Guide to WolframAlpha for Genealogy and Family History Research

THOMAS MACENTEE
About the Book

Most genealogists and family historians these days are familiar with a variety of search engines used to locate information on the Internet. These include Google, Bing, and Yahoo as well as specialty search engines such as Mocavo. The process is straightforward: you enter your search terms and you get back a list of links to relevant websites.

However, what if there were a search engine that allowed queries in the form of a question and, in fact, preferred that format? You could classify the resulting search engine as more of an answer engine than anything else. In addition, what if you could take the concept one step further and have this answer engine also calculate information based on set input parameters? Great concept, right?

Well such a search engine does exist: Wolfram|Alpha (http://wolframalpha.com). What sets this computational knowledge engine apart from other search engines is the ability to pull data from external sources (meaning websites outside of Wolfram|Alpha) that are curated (meaning selected for their data reliability and sources).

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Wolfram|Alpha – An Introduction

Most genealogists and family historians these days are familiar with a variety of search engines used to locate information on the Internet. These include Google, Bing, and Yahoo as well as specialty search engines such as Mocavo. The process is straightforward: you enter your search terms and you get back a list of links to relevant websites.

However, what if there were a search engine that allowed queries in the form of a question and, in fact, preferred that format? You could classify the resulting search engine as more of an answer engine than anything else. In addition, what if you could take the concept one step further and have this answer engine also calculate information based on set input parameters? Great concept, right?

Well such a search engine does exist: Wolfram|Alpha (wolframalpha.com). What sets this computational knowledge engine apart from other search engines is the ability to pull data from external sources (meaning websites outside of Wolfram|Alpha) that are curated (meaning selected for their data reliability and sources).

In this e-book, you will learn more about Wolfram|Alpha including how to calculate information related to these areas:

- Family Relationships
- Names
- Words and Text
- Dates
- Historical Weather
- Historical Money

Each of these topics factor into genealogical research and writing and Wolfram|Alpha provides solutions to questions such as “How am I related to my great-grandmother’s niece” or “What was the time of the sunrise on April 1, 1962, in Chicago, Illinois?”

In addition, you will learn about the Genealogy & History Research Assistant for iPhone & iPad, which allows you to use your smartphone or mobile device to access these same calculations and results.

Once you have mastered the sections of Wolfram|Alpha most important to genealogists, you will wonder why more of your research colleagues have not heard about this amazing solutions platform.
Wolfram|Alpha – The Basics

Many new users tend to “overthink” how they should use Wolfram|Alpha, perhaps because the site is capable of computing large amounts of data and serving up complex answers. Most Internet users are accustomed to search engines which simply fetch and present the most relevant and popular links to websites. Using Wolfram|Alpha is easy and simple.

Input Field
To get more information about a word, a calculation or any question, enter data in the input field and click the equal sign. There is no need to use complex formulas; plain English is best.

Assumptions
Depending on your query, Wolfram|Alpha may use some base assumptions, which will appear once calculations begin. To change an assumption, click on one of the interpretations listed as a hyperlinked term.

Reports
The “answer” you receive at Wolfram|Alpha is in the form of a report, the length of which can vary depending upon the query. Some reports require you to enter more information in a formula/calculator field.

The Input interpretation section displays how Wolfram|Alpha interpreted your data. Sources for the information displayed appear at the bottom of the report.
Other sections that may appear, again depending upon the type of query, include related queries and definitions.

See http://www.wolframalpha.com/tour/basics.html for more information on the basics of Wolfram|Alpha.
Sources for Wolfram|Alpha Results

As genealogists, we know (or should know) that information is only as reliable as the source for that information. This belief is a cornerstone of all research, including research involving family history. In addition, the best way to analyze information is to investigate the underlying source.

Wolfram|Alpha Data

The trillions of pieces of data that help provide answers and calculations at Wolfram|Alpha are stored in its knowledgebase. While some of the data is derived from websites, for the most part it comes from primary sources that have partnered with Wolfram|Alpha.

Determining Sources at Wolfram|Alpha

For each answer, scroll to the bottom of the page and locate the Sources link. Here you will find the primary source listed as well as links to external sources.

Click on the external source links to display each source. Click the orange chevron symbol (>>) to the left of each source to go to the external website for that source.

See http://www.wolframalpha.com/faqs5.html for detailed information on data sources at Wolfram|Alpha.
Family Relationships

Wolfram|Alpha can provide information about different types of family relationships as well as compute family relationships and present valuable information for genealogists and family historians.

