



The Leeds Method

This was created by Dana Leeds in 2018. This method uses a spreadsheet to sort DNA matches into colour groups based on shared ancestors. It often creates four groups of DNA matches based on four grandparent lines, although there can be some additional groups if some lines are not entirely worked out.

This is how Dana Leeds explains her method.

“Step 1: List 2nd and 3rd cousins.

For this method, I use AncestryDNA and skip any “close family” and “first cousin” matches. Instead, I use cousins who Ancestry says are “second” or “third” cousins. However, I do eliminate any of the matches near the top who share over 400 cM. (In other words, use those matches who share between 90 and 400 cM of DNA with you.) The key is to not include anyone who you share two grandparents with. For the spreadsheet, I use Excel. I add “borders” around each cell – this helps everything stay readable when printed – and I “fill” the cells with colour to create the colour clusters.

| | A | B | C | D | E |
|----|-----------|---|---|---|---|
| 1 | Person 01 | | | | |
| 2 | Person 02 | | | | |
| 3 | Person 03 | | | | |
| 4 | Person 04 | | | | |
| 5 | Person 05 | | | | |
| 6 | Person 06 | | | | |
| 7 | Person 07 | | | | |
| 8 | Person 08 | | | | |
| 9 | Person 09 | | | | |
| 10 | Person 10 | | | | |
| 11 | Person 11 | | | | |
| 12 | Person 12 | | | | |
| 13 | Person 13 | | | | |
| 14 | Person 14 | | | | |
| 15 | Person 15 | | | | |

Step 2: Assign a colour to your first DNA match.

In this example, I assigned blue to person 01.

| | A | B | C | D | E |
|----|-----------|------|---|---|---|
| 1 | Person 01 | Blue | | | |
| 2 | Person 02 | | | | |
| 3 | Person 03 | | | | |
| 4 | Person 04 | | | | |
| 5 | Person 05 | | | | |
| 6 | Person 06 | | | | |
| 7 | Person 07 | | | | |
| 8 | Person 08 | | | | |
| 9 | Person 09 | | | | |
| 10 | Person 10 | | | | |
| 11 | Person 11 | | | | |
| 12 | Person 12 | | | | |
| 13 | Person 13 | | | | |
| 14 | Person 14 | | | | |
| 15 | Person 15 | | | | |

Step 3: Open that person’s shared matches and assign them the same colour in the same column.

In this example, 01 showed shared matches with 02, 06, & 08. Each of these people are now a part of the Blue Cluster.

| | A | B | C | D | E |
|----|-----------|------|---|---|---|
| 1 | Person 01 | Blue | | | |
| 2 | Person 02 | Blue | | | |
| 3 | Person 03 | | | | |
| 4 | Person 04 | | | | |
| 5 | Person 05 | | | | |
| 6 | Person 06 | Blue | | | |
| 7 | Person 07 | | | | |
| 8 | Person 08 | Blue | | | |
| 9 | Person 09 | | | | |
| 10 | Person 10 | | | | |
| 11 | Person 11 | | | | |
| 12 | Person 12 | | | | |
| 13 | Person 13 | | | | |
| 14 | Person 14 | | | | |
| 15 | Person 15 | | | | |

Step 4: Locate the first person who does not have a colour assigned and assign them a colour in the next column.

In this example, person 03 is the first person who is not already a part of the Blue Cluster. So, they were assigned the colour Orange in the next column.

| | A | B | C | D | E |
|----|-----------|------|--------|---|---|
| 1 | Person 01 | | | | |
| 2 | Person 02 | Blue | | | |
| 3 | Person 03 | | Orange | | |
| 4 | Person 04 | | | | |
| 5 | Person 05 | | | | |
| 6 | Person 06 | Blue | | | |
| 7 | Person 07 | | | | |
| 8 | Person 08 | Blue | | | |
| 9 | Person 09 | | | | |
| 10 | Person 10 | | | | |
| 11 | Person 11 | | | | |
| 12 | Person 12 | | | | |
| 13 | Person 13 | | | | |
| 14 | Person 14 | | | | |
| 15 | Person 15 | | | | |

Step 5: Open that person’s shared matches and assign each the same colour in the same column.

