Glossary

autosome	A numbered chromosome. A chromosome not involved in gender determination.
base pair	"Two chemical bases bonded to one another forming a 'rung of the DNA ladder.'" [*Talking Glossary of Genetic Terms* from the National Human Genome Research Institute]
Cambridge Reference Sequence (CRS)	Based on the sequence of the first mitochondria to be mapped. It was done in Cambridge and became the reference set against which other mitochondrial results were measured.
celibate DNA	DNA which is passed intact from one of the parents without mixing with DNA from the other parent. Ex. Y-DNA from father to son(s) and mtDNA from mother to children of both genders.
centiMorgan (cM)	A unit of measurement based on recombination. It is used to measure genetic linkage, or how likely two alleles are to be inherited together.
chromosome	Structure within the nucleus of the cell containing DNA. A normal human cell contains 46 chromosomes arranged into 23 pairs.
cM	See c*entiMorgan*.
coding region	A sequence of DNA that can that result in the production of a protein necessary for cellular function.
CRS	See *Cambridge Reference Sequence*.
DNA	*Deoxyribonucleic acid* is an infinitely detailed instruction book on how to create our specific physical body, to change it over time and if necessary to repair it.
double helix	Two linear strands of DNA that bond together in a manner that resembles a twisted ladder.
GEDCOM	A file format for sharing genealogical information from one program to another.
gene	The basic physical unit of inheritance passed from parent to child and contains instructions for the production of proteins.
genealogical time	The time when most of us have had surnames and some of us have a chance to find documentary records mentioning our ancestors. For those of European descent that is generally from the 17th century to the present.
genetic distance	FTDNA uses genetic distance in their yDNA and mtDNA to say how many markers are different between 2 people. 23andMe uses the term to describe the number of cMs two people share on their atDNA.
genome	An entire set of instructions found in a single cell.
haplogroup	Ancient grouping to which a male or female ancestor belonged. Each individual has a maternal and a paternal haplogroup. The classification schemes for maternal and for paternal haplogroups are completely separate.
HVR2	There are two mitochondrial hypervariable regions used in human mitochondrial genealogical DNA testing. HVR1 is considered a "low resolution" region and HVR2 is considered a "high resolution" region. Getting HVR1 and HVR2 DNA tests can help determine one's haplogroup. HVR1 locations are numbered 16001-16568. HVR2 locations are numbered 001-574. [*Wikipedia*]
HVR1	There are two mitochondrial hypervariable regions used in human mitochondrial genealogical DNA testing. HVR2 is considered a "high resolution" region. Getting HVR2 DNA tests can help determine one's haplogroup. HVR2 locations are numbered 001-574. [*Wikipedia*]

Hypervariable Region (HVR)	A region on the mitochondria that seems to mutate more rapidly than other regions.
marker	A DNA segment with a known location.
mitochondrial DNA	Free floating circular rings of DNA contained inside the mitochondria of the cell. Each cell may have hundreds or thousands. Each person inherits it from their mother but men do not pass it on.
Mitochondrial Eve	The most ancient woman who had at least two daughters who have current living direct female lines. Not to be confused with Biblical Eve.
most recent common ancestor (MRCA)	The most recent ancestor that two individuals share in common.
MRCA	Most Recent Common Ancestor
mutation	A change in value at a location on the genome
non-parental event (NPE)	The surname of the biological parent is not the one who passed on the offspring. It can result from unrecorded adoptions, legal name changes, births out of wedlock, etc.
NPE	see Non-parental event
nuclear DNA	DNA within the nucleus of cells. The 22 pairs of autosomal chromosomes plus the two sex chromosomes.
nucleus	A membrane within a cell that contains the chromosomes and most of the genetic material.
personalized medicine	Medical treatment that is individualized based on the patient's genomic information.
promiscuous DNA	DNA which becomes diluted in each intergenerational transfer because a contribution of each parent is included and mixed together. see also Recombining
recombining	Mixing process of paternal and maternal DNA within the nuclear chromosomes except the sex chromosomes.
sex chromosome	The 23rd pair of chromosomes in the nucleus which may be either two X chromosomes or a combination of an X chromosome and a Y chromosome. This pattern determines the gender of the individual.
Short Tandem Repeat (STR)	Pronounced "stir." This is a repeating pattern of a genetic code of letters at a location on the genome. The value is the number of times that pattern is repeated
Single Nucleotide Polymorphism (SNP)	A single change in the DNA bases at a given location. Pronounced "snip."
SNP	see *Single Nucleotide Polymorphism*
STR	see *Short Tandem Repeat*
surname	Family name.
umbilical DNA	Mitochondrial DNA that pass down through maternal lines.
X-chromosome	A "sex chromosome" within in the cell nucleus. Two copies, one from each parent, are present in females. Males have only a copy contributed by the mother.
Y-chromosome	The shortest of the 46 chromosomes within the nucleus of a cell of males.
Y-chromosome Adam	The most ancient man who had two or more sons each of whom have an unbroken line of male descendants down to the present. Not to be confused with Biblical Adam.