Basic Family Relationship Information

If you want to understand not only the meaning of a family relationship, but also a visual depiction through a family tree and detailed relationship properties, Wolfram|Alpha can provide much more information than genealogy database software.

For example, type granddaughter in the search field and click the equal sign.

The following results appear:

Basic information about the relationship appears including a genealogic tree, a genealogic relation, and relationship properties including difference in generations and blood relationship fraction.
For specific sections, you can display more information by clicking on the appropriate button in the right hand corner of each section:

- **Genealogic Relation**

![Genealogic relation](image1)

- **Relationship properties**: Expanded relationship properties include degree of kinship, canon degree and DNA-related calculations.

![Relationship properties](image2)

**Computed Family Relationship Information**

If you want to understand not only the meaning of a family relationship, but also a visual depiction through a family tree and detailed relationship properties, Wolfram|Alpha can provide much more information than genealogy database software. Examples include:

- father’s mother’s sister’s son
- grandmother’s aunt
- third cousin’s great-grandson

See [http://www.wolframalpha.com/examples/Genealogy.html](http://www.wolframalpha.com/examples/Genealogy.html) for a list of Relationship calculation examples to test at Wolfram|Alpha.
Names

Names, both given and surnames, hold great meaning and Wolfram|Alpha can provide information such as name variations, nicknames and alternative names, name popularity and distribution and more. Most of this information is pulled from United States-centric databases.

Given Names

Type **Elizabeth given name** in the search field and click the equal sign.

The results will show popularity statistics for the name, current age distribution for those with the name, alternate versions and nicknames and the etymology of the name.
You can also compare given names by listing two or more given names, separated by commas. Type **Elizabeth, Rebecca, Jennifer** in the search field and click the equal sign.

The same basic given name information above will be presented in tabular form for each name for comparison purposes.
Surnames
To see information about a surname, type name Jones in the search field and click the equal sign.

The results will show popularity statistics for the surname, ethnic distribution for the surname, and a list of notable people with the surname.
Words and Text

What may seem as an unfair advantage or cheating for crossword puzzle lovers, can actually help genealogists when deciphering old handwritten documents. If you have ever had trouble determining a word, you know it is helpful to see a set of the possible words to help you make a decision. In addition, Wolfram|Alpha can be used to translate words from English to another language and to help determine Soundex values for names and words.

Determine Missing Letters in a Word

Type **words beginning with b and ending with k** in the search field, click the equal sign.

A list of words (a total of 239 for this query) appears. Use the dropdown list to sort the results alphabetically, by length or by frequency and show all of the possible words.
Another query is to type the beginning letter the number of missing letters and then the ending letter to see a list of results based on the number of total letters in the word. Type b____k in the search field and click the equal sign.

A list of English words matching the criteria appears.

You can also find words matching a pattern. Type _al__la__ in the search field and click the equal sign.
Finally, you can also generate a list of words starting or ending with a word. Type word starting with mount in the search field and click the equal sign.

Type word ending with mount in the search field and click the equal sign.
Translation

Wolfram|Alpha can also be used for basic translation from one language to another.

Type **Translate widow to German** in the search field and click the equal sign.

A list of English words matching the criteria appears.

**Soundex**

Although in the current days of indexed records Soundex may seem dated, knowing the Soundex equivalents for names and words can still come in handy for genealogists.

To compute the Soundex code for a word or name, type **Soundex Henneberg** in the search field and click the equal sign.
The answer is **H516**. To find similar-sounding words, type `sounds like Rubin` in the search field and click the equal sign.

The answers are **Rabin**, **raven**, **ripen** and **riven**.

To find words with a given Soundex code, type `Soundex code A626` in the search field and click the equal sign.

The answers are **archer**, **Archer**, **arguer** and **aircrew**.
Dates

Specific dates are crucial to genealogical research and yet many source are not as “date friendly” as we may like. A vital record will not state the day of the week when an event occurred or a newspaper marks a date as “last Wednesday.” Working with a reference date, you can use Wolfram|Alpha to obtain the date information you need.

Historical Dates of Holidays

Type Easter 1910 in the search field and click the equal sign.

The exact date, Sunday, March 27, 1910, appears along with other supplemental feature including the time difference from the current date, historic events that occurred on that date, and the daylight information (sunrise and sunset) on that date for the current location. In addition, a nice feature if that on certain holidays you can select the Orthodox Church version (which uses the Julian calendar).

