

All slides and handouts can be found at:

<http://www.familytreeaz.com/Presentations/>

Intro

- This is a follow on to April's class introducing the use of DNA for genealogy purposes
- There should be time for questions after the presentation
- We are assuming you've already taken a DNA test from one of the 5 testing companies (Ancestry, 23andMe, Family Tree DNA, MyHeritage, or Living DNA) and have received the results
- **So, what do we do as next steps to use the results?**

Assumptions

- This presentation is all about genealogy, or in other words, working on your family tree
- You'll need be able to access your results on the testing company's website
- This presentation does not discuss other uses of DNA tests such as:
 - Health aspects
 - Ethnicity estimates
 - Forensic genetic genealogy

Step 1: Download Your Results

- Each of the 5 testing companies provide the capability to download your DNA data
 - *** Important to know: this is not your complete DNA genome! It's only a representation of about 700,000 markers (a tiny percentage of your DNA) that's useful for genealogy purposes.
 - For brevity we will show you a screen shot of each company's DNA downloading page.
 - *** NOTE: when you download be sure to **take note** of where the file is downloaded on your computer (e.g., Desktop, My Documents, etc.) --- in each case the result will be one fairly large file.



DNA_KenWaters.zip

10/21/2017 1:02 PM

Compressed (zipp...

6,006 KB

Downloading from Ancestry


- Log onto Ancestry and go to your DNA page and DNA settings



Download DNA Data Close ^

Please enter your Ancestry account password. You'll receive a confirmation email and download instructions at the email address associated with your Ancestry account.

Password [Forgot Password?](#)

..... 




I understand that after my DNA data is downloaded, the downloaded copy will not be protected by AncestryDNA's security measures. When I download my DNA data, I assume all risk of storing, securing, and protecting my downloaded data.

Downloading from MyHeritage

- Go to Manage DNA kits

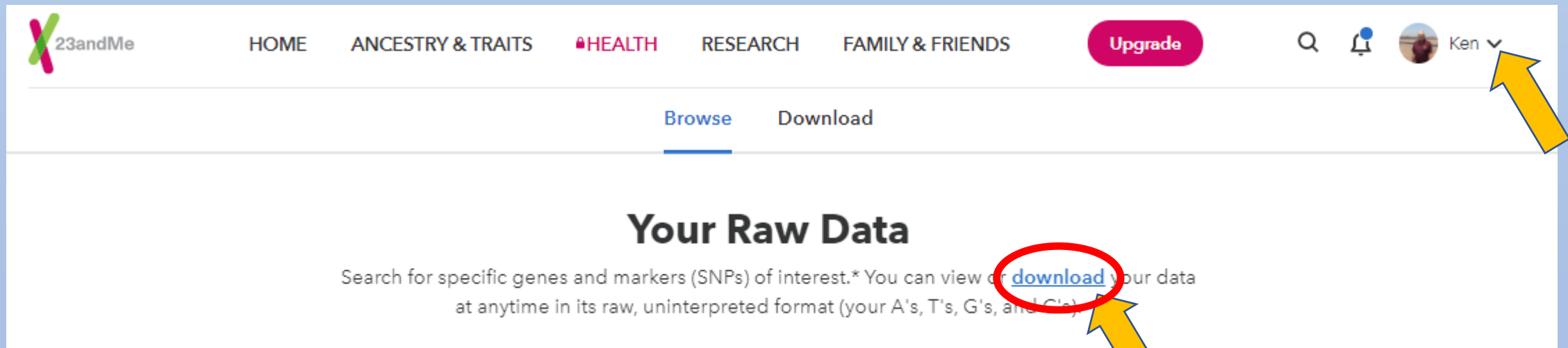
MyHeritage Home Family tree Discoveries **DNA** Photos Research

Manage DNA kits

	Status	
 Kit MH8000SE from MyHeritage	Ready	⋮
 Assigned to Lily Becks MH-QA78FC	Ready	<div>Re-assign Download Delete</div>
 Assigned to Franck Monfils MH-JA02EC	Ready	⋮

Downloading from 23andMe

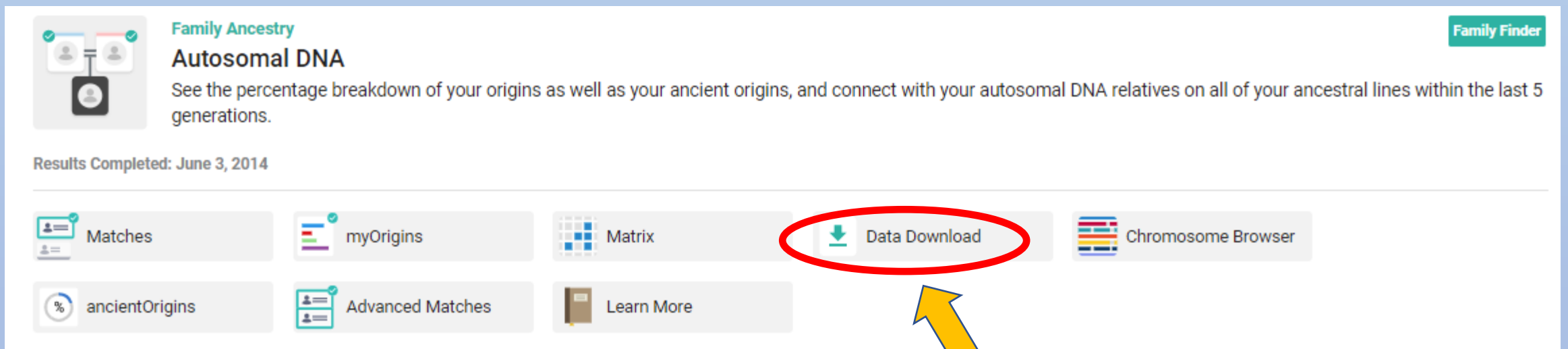
- Drop down on right-most link for “Your Raw Data”



The screenshot shows the 23andMe website interface. At the top left is the 23andMe logo. The navigation bar includes links for HOME, ANCESTRY & TRAITS, HEALTH, RESEARCH, and FAMILY & FRIENDS. There is an Upgrade button and a search icon. On the right, there is a user profile icon labeled 'Ken' with a dropdown arrow. Below the navigation bar, there are two tabs: 'Browse' and 'Download'. The 'Your Raw Data' section is visible, with a red circle around the word 'download' in the text: 'Search for specific genes and markers (SNPs) of interest.* You can view or [download](#) your data at anytime in its raw, uninterpreted format (your A's, T's, G's, and C's)'. A yellow arrow points to the 'download' link, and another yellow arrow points to the user profile dropdown menu.

