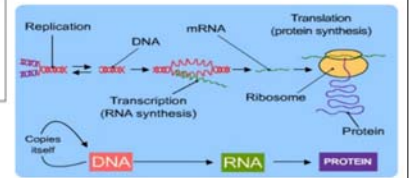
	Dominant Gene		Recessive Gene
Cleft Chin		No Cleft	
Widow's Peak		No Widow's Peak	
Dimples		No Dimples	
Brown/Black Hair		Blonde Hair	
Freckles		No Freckles	
Brown Eyes		Gray/Blue Eyes	
Free Earlobe		Attached Earlobe	

## #5 How proteins are made

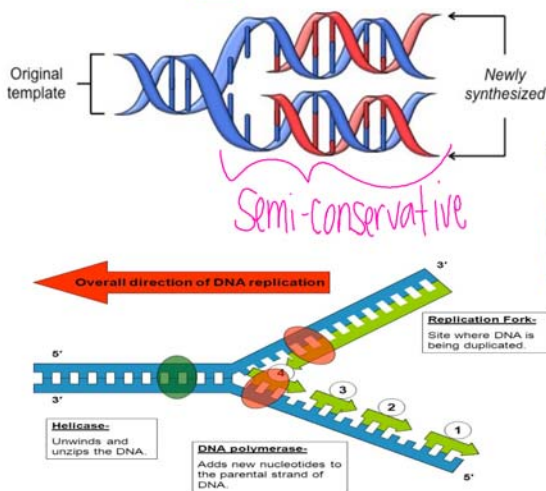
Parody Song



1. **Transcription:** DNA → mRNA
2. **Translation:** mRNA → Polypeptide
3. **Protein Formation**



## Parody Song #6 How DNA replicates



Helicase  
DNA Polymerase  
Ligase

(s) Interphase  
prior to mitosis

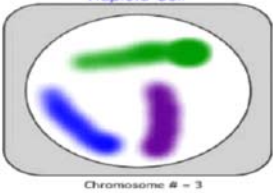
## #7

Carries the determining factor for sex



#11

Haploid  
Haploid Cell

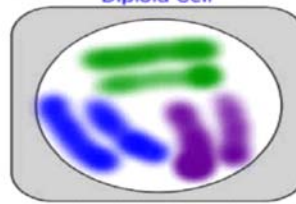


Chromosome # = 3

Contain "n" number of chromosomes

Half the # of chromosomes for that species-  
in humans: 23 - sex cells

Diploid  
Diploid Cell



Chromosome # = 6

Term used to refer to a cell that contains both sets of homologous chromosomes

Double/full amount of chromosomes

"2n" number of chromosomes - in humans 46  
(all cells minus sex cells)

#8

Gametes



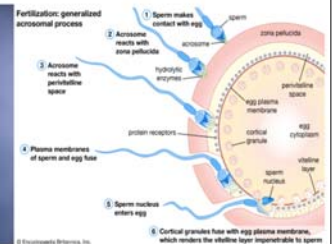
**Gametes**

Specialized cell involved in sexual reproduction

Sperm or egg cell  
(Haploid cells)

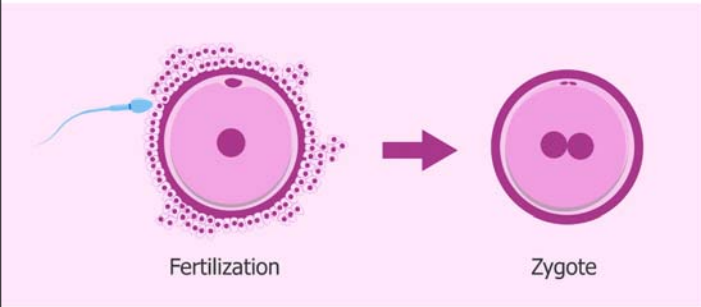


#9



Sperm meets/fuses with the egg

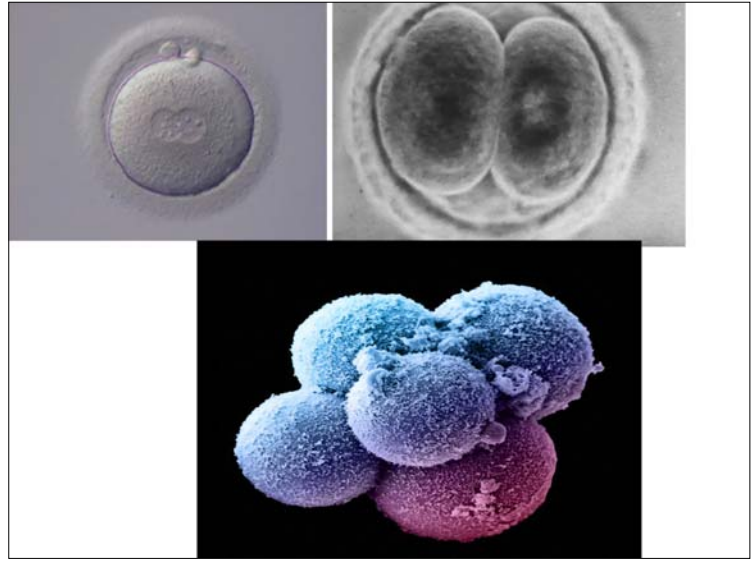
#10



Fertilization

Zygote

A fertilized egg- diploid cell ( $23 + 23 = 46$ )



#12

### Purpose of meiosis

To make 4 gametes with  $\frac{1}{2}$  (diploid) the number of chromosomes as the original cell

