Google for Teachers...
Books, Docs, Maps, and more.

A Free Guide from Free Technology for Teachers.

About this Guide

Google offers dozens of free resources that teachers and students can use to improve their learning experiences. This guide is intended for teachers who would like to know more about Google Search, Google Docs, and Google Maps.

This guide begins with an overview of advanced Google Search tools that can improve Internet search experiences.

So you know about Google, but do you know how to post a quiz online, create map placemarks containing videos, or how to find free full-length books?

This guide presents uses for Google Books, Google Docs Forms and Spreadsheets, and Google Maps.

Step by step directions are provided for embedding Google Books, creating and embedding quizzes made with Google Docs Forms, customizing and embedding Google News widgets, and creating placemarks in Google Maps.

Google Search Tools

Google is best known as an Internet search engine. Here are some tools to help students improve their Internet search experiences.
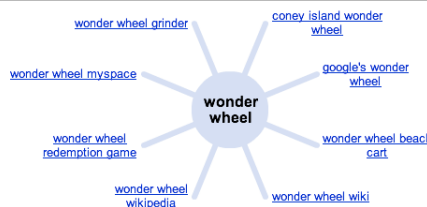
Related Search

Related search is probably the most obvious search altering option offered by Google, but because the related search terms are usually buried at the bottom of the page, students often don't click on the options.

A lot of students when given an open-ended research assignment struggle to pick the right terms to enter into a search. Often once they've entered a set of terms, they're unhappy with the results. Direct them to try the related search terms that are automatically generated by Google.

A small tweak in the choice of search terms, particularly a tweet of operator words, can yield significantly different results. Each time students tweaks their search terms, new related search terms appear.

Wonder Wheel

Wonder Wheel is not as easy to find as the "related search" option on Google. To locate Wonder Wheel, click the "more options" link that appears at the top of any list of Google results. Wonder Wheel is then found in the list on the left side of the page.

Wonder Wheel takes the concept of web and applies it to search refinement. Enter any search term in Wonder Wheel and that term will appear in the center of the web. Each branch of the web contains a related search term. Click one of those terms and a new web will be generated and linked to the original web. It's a good way for student to learn about connections between terms.

You can see a video of Wonder Wheel in action by clicking here. Or visit http://freetech4teachers.com/2009/05/google-wonder-wheel-in-action.html

Timeline

Google's Timeline option allows users to refine their searches by the dates referenced in the online materials. Timeline displays a chart on which users can click to find materials referencing a particular date or range of dates.

Timeline is particularly useful for history students.

Timeline also offers an option for refining search results by the date on which something was posted online. Users can specify that they want results only from the last day, week, month, year, or they can specify a particular date or range of dates. Click the "show options" link after entering your search terms, to find this option.

Google Search Tools

Explore books, scholarly works, and newspaper archives with these Google search tools.

Google Books

In Google Books Advanced Search you can search for full-length books that are in the public domain and available for free download and printing. Those same books can also be embedded into your blog or website. To find full-length, public domain books, go to books.google.com then select public domain in the advanced search options menu.

In the past I've given my US History students an assignment in which they have to read and analyze a book about about the Civil War. As I have more students than our school's library has books about the Civil War, the huge listing of books about the Civil War that are in the public domain is very handy for my students.

Google Scholar

Google Scholar is designed to help students research works from scholarly journals, patent applications, and legal opinions.

Google Scholar allows you to read full text legal opinions from US federal and state district courts, appellate courts, and the Supreme Court. You can search for opinions by case name (like Miranda v. Arizona) or by topic (like school busing).

Google Scholar's addition of legal opinions could be very useful for teachers and students of US civics. Google Scholar could help schools reduce or eliminate the need to purchase updated legal opinion books every few years.

Find Google Scholar at

http://scholar.google.com

Google News

Google News search allows students to scour the web for news stories from Google's trusted sources. Students can refine searches by date to look at current stories (default setting) or to look back at news stories from years ago. Students can also refine their searches by specifying a particular news source and or a particular author.

Google News Fast Flip presents news stories in a visually-appealing magazine rack-style. Students can click through the covers to find a news story.

The Google News wizard makes it easy to customize the look and the content displayed on your blog. Once you have selected the news content you want displayed and the size of the display, simply copy the code generated for you and paste it into your blog.

Accessing Google Books Advanced Search

The advanced search menu allows users to refine searches to show only public domain works, only full text works, or only books of a particular genre. Users can also build a virtual bookshelf of their favorite works.

