

QUICK TIPS

Understanding DNA

Here's a little science lesson from an old science teacher.

DNA, deoxyribonucleic acid, is the hereditary material in humans and most living things.

- It contains the instructions that control the daily workings of our cells.
- It makes up the genes of an organism that are passed from parent to offspring.
- Humans have 23 pairs of chromosomes- 22 pairs are autosomal and 1 pair are the sex chromosomes, X and Y. Males have an XY and females have an XX

DNA is found in 2 places in all human cells except red blood cells.

- Most DNA is packaged in chromosomes in the nucleus of the cell.
- Mitochondria, small structures in the cell nucleus, have a small amount of their own DNA in the shape of a ring. You might remember from high school biology that the mitochondria are the “powerhouses” of the cell.

There are 4 different types of DNA.

- Y Chromosome DNA
- X Chromosome DNA
- Mitochondrial DNA
- Autosomal DNA

DNA testing can be done on each type of DNA but Autosomal DNA testing is the most popular and affordable. It looks at all your pedigree lines, it can help break through brick walls, and it provides you with an abundance of data.

Why is DNA important in family history work?

- It is another record of our family relationships.
- It can provide clues about our ethnicity.
- By using DNA with traditional genealogy it's possible to go much deeper into our ancestry.
- We can connect and collaborate with our cousins.

Getting a match through autosomal DNA testing is most valuable when you can open a line of communication with your newfound cousins. Then you can share genealogical data like surnames, geographic origins and pedigrees. **Make sure you share your family tree on the testing company's website so you may more easily connect with your cousins and compare information.**