Downloading from Family Tree DNA

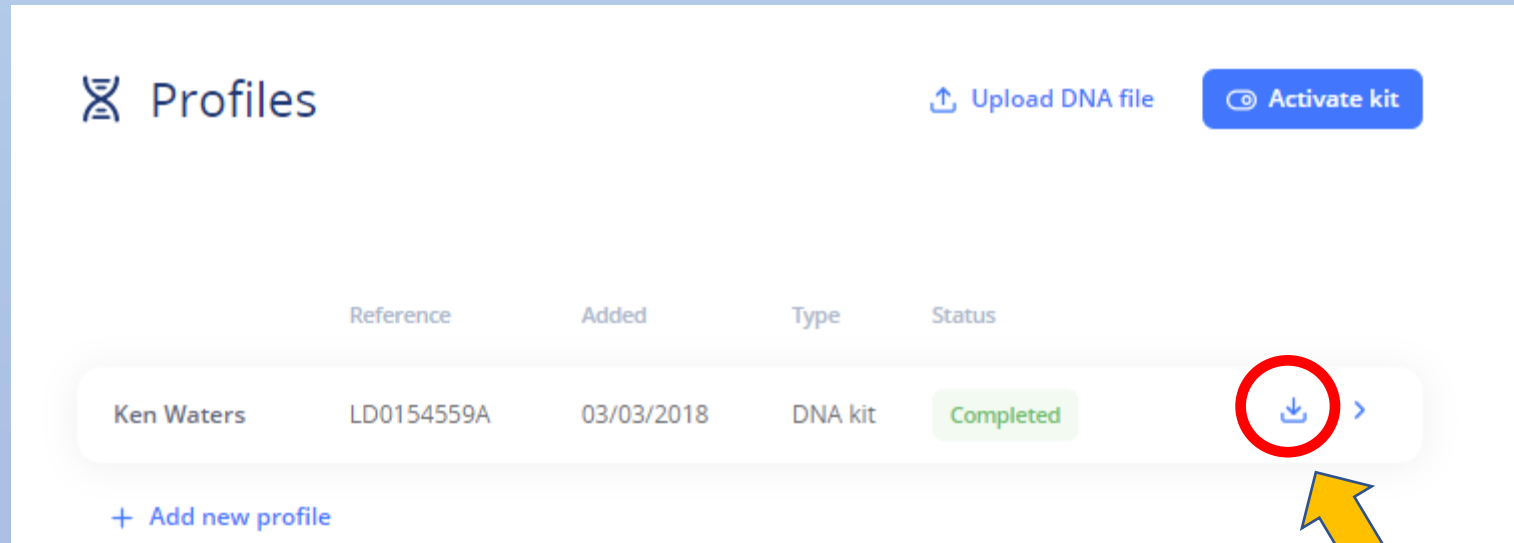
- Go to Family Finder (autosomal DNA) and click on data download




The screenshot displays the 'Family Ancestry Autosomal DNA' interface. At the top right, there is a 'Family Finder' button. Below the header, a description states: 'See the percentage breakdown of your origins as well as your ancient origins, and connect with your autosomal DNA relatives on all of your ancestral lines within the last 5 generations.' Below this, it says 'Results Completed: June 3, 2014'. A row of navigation buttons includes 'Matches', 'myOrigins', 'Matrix', 'Data Download', and 'Chromosome Browser'. The 'Data Download' button is circled in red, and a yellow arrow points to it from below. Below this row, there are more buttons: 'ancientOrigins', 'Advanced Matches', and 'Learn More'.

Downloading from Living DNA

- Go to Profiles and click on the little download arrow



The screenshot shows the 'Profiles' section of the Living DNA website. At the top left is a DNA double helix icon and the word 'Profiles'. To the right are two buttons: 'Upload DNA file' with an upload icon and 'Activate kit' in a blue box. Below this is a table with columns for Name, Reference, Added, Type, and Status. A single profile is listed: Ken Waters, Reference LD0154559A, Added 03/03/2018, Type DNA kit, and Status Completed. To the right of the profile is a download icon (a blue arrow pointing down) circled in red, with a yellow arrow pointing to it from the bottom right. Below the table is a link '+ Add new profile'.

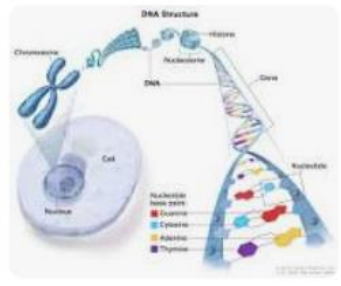
	Reference	Added	Type	Status	
Ken Waters	LD0154559A	03/03/2018	DNA kit	Completed	 >

+ Add new profile

What's in that file we just downloaded??

- This is my downloaded Ancestry DNA file when “unzipped”
- Consists of about 700,000 markers (“position” in this example) showing the two nucleotides (one from mom, one from dad)

Chromosomes have proteins called histones that bind to DNA. ... DNA is made up of four building blocks called nucleotides: adenine (A), thymine (T), **guanine** (G), and cytosine (C). The nucleotides attach to each other (A with T, and G with C) to form chemical bonds called base pairs, which connect the two DNA strands.



```
AncestryDNA.txt - Notepad
File Edit Format View Help
#AncestryDNA raw data download
#This file was generated by AncestryDNA at: 09/29/2013 12:34:41 MDT
#Data was collected using AncestryDNA array version: V1.0
#Data is formatted using AncestryDNA converter version: V1.0
#Below is a text version of your DNA file from Ancestry.com DNA, LLC. THIS
#INFORMATION IS FOR YOUR PERSONAL USE AND IS INTENDED FOR GENEALOGICAL RESEARCH
#ONLY. IT IS NOT INTENDED FOR MEDICAL OR HEALTH PURPOSES. THE EXPORTED DATA IS
#SUBJECT TO THE AncestryDNA TERMS AND CONDITIONS, BUT PLEASE BE AWARE THAT THE
#DOWNLOADED DATA WILL NO LONGER BE PROTECTED BY OUR SECURITY MEASURES.
#
#Genetic data is provided below as five TAB delimited columns. Each line
#corresponds to a SNP. Column one provides the SNP identifier (rsID where
#possible). Columns two and three contain the chromosome and basepair position
#of the SNP using human reference build 37.1 coordinates. Columns four and five
#contain the two alleles observed at this SNP (genotype). The genotype is reported
#on the forward (+) strand with respect to the human reference.
rsid      chromosome    position      allele1 allele2
rs4477212 1             82154        T        T
rs3131972 1             752721       G        G
rs12562034 1             76848        A        G
rs11240777 1             798955       A        G
rs6681049 1             800007       C        C
rs4970383 1             838555       C        C
rs4475691 1             846808       C        C
rs7537756 1             854250       A        A
rs13302982 1             861808       G        G
rs1110052 1             873558       T        T
rs17160698 1             887162       T        T
rs3748597 1             888659       C        C
rs13303106 1             891945       G        G
rs28415373 1             893981       C        C
rs13303010 1             894573       A        A
rs6696281 1             903104       C        C
```

Step 2 -- Uploading

- Now that you've downloaded your DNA file you'll want to upload to other services.
- 3 of the 5 testing sites allow free uploading of your DNA file
- In addition, a public domain site, known as GEDMatch is also recommended to upload to
- The file you downloaded will typically be a “.zip” file and there's no need to unzip it---you will upload it in the same way it was downloaded

Why Upload?