Calculate a Date Based on Another Date

Often you will find references in a newspaper to a previous date, but expressed in years. Example: In a newspaper published on February 2, 1901, you may find an obituary stating, “Mr. Smith was born 74 years ago in Lowville . . .”
Type **74 years before February 2, 1901** in the search field and click the equal sign.

The answer is **February 2, 1827** and additional information is provided including the time difference from the current date and the daylight information (sunrise and sunset) on that date for the current location.

To calculate a date using year, month and day information – frequently found on tombstones – the syntax is different. Type **February 2, 1901 -74 years -3 months -2 days** in the search field and click the equal sign.

The answer is October 31, 1826.
Calculate a Date Based on a Previous Day of the Week

Again, while newspapers can offer useful information about our ancestors, the way dates are presented can make it difficult to calculate an exact date. For important life events such as births, marriages, and deaths, you may find a statement such as “Mr. Smith passed away last Sunday . . .” in a newspaper published on July 13, 1869.

Type **Sunday before July 13, 1869** in the search field and click the equal sign.

The answer is **Sunday, July 11, 1869**. In addition, the standard supplemental information presented for any date query appears as well.

Calculate Julian Calendar Dates

Although the Gregorian Calendar, currently in use in much of the world, was adopted as early as 1582, some countries such as Greece did not make the change until 1923! This means that vital and church records, especially for countries where the Orthodox Christian faith was predominate, need to be recalculated to the current calendar.
Type **December 13, 1897 Julian calendar** in the search field and click the equal sign.

The answer is **Saturday, December 25, 1867**.

**Determine a Day of the Week for a Historical Date**

Type **December 10, 1897** in the search field and click the equal sign.

The answer is **Friday**. For any date calculation at Wolfram|Alpha, the day of the week is always shown.
Generate a Calendar for a Specific Year

Type **1865 AD** in the search field and click the equal sign.

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**Note:** You must include “AD” after the year; otherwise, Wolfram|Alpha will interpret your query as a number and not a year.
Money

Do you have any idea what one dollar in 1910 is worth in today's dollars? Well, besides being worth $25.50, this piece of knowledge can help us understand the value of money as stated in letters, diaries and even newspaper articles about our ancestors.

**Current Value of Historical Money**

Type **$100 (1910 dollars)** in the search field and click the equal sign.

![WolframAlpha result](image)

The equivalent value based on the Consumer Price Index (CPI) is shown. In addition, a graphical interpretation of the value over time appears as well as inflation rate figures.
Historical Equivalent Value of Today’s Money

Type 100 current dollars in 1910 in the search field and click the equal sign.

Again, the equivalent value based on the CPI will appear along with other interpretive data.
Convert Historical Quantities of Money

Type $100 1965 dollars in 1910 in the search field and click the equal sign.

This calculation is helpful if you are trying to convert one historical quantity of money to another.
Weather

Why would it matter if it snowed on December 5, 1960 where your ancestors lived? The same reason many other facts can be important to understanding the lives of our ancestors: historical weather can help us interpret other facts found in our research. An example: knowing that a tornado took place in a time and place involving ancestors could explain deaths or injuries that they suffered. Wolfram|Alpha can be used to retrieve current and historical weather information.

Local Historical Weather

Type weather December 1960 in the search field and click the equal sign.
Wolfram|Alpha uses your location (based on your computer’s IP address) to return an overview of weather for that period. Using just the word `weather` will return the current local weather conditions. Also, consider searching for specific years and dates.

**Historical Weather for Specific Locales**

Type `weather Chicago June 21, 1960` in the search field and click the equal sign.

**Note**: not all weather information is available for specific locales and dates. Wolfram|Alpha will return historical temperatures for that date.

Also, remember that Wolfram|Alpha is always adding new data points and primary sources, so keep checking for dates and locales that do not return exact results.
Genealogy & History Research Assistant for iPhone & iPad

Now that you are convinced as to the power of Wolfram|Alpha and its abilities to assist you with your genealogy research, consider taking the next step and using a Wolfram|Alpha mobile app designed specifically for genealogists.

The Genealogy & History Research Assistant for iPhone & iPad app is available for download for $4.99 and can help genealogy researchers answer these questions about their ancestors:

- Were their names common at that time?
- What happened on their birthdays?
- What was the weather like on your grandparents' wedding day?
- What were the towns they lived in like, including demographics, and how far are they from where you live?
- What was 20 dollars' worth the year your great-grandmother was born?
- What is the technical relationship between you and your grandfather’s sister?