Google books [ ] Search Books Advanced Book Search

Google has reached a groundbreaking agreement with authors and publishers.

Select advanced to find public domain books.

› Fiction

Literature
Science fiction
Fantasy
Romance
Mystery
Fairy tales
Short stories
Poetry

LIFE Magazine

› Non-fiction

Philosophy
Economics
Political science
Linguistics
Mathematics
Physics
Chemistry
Biology

Interesting

› Random subjects

Google books   **Advanced Book Search**   About Google

Find results	with **all** of the words		10 results	Google Search
	with the **exact phrase**			
	with **at least one** of the words			
	without the words			

Search: ○ All books ○ Limited preview and full view ○ Full view only ● Public domain only

Select Public domain only.

Content: ● All content ○ Books ○ Magazines

Language   Return pages written in   any language

Title   Return books with the title
            e.g. Books and Culture

Author   Return books written by
            e.g. Hamilton Mabie or "Hamilton Wright Mabie"

Publisher   Return books published by
            e.g. O'Reilly

Subject   Return books on subject
            e.g.Medieval History or "Medieval History"

Publication Date   ● Return content published anytime
                   ○ Return content published between   and
                   e.g. 1999 and 2000, or Jan 1999 and Dec 2000

ISBN   Return books with the ISBN

How to Embed Google Books Into Your Blog or Website.

Note, this method does not work for blogs hosted on WordPress.com but can work for Edublogs blogs and WordPress self-hosted blogs.

Step 1.

Copy this embed and paste it into your blog's html editor.

Step 2

Adjust the width and height to fit in your main content column.

Create a Virtual Bookshelf in Google Books.

Google books   [   ] [Search Books] Advanced Book Search

Browse popular books

My library
Favorites
Reading now
To read
Have read
Reviewed
Adventure Books
Fishing Books
[Create new bookshelf]

Google has reached a groundbreaking agreement with authors and publishers.

New! My Library has custom bookshelves with public and private options. Learn more.

› Browse subjects
Body, Mind & Spirit

My library   Reading now   To read   Have read   Reviewed

Create a bookshelf of your favorite works.

Interesting

Magazines

Name bookshelf and select public or private view.

Create new bookshelf   [×]

Name
[   ]

Description (optional)
[   ]

Visibility   Public   Make private

[Create bookshelf] [Cancel]

To read

Google Advanced Search

Take advantage of Google's built-in search refinement tools to improve your Internet search experience.

Google **Advanced Search**

Use the form below and your advanced search will appear here

Find web pages that have...

all these words:

this exact wording or phrase: tip

one or more of these words: OR   OR   tip

But don't show pages that have...

any of these unwanted words: tip

Need more tools?

Results per page: 10 results

Language: any language

File type: any format

Search within a site or domain:
(e.g. youtube.com, .edu)

⊞ Date, usage rights, numeric range, and more

Advanced Search

Find web pages that have...

all these words:

this exact wording or phrase: tip

one or more of these words: OR   OR   tip

But don't show pages that have...

any of these unwanted words: tip

Need more tools?

Results per page: 10 results

Language: any language

File type: any format

Search within a site or domain:
(e.g. youtube.com, .edu)

⊟ Date, usage rights, numeric range, and more

Date: (how recent the page is)   anytime

Usage rights: not filtered by license

Where your keywords show up: anywhere in the page

Region: any region

Numeric range: ..
(e.g. $1500..$3000)

SafeSearch: ○ Off   ● On

Advanced Search

Google News Widgets

Use the Google News Widget to display top news stories on your blog or website. Find the widget at

http://code.google.com/apis/ajaxsearch/documentation/newsshow/wizard.html

NewsShow Wizard - Put Google News on Your Web Page

Embed a NewsShow on your web page and let your users see headlines and previe̶
bar should be displayed, and this wizard will write the code for you.

Style: 300x250 Medium Rectangle

Select the size of your news widget.

Search Expression(s):

Note: You can either specify a single expression or a comma separated list of expressions (or just some topics below).

Search Topic(s):

☑ Top Headlines   ☐ Elections
☐ World   ☐ Politics
☐ Business   ☐ Entertainment
☐ Nation   ☐ Sports
☐ Science & Technology ☐ Health

Select story topics.

Note: Your NewsShow will contain results from all checked topics and search expressions entered above.

News Edition: [Auto]

Note: The best way to understand the available set of editions is to look at the edition links at the bottom of Google News. After clicking on an edition, note the value of &ned argument in the browser's address bar.

User Interface Language: [Auto]

Note: This forces the user interface into the specified language and changes the default news edition (see above). There may not be news articles for every language.