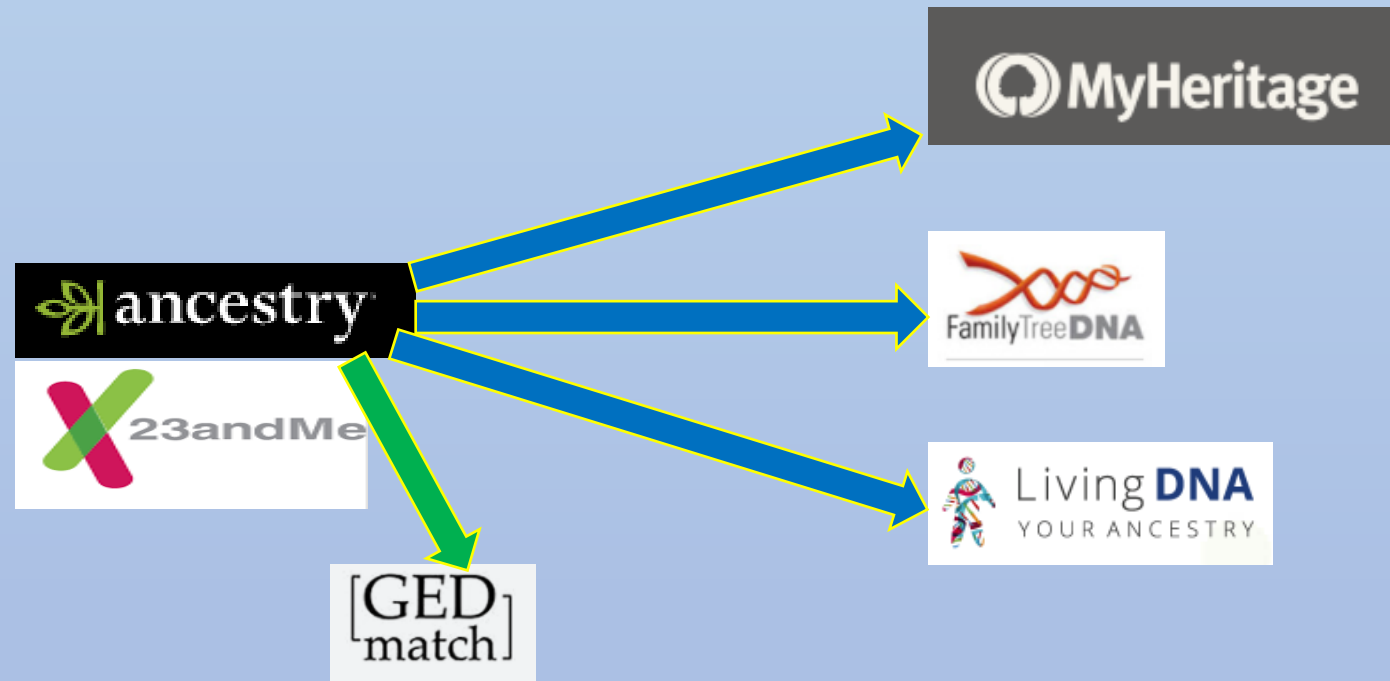
- Biggest reason is to increase the number of potential matches. Each testing company has its own matching database. By uploading to other sites you increase the chances of finding important close matches that may not be in other databases.
 - I have found many huge surprises by uploading (e.g., 2nd cousins that revealed surprises in my family tree)
- Each site has different tools available including varying ethnicity estimates and in some cases more advanced tools for comparison to matches
- AND--- It's FREE! (mostly*)

* Some more advanced tools may require a nominal fee to access

Step 2: Uploading

- Next, you'll want to upload your DNA results. 3 of the 5 testing companies allow free uploads!

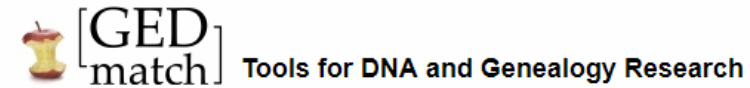
- The options:
 - Family Tree DNA
 - My Heritage
 - Living DNA
- PLUS: GEDMatch



- So, potentially you can go from 1 database to 5 databases at no cost!

GEDmatch

- A mostly-free public website which accepts DNA data from all 5 testing companies
- <http://gedmatch.com>
- Has more DNA match analytical tools than any of the 5 testing companies
 - Including triangulation
 - Auto-clustering



Welcome to GEDmatch. If you are already registered, just enter your login ID and password in the place provided below.

If you are not previously registered, click on the registration link near the bottom of this page. You will be asked to provide a valid email address and a password. After you are registered, you will be required to accept the GEDmatch Terms of Service. You can read the Terms of Service before you register by clicking on the link at the bottom of this page.

GEDmatch provides applications for comparing your DNA test results with other people. There are also applications for estimating your ancestry. Some applications are free. More advanced applications require membership in the GEDmatch Tier1 program at \$10 per month.

If you have any questions or comments, you can reach us at GEDmatch@Gmail.com

Log In

Email Address:
Password:


Not Registered? Click [HERE](#) to register at the main site - when registered return to this page to access genesis.gedmatch.com

Forgot your password or wish to change your password? Click [HERE](#) to recover your password at the main site - when recovered return to this page to access genesis.gedmatch.com


Site policy: Click [HERE](#)

GEDmatch

- Allows comparisons to other people from different testing companies who have uploaded
- Has many advanced analytical tools such as triangulation --- these require upgrading (\$10/mo) but matching is free!



Home Upload DNA Free Tools GEDmatch Forums Family Trees Genealogy Comparisons / Searches KEN WATERS



One to Many Results

When you contact a potential match, you should include in your email your kit number and the kit number you think you match with. Many people manage multiple kits, and they have no other way of confirming the match you think you have.

It is generally considered to be bad form to send out emails to large numbers of names on your results list, without first reviewing those results in some detail. This falls into the category of 'Spam' email.

'Overlap' is the number of positions that exist in common between both kits, without regard to whether they match or not. The amount of overlap, along with the largest cM amount, is usually a good indication of the relative quality of the match. Matches with low overlap have that field highlighted with a pink or red background, depending on the overlap value.

Matches with very low overlap are not shown.

