

Oct 7, 2011

Chapter 6: A Closer look at Cell Division

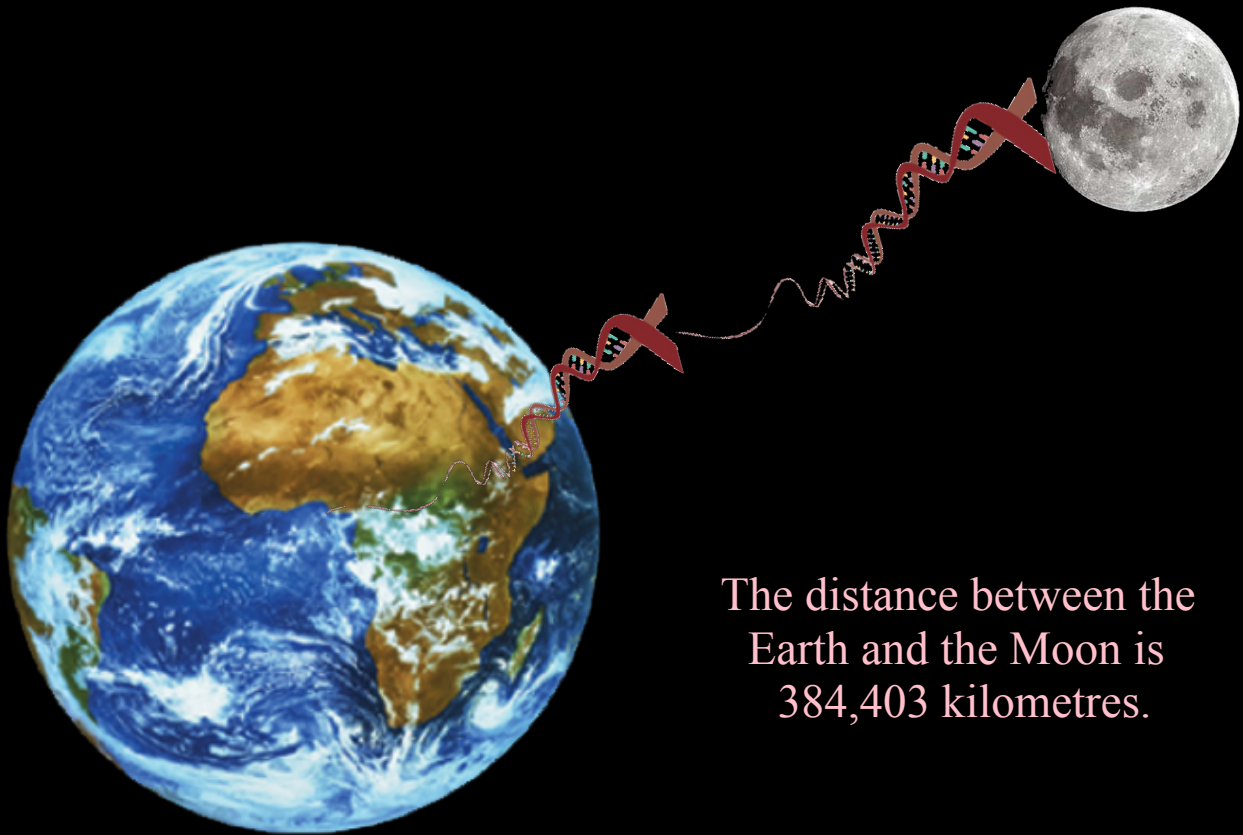
1) DNA

2) Genes and Heredity/Inherited Traits

Warm-up

If all of the DNA contained within the cells of a human being was stretched out and laid end to end, it would reach to the Moon and back _____ thousand times.

DNA stretched from all of our cells would reach the moon and back **eight thousand** times!



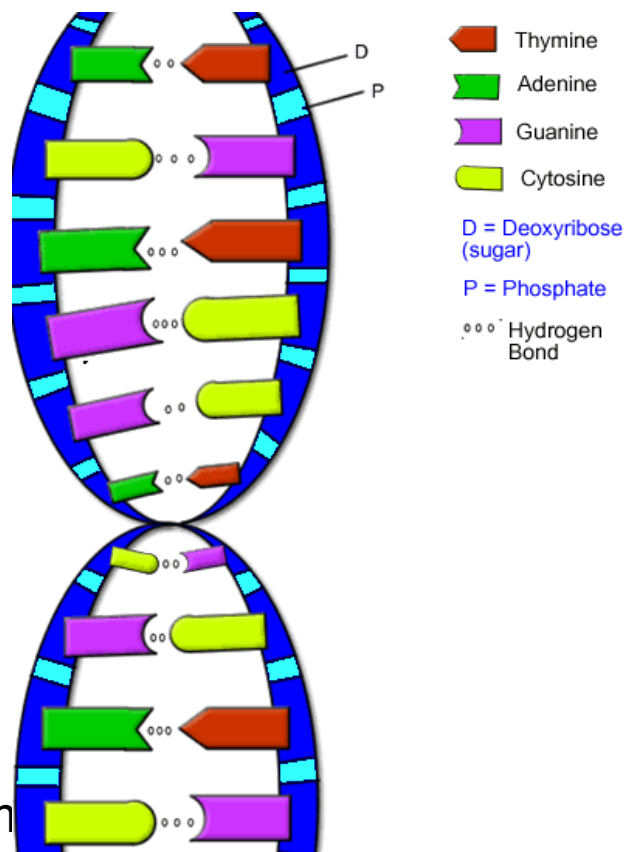
The distance between the Earth and the Moon is 384,403 kilometres.

DNA is a double helix that contains a series of chemicals.

These chemicals are arranged like letters in a code. DNA has a four character code

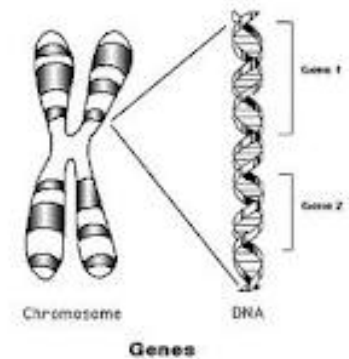
A = Adenine
 T = Thymine
 C = Cytosine
 G = Guanine

These codes combine to form genes.



A Gene is a long section of DNA that determines a specific characteristic i.e. hair color, skin color, height, nose length etc Each of us has thousands of genes, which are made of DNA and are found within our chromosomes.

The passing of these traits from parent to offspring is the basis of heredity.



What are some other traits you think you inherited from your parents??

Inherited Traits Activity

Trait	Frequency Form 1	Frequency Form 2
Gender	Female – approximately 50%	Male – approximately 50%
Earlobes	Unattached (free) – more frequent	Attached – less frequent
Thumb extension	Straight thumb – 64-75%	Hitchhiker’s thumb – 25-36%
Tongue rolling	Can roll tongue – 65%	Cannot roll tongue – 35%
Cheek dimples	Dimples – more frequent	No dimples – less frequent
Handedness	Right handed – more frequent	Left handed – less frequent
Hand clasping	Left over right – 55%	Right over left – 44%
Hair curl	Curly hair – more frequent	Straight hair – less frequent
Color vision	Normal color vision – females 100%; males 92%	Color blind – males 8%