Result Set Size: Small (4 results)

Note: This is the number of results per search expression and topic.

Preview Configuration & See the Code

This is how it will look on your page:

Top Stories
powered by Google News

Arab leaders renew support for peace efforts
The Associated Press - 1 hour ago
SIRTE, Libya — Arab leaders on Sunday renewed their support for Mideast peace efforts, rejecting pressure from Syria and Libya on the Palestinians to abandon talks
Related Articles »   « Previous   Next »   The Hindu

And this is the code you need to copy and paste where you want your NewsShow to appear:

```
<iframe frameborder="0" width="728" height="90" marginwidth="0" marginheight="0"
    src="http://www.goog a.com/uds/modules/elements/newsshow/iframe.html?topic=h&rsz=small&format=728x90">
</iframe>
```

More about the NewsShow

If you're ...   several
options.

Getti

If you h ...   ith. The
Google ...

Copy this code. Adjust the width to fit your blog's main column. Generally you want the width to equal less than 500px

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Google Docs

There is more to Google Docs than word processing, presentations, and spreadsheets.

Here are some other things teachers and students can do with Google Docs.

Word Cloud Gadget

One of the lesser known elements of Google Docs is spreadsheet gadgets. Gadgets are designed to take data from your spreadsheets and use it or display it in non-spreadsheet forms.

The Word Cloud Gadget takes the words (and numbers if you choose) in your spreadsheet and generates a word cloud. You can customize the Word Cloud Gadget to use the words from all of your cells or you can specify to draw upon specific cells. You can also customize the Word Cloud Gadget to link words in the cloud to a search engine. To add further utility, you can adjust the Word Cloud Gadget to ignore certain words when generating your word cloud.

Reading Levels

If you select the word count option in the Google Docs tools menu you will find three indicators of the reading level of the document you're creating. Google Docs will calculate for you the Flesch Reading Ease, Flesch-Kincaid Grade Level, and the Automatic Readability Index.

The Google Docs reading level indicators could be useful in selecting Internet articles for students to read. Paste an article into Google Docs to quickly determine the reading level.

Flashcards & Word Games

The Google Docs Templates gallery contains three templates allow you to create flashcards, word searches, and a word study game.

If you've been looking for just the right flashcard program or the right word search generator, but haven't found it, these templates might be what you need. One clear advantage of using these templates over a commercial program is that you won't be exposing your students to any advertising on your word search or flashcards.

Google Docs

There is more to Google Docs than word processing, presentations, and spreadsheets.

Here are some other things teachers and students can do with Google Docs.

Thesaurus & Dictionary

Google Docs contains an integrated thesaurus, dictionary, and encyclopedia tool. It is a simple tool to use. Simply highlight a word in your document then select "look up word" from the "tools" drop-down menu. From there you can find a synonym, a definition, or an Encyclopedia Britannica reference to your selected word. Also worth noting is an image search tool integrated into Google Docs. Just like using the thesaurus tool, simply highlight a word in your document then select "search for images" from the "tools" menu. Suggested synonyms and definitions appear in a pop-up window that floats over the document you're working on.

Bibliography Templates

Google Docs has templates for creating bibliographies in APA, MLA, AMA, and Chicago Style. You can find these templates in the Google Docs Template Gallery.

The Google Docs bibliography templates could be very useful for any student that needs to create a bibliography.

Translation

Google's translation tool is integrated into Google Docs. You can translate any document in Google Docs into your choice of fifty-one different languages. To use the translation feature, just select the "translate" option under the "tools" drop-down menu.

Google Docs translation tool obviously could be used in a foreign language class. It could also be useful if you have students that live in homes where English is not the primary language. If you need to send a letter home, you can easily print it out in multiple languages.

Google Docs

There is more to Google Docs than word processing, presentations, and spreadsheets.

Here are some other things teachers and students can do with Google Docs.

Equations & Subscripts

Google Docs contains an equation editor for mathematics teachers and students. Google Docs also offers a subscript and superscript tool that can be used in writing chemical compounds and mathematics equations.

The equation editor, subscript, and superscript tools make it possible for math and science teachers and their students to use Google Docs for more of their document creations. With these three tools online collaborative document creation isn't limited to the humanities. Science and mathematics students can also collaborate to solve equations.

Clipboard

The Google Docs clipboard allows you to copy content from a spreadsheet and paste it to a document or presentation. Likewise, you can copy from a document and paste to a presentation or a spreadsheet cell.