Kit: A979857 (Ken Waters) [Migration - F2 - A]

Kit	1:1	Name	Email	Largest Seg	Total cM	Gen	Overlap	Date Compared	Testing Company
AT1613328	A	Ken Waters	familytreeaz.gedmatch@gmail.com	151.8	3577.5	1.0	427056	2020-09-06	Ancestry
NH2682327	A	Joan Craddock	familytreeaz.gedmatch@gmail.com	151.8	3577.5	1.0	327698	2020-05-15	Ancestry
NG4843670	A	Ernie Waters	familytreeaz.gedmatch@gmail.com	136.3	1587.3	1.6	313948	2020-05-15	Ancestry
A891484	A	*MW	familytreeaz.gedmatch@gmail.com	128.9	745.0	2.1	N/A	2016-03-30	Migration - F2 - A
A430006	A	Donn	familytreeaz.gedmatch@gmail.com	85.0	654.6	2.2	N/A	2016-05-26	Migration - F2 - A
A916265	A	ll	familytreeaz.gedmatch@gmail.com	64.0	488.3	2.4	N/A	2017-04-	Migration - F2 -

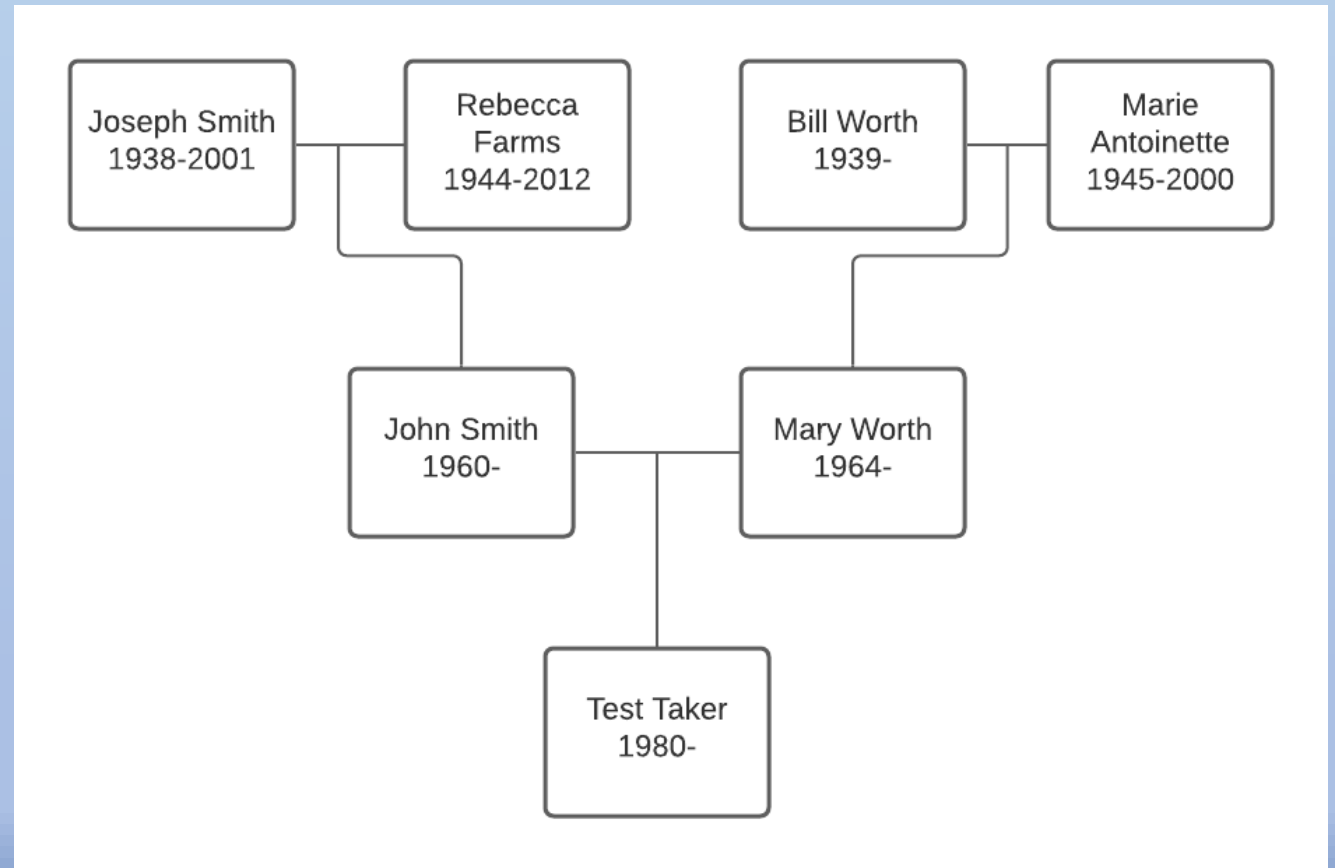
GEDMatch – Family Tree

- GEDMatch also allows uploading of family trees using the standardized “GEDCOM” format



Step 3: Build a Family Tree

- This may be the most important step
- Improves the ability to identify matches
- 4 of the 5 testing company's allow you to build a tree so that other matches can better determine how they are related to you. (at this time Living DNA does not have this capability)

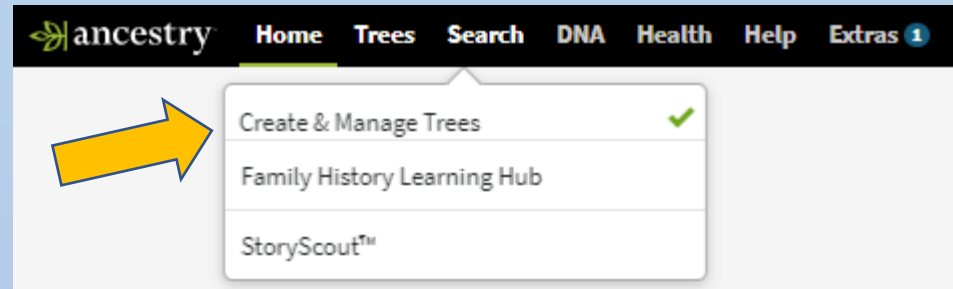


The Process

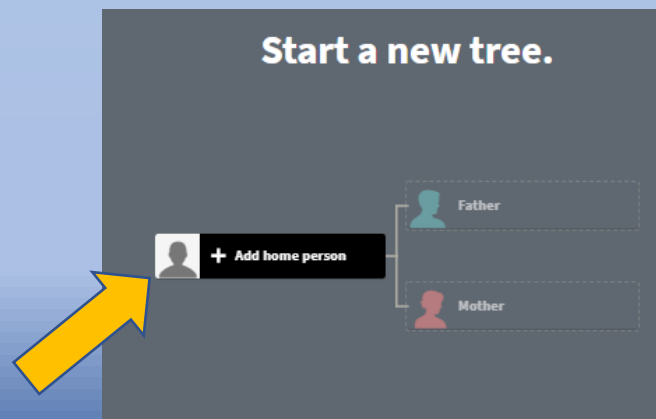
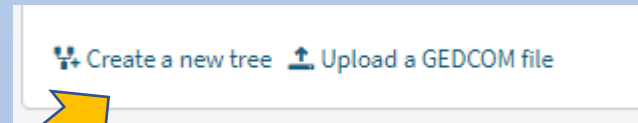
- For brevity I will just focus on Ancestry trees; however the other sites have similar methods
- **GUIDELINES**
 - Make sure your tree is correct as best as you know it to be and is for the same person who took the DNA test
 - Use **maiden names** for females (improves ability to match family lines)
 - Add as many people as you can but really focus on direct relations first (parents, grandparents, etc.)
 - Stick to biological relationships as this tree will be used in conjunction with DNA matches (you can always make other trees for adopted families)
 - You can keep these trees simple (mainly need birth, marriage, death facts)
 - You can always have other trees for other purposes such as attaching family photos
 - Make sure the family tree is **PUBLIC** and the test taker is identified/matched to the DNA test