In this example, 03 showed shared matches with 09 and 11. Each of these people are now a part of the Orange Cluster.

Note: Even though it didn’t happen in this example, a person would be assigned as part of the Orange Cluster even if they were already a part of the Blue Cluster! When someone is part of more than one colour cluster, I call it *cluster overlap*.

| | A | B | C | D | E |
|----|-----------|------|--------|---|---|
| 1 | Person 01 | | | | |
| 2 | Person 02 | Blue | | | |
| 3 | Person 03 | | Orange | | |
| 4 | Person 04 | | | | |
| 5 | Person 05 | | | | |
| 6 | Person 06 | Blue | | | |
| 7 | Person 07 | | | | |
| 8 | Person 08 | Blue | | | |
| 9 | Person 09 | | Orange | | |
| 10 | Person 10 | | | | |
| 11 | Person 11 | | Orange | | |
| 12 | Person 12 | | | | |
| 13 | Person 13 | | | | |
| 14 | Person 14 | | | | |
| 15 | Person 15 | | | | |

Step 6: Repeat steps 2 to 5 until all of your 2nd & 3rd cousins have at LEAST one colour assigned to them.

| | A | B | C | D | E |
|----|-----------|------|--------|--------|--------|
| 1 | Person 01 | Blue | | | |
| 2 | Person 02 | Blue | | | |
| 3 | Person 03 | | Orange | | |
| 4 | Person 04 | | | Yellow | |
| 5 | Person 05 | | | Yellow | |
| 6 | Person 06 | Blue | | | |
| 7 | Person 07 | | | Yellow | |
| 8 | Person 08 | Blue | | | |
| 9 | Person 09 | | Orange | | |
| 10 | Person 10 | | | Yellow | |
| 11 | Person 11 | | Orange | | |
| 12 | Person 12 | | | Yellow | |
| 13 | Person 13 | | | Yellow | |
| 14 | Person 14 | | | | Purple |
| 15 | Person 15 | | | | |

Analysing the Results

4 Columns, No Overlap:

If your results show 4 distinct colour clusters, like above, without any overlap, your sort is *likely* showing matches to your four sets of great grandparents.

Fewer than 4 Columns, No Overlap:

If your results show less than 4 clusters, it is likely these clusters represent 3 of your 4 sets of great grandparents and that you have no matches at the 2nd/3rd cousin levels who have tested for the 4th set of great grandparents.

| | A | B | C | D |
|----|-----------|------|--------|--------|
| 1 | Person 01 | Blue | | |
| 2 | Person 02 | | Orange | |
| 3 | Person 03 | | Orange | |
| 4 | Person 04 | | | Yellow |
| 5 | Person 05 | | | Yellow |
| 6 | Person 06 | | | Yellow |
| 7 | Person 07 | | Orange | |
| 8 | Person 08 | Blue | | |
| 9 | Person 09 | | | Yellow |
| 10 | Person 10 | | | Yellow |
| 11 | Person 11 | | | Yellow |
| 12 | Person 12 | | | Yellow |
| 13 | Person 13 | | Orange | |
| 14 | Person 14 | | | Yellow |
| 15 | Person 15 | | Orange | |
| 16 | Person 16 | | | Yellow |

Some Overlap:

If your results show 4 clusters but some of your matches have been assigned more than one colour (for example, 02 and 04 are both blue and orange), your sort is likely showing either your four sets of great grandparents, but also showing you that two of these results (i.e. blue & orange) are on one side of your family. Or, the overlapped clusters (blue & orange) might belong to one set of great grandparents and, in this example, you are missing matches for one set of your four sets of great grandparents.

