DNA: I've Tested, Now What?

Beth Taylor, CG[SM]

FamilySearch

Have you taken a DNA test but aren't sure what to do with your results? In this class, we will discuss different ways to incorporate DNA into your genealogical research projects.

The Basics

Ethnicity vs. Match Lists – many DNA testers look at their ethnicity results and move on. However, the real value in DNA tests comes from working with your match lists. A match list is the list of people with whom you share DNA. Incorporating DNA into genealogical research focuses more on match lists than on ethnicity results.

Family Trees and Messages – DNA is the only genealogical record that requires collaboration with other people. In order to use DNA as part of your research process, you need to know how you are related to your matches. This means you need to be able to review the family trees for each of your matches. Because there is so much value in pairing family trees with match lists, make sure you contribute by creating or uploading your own family tree. Make sure your tree is public so others can see how you're related and connect your DNA results to your tree. Also, make an effort to reply to emails and messages from your DNA matches.

Track Your Matches – Most people who take a DNA test find themselves matched with hundreds, thousands, or even tens of thousands of other DNA testers. Find a way to track information about each of your matches including who they are, their relationship to you, and your common ancestor. You can use the note feature provided by most DNA companies or download your matches and create a table or spreadsheet.

Your DNA Data: If you want to use your DNA to solve a tough research problem, consider contributing your DNA to more than one DNA company. This will give you access to different ethnicity estimates, more matches, and unique tools. Currently, you can upload your raw DNA data for free to MyHeritage, FamilyTreeDNA, and GEDMatch or you may want to take another DNA test with a different company. Also consider taking a different type of DNA test. For example, if your research problem is on your patrilineal line, make sure to take a yDNA test.

Cousin Matches

If you share DNA with another DNA tester, you probably share a common ancestor. For each match, try to identify your most recent common ancestor (MRCA).

1. Choose one of your matches.
2. Explore their family tree, look for names that appear in your family tree.
3. Find the most recent common ancestral couple that exists on both your tree and their tree* (Some DNA companies, such as Ancestry or MyHeritage, will do this step for you.)
4. Determine your relationship to the match.

*If you cannot identify a common ancestor, search for common locations. You may have to extend the ancestral lines of your match in order to identify the common ancestor.

Match Clusters: If your match has no tree, you may still be able to identify which of your family lines

you share in common. A match cluster is a group of matches who appear to connect on the same family lines. To create a match cluster:

1. Identify a common ancestor for one of your matches
2. Use the “Shared” or “In Common With” feature to identify other matches who share DNA both with you and with that match.
3. Mark all connected matches as a single cluster.

Finding Unknown Parents (DNA First)

For more recent genealogical problems, you can use DNA to identify biological parents, grandparents, and sometimes great grandparents by starting with DNA and then “fishing” in your DNA matches.

1. Start with a close match who has a tree.
2. Use shared and in-common with features to identify other matches who also share DNA.
3. Review the family trees of the shared matches.
4. Identify the MRCA for the related matches – If you match multiple people who all descend from the same ancestral couple, it is likely you also descend from that couple.
5. Research that couple and identify all of their descendants.
6. Evaluate the descendants – look for connections with known information

Once you have identified a potential parent or relative, test their DNA or the DNA of known to descendants to prove or disprove the relationship.

Brick Walls (Research First)

To solve more distant genealogical problems (oftentimes referred to as brick walls), start with research and then use DNA to confirm any hypothesized relationships.

1. Research your brick wall ancestor in traditional paper trail records.
2. Identify a possible relative and hypothesize a relationship.
3. Use paper trail research to locate living descendants of your known ancestor.
4. Use paper trail research to locate living descendants of the hypothesized relative of your ancestor.
5. Test the DNA of both sets of living descendants.
6. Compare the DNA from both sets of living descendants.
7. Come to a conclusion.

You can conclude the hypothesized relationships exists if the DNA between multiple descendants of the known ancestor and multiple descendants of the hypothesized relative test at the expected rate and no other relationship can explain the DNA connection.

Conclusion

DNA can be used to solve genealogical research problems. However, testing your DNA is just one step in a larger process. Many research goals require the use of both DNA and traditional research. Once DNA is added to traditional paper trail research, it may be possible to finally solve some of your tough research problems.