The Process of Building a Tree (in Ancestry)

- Go to “Trees” and create a new tree

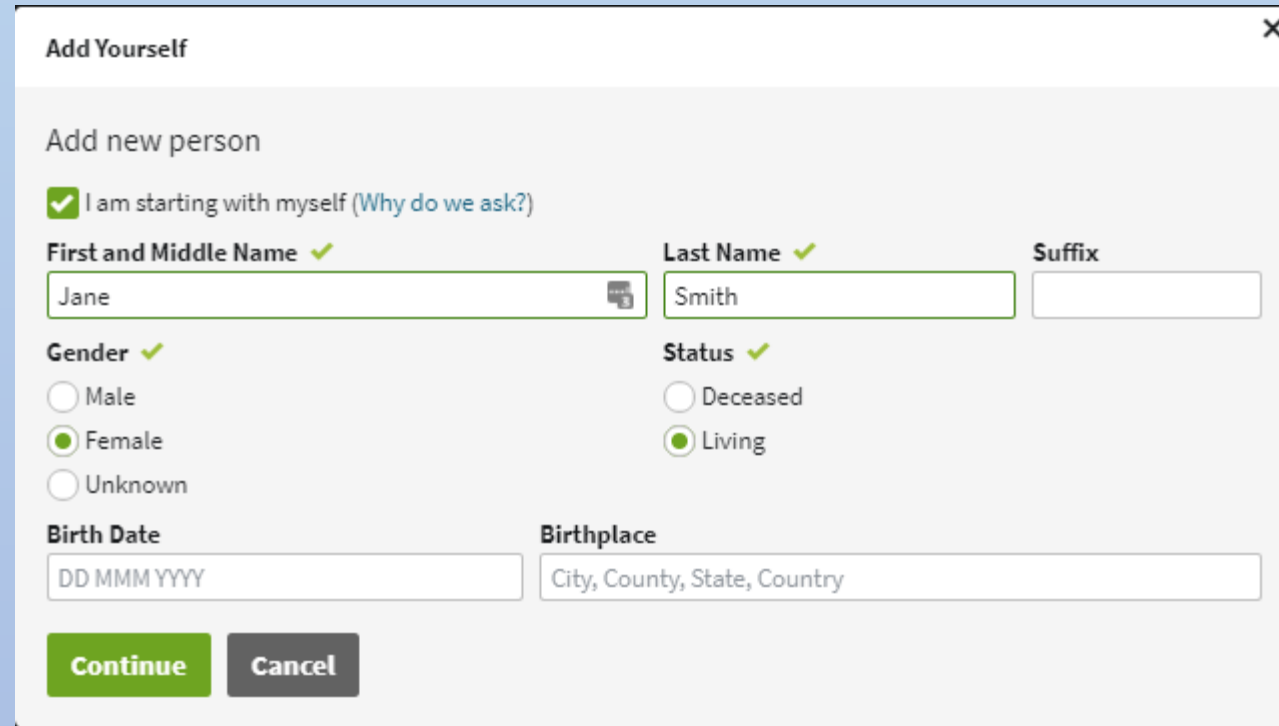


- Make sure the “home person” is the test takers identity



Enter Test-taker's Details

- Suggest using normal capitalization (first letter only of each name)
- Use a standard preferred date format (e.g., 27 Jun 1984)

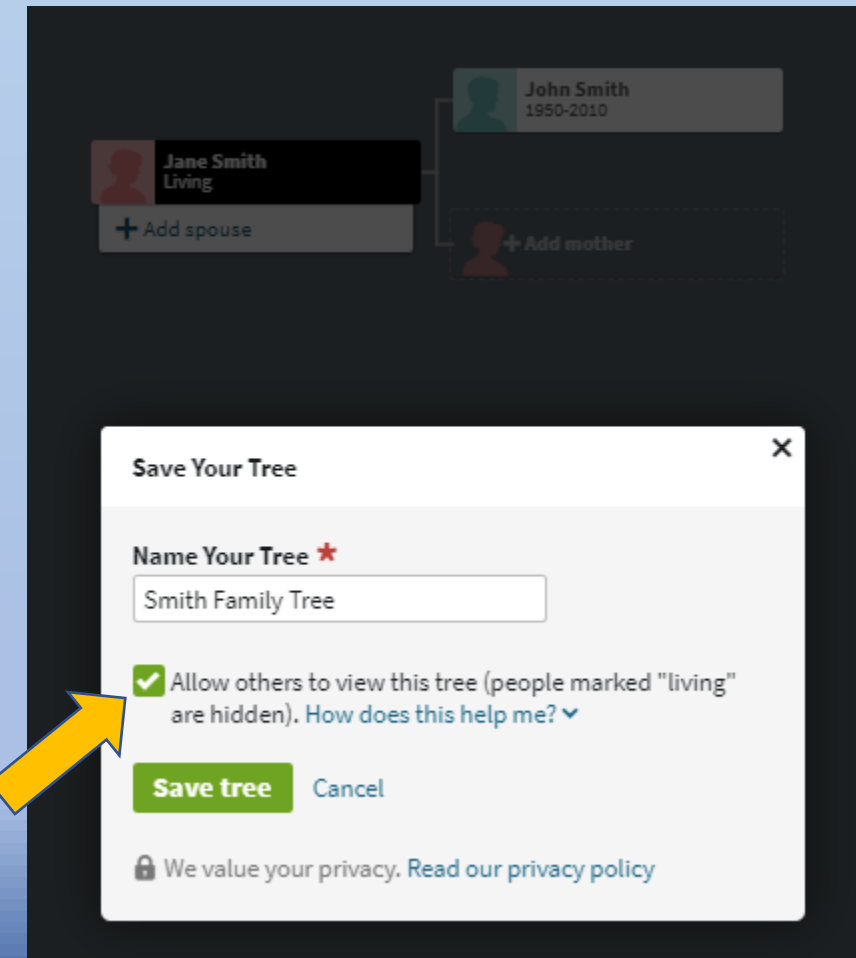
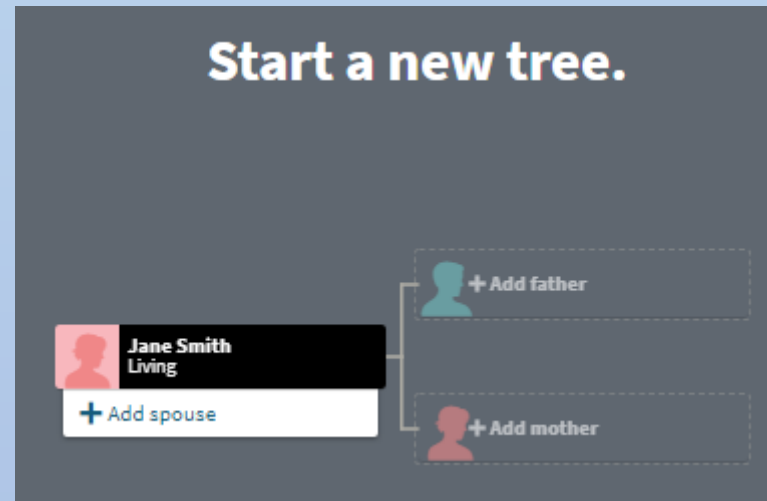