The most important element of the Google Docs clipboard is that you can save multiple selections to your clipboard and access them at any time from any internet-connected computer.

The Google Docs clipboard option could be useful for editing the sequence of an outline or essay. Students can copy many elements to their clipboards and paste them onto a blank canvas in the order they want.

Quizzes and Surveys

Google Docs Forms allows teachers to create a quiz and post it online. All of answers submitted by students appear in an easy-to-grade spreadsheet.

Along the same lines of creating a quiz using Google Docs Forms, teachers and students can create surveys in Google Docs. Surveys can be embedded into a blog or website. All responses will appear in a spreadsheet. After all responses are collected users can choose from a variety of summation tools built into Google Docs Spreadsheets. The summation tools will create graphs of the survey responses.

How to Create and Publish a Quiz Using Google Docs.

The directions for embedding quizzes into a blog works for Blogger and Edublogs blogs.

1. Make sure the first question is "student name." Otherwise you won't know who submitted which answers.

2. You can mix question types (multiple choice, short answer, paragraph) but if you have too many types and too many students, the spreadsheet can become difficult to navigate.

3. When embedding the form into a blog, make sure you edit the width to fit within your blog's main column.

Step One

How to Create and Publish a Quiz Using Google Docs.

The directions for embedding quizzes into a blog works for Blogger and Edublogs blogs.

Step Two

How to Create and Publish a Quiz Using Google Docs.

The directions for embedding quizzes into a blog works for Blogger and Edublogs blogs.

Step Three

Select question type.

How to Create and Publish a Quiz Using Google Docs.

The directions for embedding quizzes into a blog works for Blogger and Edublogs blogs.

Step Four

Select "required question" so that students can't skip questions.

How to Create and Publish a Quiz Using Google Docs.

The directions for embedding quizzes into a blog works for Blogger and Edublogs blogs.

Select "add item" to add more questions.

Select "embed" to get code for placing form into blog or website.

How to Create and Publish a Quiz Using Google Docs.

The directions for embedding quizzes into a blog works for Blogger and Edublogs blogs.

Google Docs Translation

Google Docs Thesaurus

ABC ✓ Check spelling	Ctrl+Shift+K	
Done spelling		
Language (for spelling)	►	
Word count...	Ctrl+Shift+C	
Look up word	►	Look up definition of "Moxie"...
Search the web for word	►	Look up synonyms for "Moxie"...
		Look up "Moxie" in encyclopedia
Manage document bookmarks...		
Revision history		

Reading Levels in Google Docs

Select Word Count from the Tools Menu to access this information.

Word Count ☒

Counts	Selection	Document
Words:	-	566
Characters (no spaces):	-	2922
Characters (with spaces):	-	3487
Paragraphs:	-	3
Sentences:	-	34
Pages (approximate):	-	2

Readability	Selection	Document
Average sentences per paragraph:	-	11.33
Average words per sentence:	-	16.65
Average characters per word:	-	5.16
Average words per page:	-	283.00
Flesch Reading Ease: [?]	-	50.33
Flesch-Kincaid Grade Level: [?]	-	10.00
Automated Readability Index: [?]	-	11.00

(Done)

Google Word Cloud Gadget

The fastest way to locate Word Cloud Gadget is to use these search terms in the template gallery.

Google Word Cloud Gadget

Google Word Cloud Gadget

Customize the gadget settings

oogle docs Copy of Advanced Word Cloud Gadget Sample

Autosaved on 10:13 AM PST

Share ▼

Edit View Insert Format Form Tools Help

Choose range of cells from which to generate cloud

Secretary Hilda Solis discussed her perspective on International Women's Day, and the First Lady's role in recognizing and exemplifying the ideals behind it. Today, the State Department's DipNote blog tells us about the annual International Women of Courage Awards -- and will allow you to watch the ceremony live at 3:00:

▼Edit   Gadget

Range   Sheet1!A2:E3   Help ✕

Number of header rows Auto

Number of words   75

Text color   darkblue

Fade colors?   ☑

Specify words to ignore

Words to ignore   and or in the of with that so

Search URL   http://google.com

Specify url(s) to link words to.

* required

Apply   Apply and close

Google Word Cloud Gadget

Copy HTML and paste into your blog/website.