Could you get the same answers by just using the Wolfram|Alpha website? Yes, but for some researchers, the Wolfram|Alpha app gathers all the needed tools for research in one convenient area.

Fun Stuff

From time to time, we all realize that even researchers need to take a break and let off some steam. Here are some ways to use Wolfram|Alpha to have some fun:

Occupation: Genealogist

Wolfram|Alpha can be used to look up information on almost any profession, including genealogist.

The data found for the genealogist position includes employment history (number of people employed each year), wage history, median wage, related occupations, and the Standard Occupational Classification (SOC) code.
Wolfram|Alpha Easter Eggs

An “easter egg” as it relates to digital media, represents a special feature or “inside joke” when the developers of the media want to have fun. Click the search criteria below to treat yourself to some surprising answers from Wolfram|Alpha.

- 867-5309
- Am I pretty?
- Are you a PC (or Mac)?
- Hello
- How do I win the lottery?
- How long is a piece of string?
- How many roads must a man walk down before you can call him a man?
- How much wood could a woodchuck chuck?
- I know kung fu
- If a tree falls in a forest and no one is around to hear it, does it make a sound?
- Tea Earl Grey Hot
- What is your favorite color?
- What is your name?
- What’s the answer to life?
- What’s the speed of an unladen swallow?
- When is Judgment Day?
• **Where am I?**
• **Where did I put my keys?**
• **Where in the world is Carmen Sandiego?**
• **Who lives in a pineapple under the sea?**
• **Why?**
• **Why did the chicken cross the road?**
FAQ

Do I need a Wolfram|Alpha account?

- No, but if you do set up an account at Wolfram|Alpha, which is free, you then gain access to various features such as favorites, history and setting preferences.

Is Wolfram|Alpha free?

- Yes, but there is a premium version of the product called Wolfram|Alpha Pro. For a nominal monthly fee, you can upload images to be analyzed, input your own data for computation and analysis, upload more than 60 different file types for analysis, get access to the Step-by-step Solutions feature for results, get access to dynamic versions of output including 3-D and animation, download data in more than 60 file formats, and more.

Is there a mobile version of Wolfram|Alpha available?

- Yes! Wolfram|Alpha is available for the iPhone, iPad, Nook, Android and Kindle Fire. Visit http://products.wolframalpha.com/mobile/ for more information and to download specific types of apps.

Would you use Wolfram|Alpha as a source for genealogy research?

- No. Like many other resources used by researchers, Wolfram|Alpha is a starting point to gather information. For each answer provided, make sure to click the Sources link at the bottom of the page and determine the primary source or sources used.
Resources

- Wolfram|Alpha
  http://www.wolframalpha.com

- Wolfram|Alpha – Take the Tour
  http://www.wolframalpha.com/tour/what-is-wolframalpha.html

- Wolfram|Alpha Blog
  http://blog.wolframalpha.com

- Wolfram|Alpha Example By Topic
  http://www.wolframalpha.com/examples/

- Wolfram|Alpha Resources and Tools
  http://www.wolframalpha.com/resources/

- Wolfram|Alpha Toolbars and Add-Ons
  http://www.wolframalpha.com/downloads.html

- Wolfram|Alpha Community Forum
  http://community.wolframalpha.com

- Wolfram|Alpha for Mobile
  http://products.wolframalpha.com/mobile/

- Wolfram|Alpha Genealogy & History Research Assistant
  http://products.wolframalpha.com/personalapps/genealogyhistory.html
About The Author

What happens when a “tech guy” with a love for history gets laid off during The Great Recession of 2008? You get Thomas MacEntee, a genealogy professional based in the United States who is also a blogger, educator, author, social media connector, online community builder and more.

Thomas was laid off after a 25-year career in the information technology field, so he started his own genealogy-related business called High Definition Genealogy. Currently Thomas shares many of his articles and videos for free at Abundant Genealogy and also runs the popular Genealogy Bargains and DNA Bargains websites!

Thomas describes himself as a lifelong learner with a background in a multitude of topics who has finally figured out what he does best: teach, inspire, instigate, and serve as a curator and go-to-guy for concept nurturing and inspiration. Thomas is a big believer in success, and that we all succeed when we help each other find success.

Check out Thomas’ author page at http://geneaguides.com