

Smashing Brick Walls with Autosomal Results – Handout

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DNA Tests to Take

- FTDNA Family Finder (Autosomal) -- \$99 – sometimes on sale
- Ancestry DNA – Autosomal - \$99, sometimes on sale for less
- 23 and Me – Autosomal - - \$99 (for genealogy purposes only—not medical)

FTDNA Definition of Scores

Relationship	Range of Scores	“Expected” (Average) Score
1 st Cousin	548-1139	888
1 st Cousin Once Removed	220-638	444
2 nd Cousin	86-426	222
2 nd Cousin Once Removed	19-147	111
3 rd Cousin	16-111	55
3 rd Cousin Once Removed	0-99	27
4 th Cousin	0-54	13

- FTDNA gives two types of scores: Total and Longest Segment -- each is important
- **Number of FTDNA Matches.** Following my test in July 2013, FTDNA gave me 230 matches; this number has increased to over 1100 as of Dec 2016.

Definition of Ancestry DNA Scores

centiMorgan Score	Ancestry DNA Rating	Likelihood of a Common Ancestor within 5-6 Generations
Over 30	Extremely High	Virtually 100%
20-30	Very High	99%
12-20	High	95%
6-12	Good	Over 50%
Less than 6	Moderate	20% - 50%

- **Number of Ancestry DNA Matches.** Following my test in Sep 2015, Ancestry DNA gave me 4000 matches; this number has increased to 9000 as of Dec 2016.
- **Ancestry DNA Key Features**
 1. Rating measurements for each match, qualitative first; then, click on match to get a cM score. The cM score will be for total cM, but will not define the longest segment.

2. Shared Match List for each individual match. This list is smaller in number than the list offered by FTDNA. Ancestry DNA seems to be more conservative in its matching.
 3. Posted family trees by many of the matches
 4. Search Match capability to select individual matches having selected surnames in their trees. For example, select “Tracy” to find every match that has the surname Tracy in their trees. You may want to check the “Include similar surnames” option.
 5. No chromosome browser
 6. Convenient surname matches listed for each individual match
- **The Re-Shuffling Riddle:** variability in how much DNA material is inherited by each person. This means that some of the matches will score either higher or lower than “expected.” For example, some persons who luckily carry a lot of DNA from specified ancestors may score more in the range of a 3rd cousin when they are actually 5th cousins. Or, the reverse may be true.
 - **Example Showing a Close Match and How to Determine an Exact Relationship.** Scores will tell approximately how close the relationship is.
 - Compare the scores and also compare the paper trail

Example of Advantages of Working with Older People. An older person, for example, someone age 75, will be much closer in generations and scores to a potential ancestor than someone age 25. It is likely that the younger person, perhaps two generations distant from the older person, will have scores that are considerably diluted (smaller) than the older person. The message of this fact is that if you can get your older relatives to do the DNA tests it will be immensely helpful.

Using DNA Results to Solve a Challenging Genealogy Problem with a Big Brick Wall

Project #1 – Confirming Elijah Ellifritz as an Ancestor

- Our target person was Elijah Ellifritz. I looked at all the paper trail and Autosomal DNA results we had for him
- I carefully matched DNA scores with known paper trail data and got solid matches
- My own family tree was solid up to Elijah, in the 4th generation

Project #2 – Finding Kin/Parents for Elijah

- Then, I considered his possible parents, unknown at this time
- I looked at a lot of collected paper trail data that showed who might be a candidate to be a parent for Elijah
- We next looked at Ancestry DNA and used the “Select Surname” feature to find matches who had the Ellifritz surname in their family tree.
- I then looked at four possible High and Good rated matches for persons with this family surname in its family tree
- I analyzed their ratings and their posted family trees
- Four DNA result candidates had family trees that went back to Elijah’s generation, with each showing one of Elijah’s siblings (rather than Elijah)
- Each of four separate posted trees went back a generation further to include parents of Elijah’s possible siblings
- The four DNA scores were high enough that it is likely that we have a common ancestor; and, their posted trees looked reasonable. The fact that four different matches were found strengthened the case. It is likely that my family is the same family as that of the four matches, and Elijah is part of that family
- It is almost certain that I share a common ancestor with those four people
- But, one flaw: no chromosome browser capability to do triangulation

Analyzing Four Matches to Learn More About Elijah’s Origins

Tree	Key Ancestor	Scores	Comments
Samuel	Samuel Ellifritz, b.1795	cM = 22, High	Samuel’s parents = Johannes George Ellifritz, Keturah Clark
Sarah	Sarah Ellifritz, b. 1803	cM = 14, High	Sarah has same parents as Samuel
Permelia	Permelia Ellifritz, b. 1821	cM = 8, Good	Permelia has a different mother, Permelia Jarvis
Solomon	Solomon Ellefritz, b. 1801	cM = 8, Good	Solomon has same parents as Samuel and Sarah

- Even after finding the four solid matches, I continued the search and identified 5 more people who are also connected to that line

Project #3 – Defining Elijah’s Grandfather

- I tentatively added a GF for Elijah, Johann George Ilgenfritz (1728-1810)
- Data was solid connecting Elijah’s likely father to his GF; PA church records
- Using the “select surname” option on Ancestry DNA, I identified about 24 potential matches in that line
- These matches were evaluated individually
- As many as 21 matches traced back to Elijah’s new GF

Top 10 Take-aways:

- **1. DNA Tests to Take: Autosomal (Family Finder) for FTDNA and Ancestry DNA**
- **2. Scores and Their Meaning: 12 cM or more mean there is a 95% likelihood you and your match share a common ancestor within 5-6 generations**
- **3. Some variation, but good comparability among each testing company**
- **4. FTDNA gives estimated scores for different cousins**
- **5. Ancestry DNA considers cM = 30 or more virtually 100% solid**
- **6. Ancestry DNA: Features include Search Match; Posted Trees; Shared Matches**
- **7. Ancestry DNA: Features include Search Match to find matches with selected surnames in their trees**
- **8. Re-Shuffling concept needs to be understood; variable scores expected**
- **9. Case studies show that you can define ancestors for at least the 6th generation**
- **10. You can use DNA results to add to your family tree!!!**