The screenshot shows a web form titled "Add Yourself" with a close button (X) in the top right corner. The form is for adding a new person and includes the following fields and options:

- Add new person**
- I am starting with myself (Why do we ask?)
- First and Middle Name** ✓: Text input field containing "Jane" with a copy icon.
- Last Name** ✓: Text input field containing "Smith".
- Suffix**: Empty text input field.
- Gender** ✓: Radio buttons for Male, Female (selected), and Unknown.
- Status** ✓: Radio buttons for Deceased and Living (selected).
- Birth Date**: Text input field with the placeholder "DD MMM YYYY".
- Birthplace**: Text input field with the placeholder "City, County, State, Country".
- Buttons**: "Continue" (green) and "Cancel" (grey).

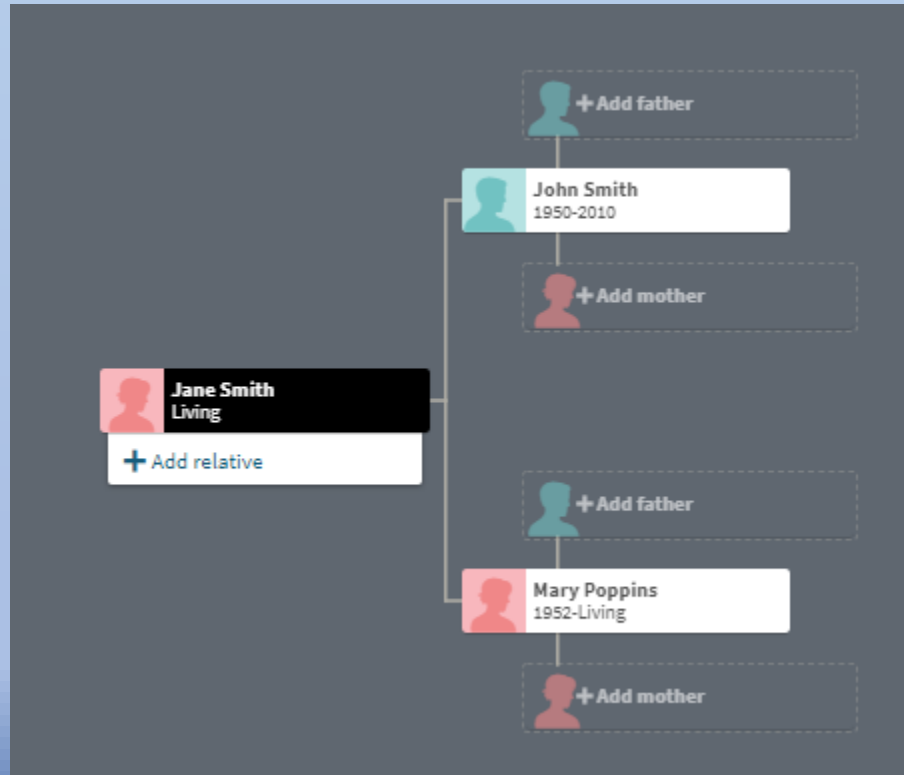
Enter Parents Information

- In Ancestry, after submitting one parent name you'll be asked to name and save the tree
- Keep the checkbox marked that allows others to see your tree



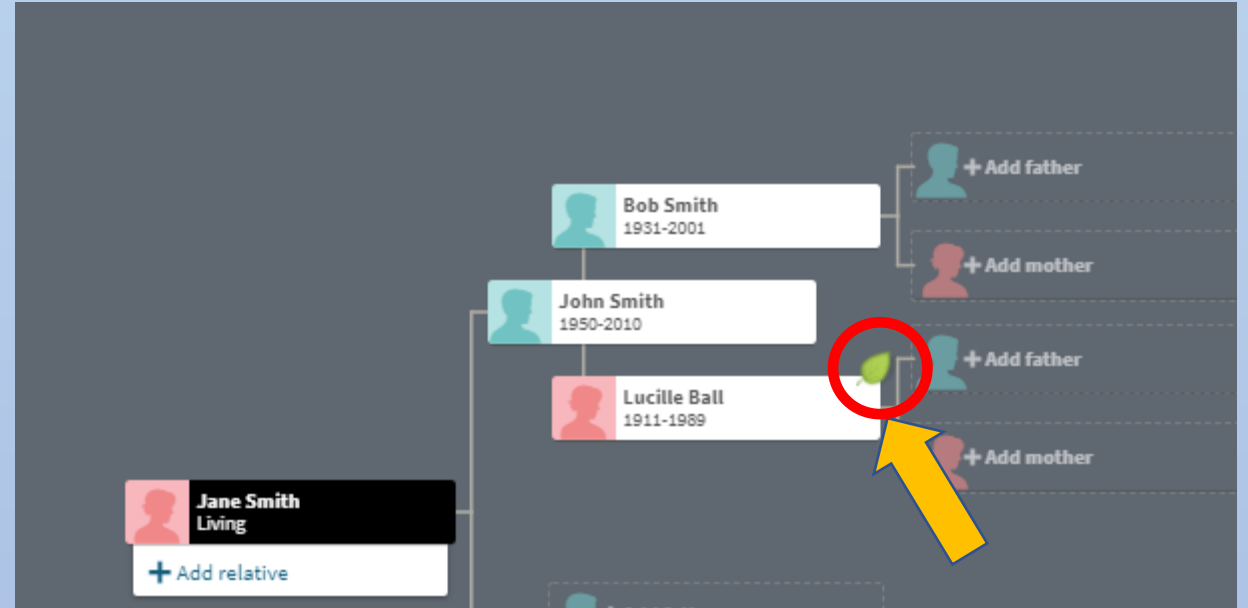
Add People

- Continue adding direct line ancestors



Hints --- Add as Sources

- Look for Hints!
- If you put enough specific data (exact birth and death dates and exact names) then you will be more likely to get useful hints



24 ANCESTRY HINTS

Lucille Ball
B: 6 Aug 1911
D: 26 Apr 1989

Look for Quality Sources

- **RECOMMENDATION:** Stick to high-quality sources such as:

- State birth/death records
- Social Security records
- Public Records
- US and state census
- City Directories



- I **do *not* recommend** using Ancestry Family Trees as sources in your main tree
 - Some trees have incorrect information that might contaminate your tree

Good Sources


- Often these quality sources will yield parents of the person so be sure to add these to your tree when they do come up and appear to be correct
- The more details you add to people (full names, birth/death dates) the more hints you will get
 - I often will be able to fill out the dates more fully (e.g., Aug 1911 -> 6 Aug 1911)