| | A | B | C | D | E |
|----|-----------|------|--------|--------|--------|
| 1 | Person 01 | Blue | | | |
| 2 | Person 02 | Blue | Orange | | |
| 3 | Person 03 | | Orange | | |
| 4 | Person 04 | Blue | Orange | | |
| 5 | Person 05 | | | Yellow | |
| 6 | Person 06 | | | Yellow | |
| 7 | Person 07 | | Orange | | |
| 8 | Person 08 | | | Yellow | |
| 9 | Person 09 | | | | Purple |
| 10 | Person 10 | | Orange | | |
| 11 | Person 11 | | | Yellow | |
| 12 | Person 12 | | | | Purple |
| 13 | Person 13 | Blue | | | |

Lots of Overlap:

In the example on the next page, there is a lot of overlap between all of the clusters, except the yellow and brick red clusters. All of the overlapping clusters are on the maternal side of this test taker and visually show a lot of cousins marrying cousins resulting in pedigree collapse. The paternal mother’s side is represented by both the yellow and brick red clusters. The paternal father’s side has no cousins matching at the 2nd/3rd cousin levels. So, even though there are a lot of clusters and matches, this sort represents only 3 of the four sets of great grandparents for this individual.

| | B | C | D | E | F | G | H | I | J | K |
|----|------|--------|--------|--------|-------|-----|------|-----|-------|------|
| 1 | Blue | | | | | | | | | |
| 2 | Blue | Orange | | Purple | | | | Red | Green | |
| 3 | Blue | Orange | | | | | | Red | Green | |
| 4 | Blue | | | Purple | | | | Red | | Blue |
| 5 | | | Yellow | | | | | Red | | |
| 6 | | | Yellow | | Green | | | Red | | |
| 7 | Blue | Orange | | | | | | Red | | |
| 8 | Blue | Orange | | Purple | | | | | | |
| 9 | | | | | | | | | | |
| 10 | | | | | Green | | | | | |
| 11 | | | | | | Red | | | | |
| 12 | | | Yellow | | | | | | | |
| 13 | Blue | Orange | | | | | | Red | Green | Blue |
| 14 | Blue | | Yellow | | | | | | | |
| 15 | | | | Purple | Green | | Cyan | | | Blue |
| 16 | Blue | | | | Green | | | | | |
| 17 | Blue | | | Purple | Green | | | | | Blue |
| 18 | Blue | | | Purple | Green | | Cyan | | | Blue |
| 19 | Blue | | | Purple | Green | | Cyan | | | Blue |
| 20 | Blue | | | Purple | Green | | Cyan | | | Blue |
| 21 | Blue | | | Purple | Green | | Cyan | | | Blue |
| 22 | Blue | | | Purple | Green | | Cyan | | | Blue |
| 23 | | Orange | | | | | | Red | | |
| 24 | | | Yellow | | | | | | | |
| 25 | Blue | | | | | | | | | Blue |
| 26 | Blue | | | | | | | | | Blue |
| 27 | | | | | | | Cyan | | | |
| 28 | Blue | | | | Green | | | | Green | |
| 29 | Blue | | | | Green | | | | | |
| 30 | Blue | | | Purple | | | | Red | | |
| 31 | | | | | | | | Red | | |

NOTES:

- Your results may vary!
- Colour Clustering, as with most DNA results, is not proof of a specific relationship. Instead, it is a **clue** that can be helpful in determining relationships.
- Although all the results shown in this post are real, the names have been hidden for privacy reasons.
- *A special thank you to everyone who allowed me to access their DNA results and gave me feedback! And, a special thank you to John Motzi who provided a lot of feedback!"*

The link below will take you to Dana Leeds' blog where there is a great deal more information about the Leeds method.

<https://www.danaleeds.com/the-leeds-method/>

Family Fanatics have a video explaining how they use the method:

<https://youtu.be/-74Ljyqo9c>