 **U.S., Social Security Applications and Claims Index, 1936-2007** [Source Info](#) Quick Compare

Court, Land, Wills & Financial

Name	Lucille Desiree Ball	Different
Birth	6 Aug 1911 Jamestown, New York	Different
Death	26 Apr 1989	Same
Father	Henry D Ball	New
Mother	Desiree E Hunt	New


[Review](#) [Ignore](#)

 **California, U.S., Death Index, 1940-1997** [Source Info](#) Quick Compare


Birth, Marriage & Death

Name	Lucille Ball Morton	Different
Birth	6 Aug 1911 New York	Different
Death	26 Apr 1989 Los Angeles	Different

[Review](#) [Ignore](#)

 **1940 United States Federal Census** [Source Info](#) Quick Compare

Census & Voter Lists

	Name	Lucille Ball	Same
	Birth	abt 1912 New York	Different
	Residence	1940 Beverly Hills J Twp, Beverly Hills, Los Angeles, California, USA	New
	Residence	1935 Los Angeles, Los Angeles, California	New

[Review](#) [Ignore](#)

Using Hints

- In some cases Ancestry may suggest possible parent relationships
- These can be useful but take care adding people as the hints may not always be correct. Only add when you have high confidence that the details are correct.

The screenshot displays a family tree interface. On the left, three individuals are listed: Bob Smith (1931-2001), John Smith (1950-2010), and Lucille Ball (1911-1989). To the right of each name are two green boxes labeled 'Potential Father' and 'Potential Mother'. A yellow arrow points from the 'Potential Father' box for Lucille Ball to a detailed hint window. The hint window for '*Henry Durrell Ball' includes a profile picture, birth and death dates (16 Sep 1887 - 28 Feb 1915), and locations (Sheridan, Chautauqua, New York, USA; Wyandotte, Wayne, Michigan, USA*). Below the details are sections for 'Records 14', 'Photos 7', and 'Family'. At the bottom, a question asks 'Do you think this is the father of Lucille Ball in your tree?' with 'Yes', 'No', and 'Maybe' buttons.

Last Step with Family Trees

- If on Ancestry, make sure the tree is properly **linked to the DNA test** and the test taker is identified in the tree
- This will open up Common Ancestor Hints which will yield many more relationship confirmations

Select a Home Person for this family tree

The Home Person is the starting point in your family tree. You can easily navigate back to the Home Person from any point in your tree.

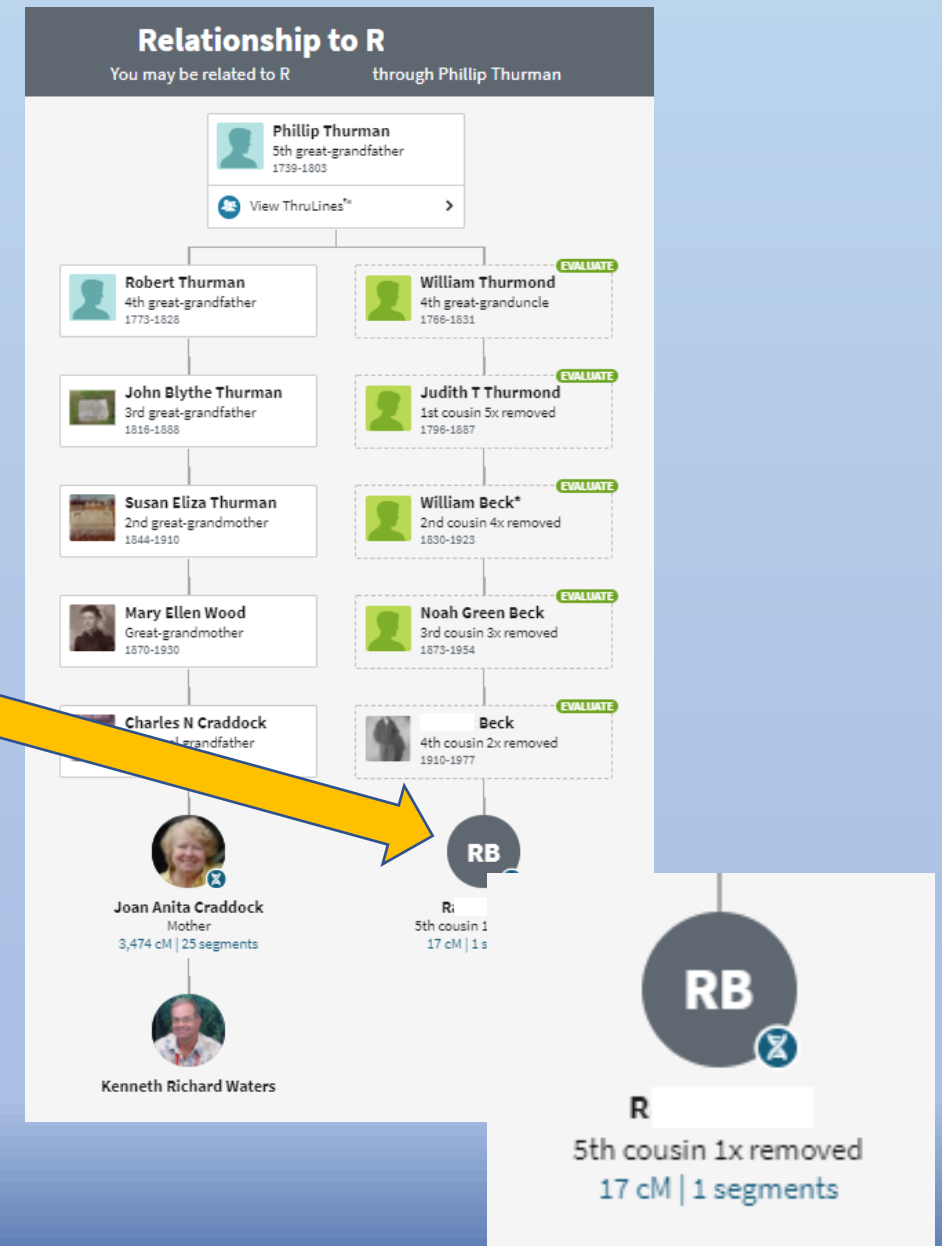
i It is recommended that you select yourself as the Home Person. If you are not in this tree, you can select a primary person you are researching.

Home Person

or Browse the list of everyone in your tree

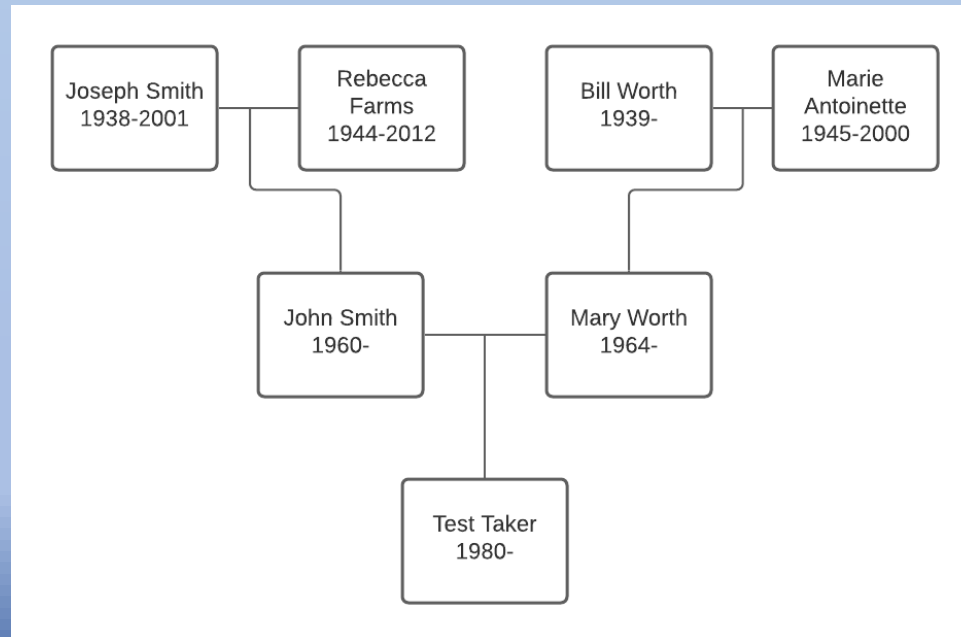
I have selected myself as the Home Person.

Select or Cancel



Ken's Best Practices for Family Trees

- Enter complete names, dates (birth/death), and locations (birth/death) as are known
- Most important --- make sure you have your direct ancestry in it



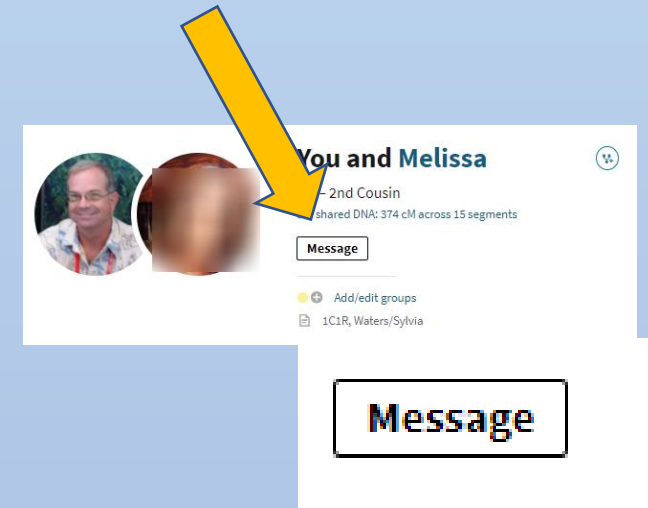
Ken's Best Practices for Family Trees

- Enter complete names, dates (birth/death), and locations (birth/death) as are known
- Most important --- make sure you have your direct ancestry in it
- Add sources of reputable facts
- Use standardized formats (e.g., name: John Quincy Adams, date: 11 Jul 1767)
- Try to keep family tree at a reasonable size for use with matching cousins
 - My recommendation: no more than 1,000 or so
 - Very large trees (> 10,000) can have negative impacts when searching through surnames
- **BOTTOM LINE: A high quality, public family tree will maximize your ability to find cousins and for cousins to find you!**

PUBLIC FAMILY TREE	
Family Tree	
People:	174,263
Records:	0
Media:	26,091

Final Tips

- Messaging
 - Be on the lookout for emails from your matches who may wish to confirm details
 - Feel free to message your matches but don't be disappointed if you don't get a response as others may not be as motivated as you are
- Keep Checking
 - Be sure to regularly check all the sites where your DNA data is to look for new matches
 - Some services are better than others about notifying you of new matches
- **More suggestions will be found in upcoming classes such as working with your matches to confirm common ancestors**



My top 10 tips

- #1: Test only with the 5 trusted companies (Ancestry, 23andMe, FTDNA, MyHeritage, Living DNA)
- #2: Download the DNA data and upload it to as many sites as you can
- #3: Build a single family tree that is accurate and supportable with good-quality records and keep that family tree PUBLIC (!) and make sure it's attached to your DNA record
- #4: Build private trees for all your hypothesis tests ("what if") to see what hints can be found to help solve mysteries and build your public tree up
- #5: Learn to use useful tools such as DNAPainter and its relationship estimator

My top 10 tips

- #6: Be prepared to deal with unexpected surprises!
- #7: Use well-crafted, well-thought out messaging to DNA matches to share information and test your hypotheses
- #8: Regularly check for new matches
- #9: Sort your matches (starting at the top) into family groups
 - I like to use Ancestry's Tag feature to sort into my 8 great-grandparent lines
- #10: Learn more (go to conferences, attend local meetings (e.g., East Valley DNA SIG), watch videos, take classes [like mine!])

BONUS RULE: HAVE FUN, ENJOY, WELCOME YOUR NEW-FOUND FAMILY MEMBERS!

Resources

- [GEDMatch.com](https://www.gedmatch.com)
- [DNAPainter.com](https://www.dnainter.com)
- [Familysearch.com](https://www.familysearch.com) (to research sources)
- Legacy Family Tree webinars (free for 7 days)
- [FindAGrave.com](https://www.findagrave.com)
- [ISOGG.org Wiki](https://www.isogg.org/wiki)
- [WikiTree.com](https://www.wikitree.com)
- Facebook Group: Genetic Genealogy Tips & Techniques
- Local groups: (for example) Phoenix East Valley DNA Group [on Facebook]

Learn more --- upcoming classes

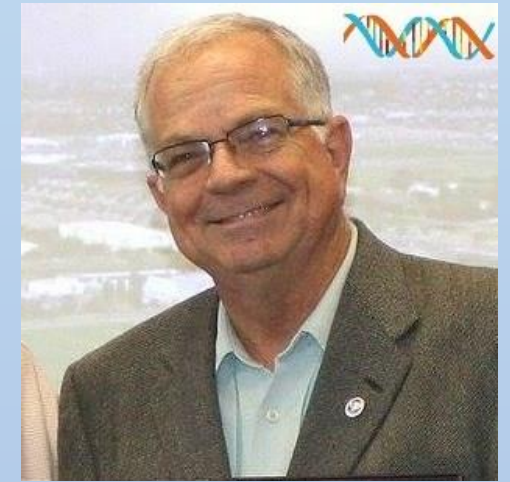
- Mesa Red Mountain Library (Power & University/Brown)
- Classes are free



**Classes typically held monthly;
virtual for now but hopefully in
person soon!**



Questions?



- Contact:
 - Ken Waters
 - E-Mail: ken@familytreeaz.com
 - Blog: familytreeaz.com
 - Twitter: [@familytreeaz](https://twitter.com/familytreeaz)
 - Presentations: <http://familytreeaz.com/Presentations>