Publish Gadget

Paste this into any HTML page:

```
<script src="http://spreadsheets.google.com/gpub?url=http%3A%2F%2Fjgbfa4rgi26iu5u0nimmdche8rkqg644.spreadsheets.gmodules.com%2Fgadgets%2Fifr%3Fup_table_query_url%3Dhttp%253A%252F%252Fspreadsheets.google.com%252Ftq%253Frange%253DA2%25253AE3%2526headers%253D-1%2526key%253D0AgL6VA9dkzMedDJGNTlJYTFfanRqRGt6eUFFcjAwaWc%2526gid%253D0%2526pub%253D1%26up_maxTerms%3D75%26up_color%3DdarkBlue%26up_fade%3D1%26up_exclude%3Dand%2520or%2520in%2520the%2520of%2520with%2520that%2520so%2520can%2520a%2520for%2520here%2520to%2520it%2520we%26up_url%3Dhttp%253A%252F%252Fwww.youtube.com%252Fresults%253Fsearch_query%253D%2525s%26up_table_query_refresh_interval%3D0%26url%3Dhttp%253A%252F%252Fhosting.gmodules.com%252Fig%252Fgadgets%252Ffile%252F107586420984574887835%252Ftagcloud.xml%253Fnocache&height=320&width=450"></script>
```

Done

Select publish gadget.

Publish Gadget...

Add Gadget to iGoogle...

Delete Gadget

Get query data source url...

Get Gadget XML

About this gadget...

Move to own sheet...

Google Maps

Google Maps can be used for more than just Social Studies lessons.

Math Maps

Math Maps are Google Maps on which Tom Barrett and others have created placemarks which when clicked reveal mathematics questions for students to answer based on the maps. There are questions available for every elementary school grade level. The placemarks are color-coded to indicate the level of the questions. Blue = Kindergarten, Red = 1st grade, Green = 2nd grade, Light Blue = 3rd grade, Yellow = 4th grade, Purple = 5th grade. Visit Tom Barrett's Math Maps page to view the existing Math Maps and read about how to contribute to the existing Math Maps.

Learn more about math maps here http://edte.ch/blog/maths-maps/

Placeopedia

Placeopedia is a website that provides additional context for Wikipedia entries through Google Maps. Placeopedia connects Wikipedia articles with their locations. Click on any placemark on Placeopedia's map and you will be linked to a Wikipedia article about that place.

Placeopedia can be a good tool for students to use to do some quick, general research about a city, state, or country. Placeopedia is also useful for providing geographical context for other Wikipedia articles that references locations.

Visit Placeopedia at

http://placeopeida.com

Climate Change Data

Geo.me Solutions has created a fairly in-depth mapped display of global climate data. The map is a Google Map containing placemarks that when opened reveal current weather data as well as historical weather data. In some cases there is data dating back three hundred years. The data is recorded from more than 1,500 weather stations around the globe. You can browse through the data sets by clicking on placemarks on the map or you can enter a search for a specific location.

Explore this Google Maps mash-up at http://www.geo.me/

Google Maps

Google Maps can be used for more than just Social Studies lessons.

Paint Map

Paint Map is part search engine, part artwork sharing, and part Google Map. The way Paint Map works is artists submit images of their paintings, write a description of the where the painting was made, and then plot that location on a Google Map. Paint Map offers a commenting system through which visitors and artists can interact. There is a search bar on Paint Map's homepage that visitors can use to search through the nearly 500 paintings on Paint Map.

Paint Map provides students with a global context of the paintings they view.

Find Paint Map at

http://paintmap.com

Literary Maps

Google Lit Trips provides dozens of examples of using Google Earth to map out stories. You can use the same concept to create literary maps in Google Maps. Have students choose their favorite stories, identify the locations mentioned in the stories, and then create placemarks on a Google Map. The students' placemarks can include text, images, and videos.

On a similar note, you could have students create a story from scratch and map it out on a Google Map.

For more ideas about creating literary maps visit:

http://www.googlelittrips.com

Plan a Bike Route

Google Maps provides directions for traveling by bicycle in more than 150 US cities. When you enter a pair of addresses you can choose to get directions for traveling by automobile or bicycle. Don't have any particular addresses in mind that you want to ride to? Google Maps offers suggested bicycle riding routes which you can find by selecting "bicycle" in your Google Maps menu.

Google Maps can be used by physical education teachers and or health teachers to have students plan safe routes for bicycle rides. To take the assignment a step farther you could have students plan a route, measure the distance, and calculate how many calories a person could burn on that route. There are numerous calorie calculators on the web that you could use for that second step.

How to Create and Save Placemarks in Google Maps

Step 1 - Create a Google Account if you don't already have one.

Sign in.
If you don't have a Google Account you will be prompted to create one.
You will need a Google Account in order to save your work.
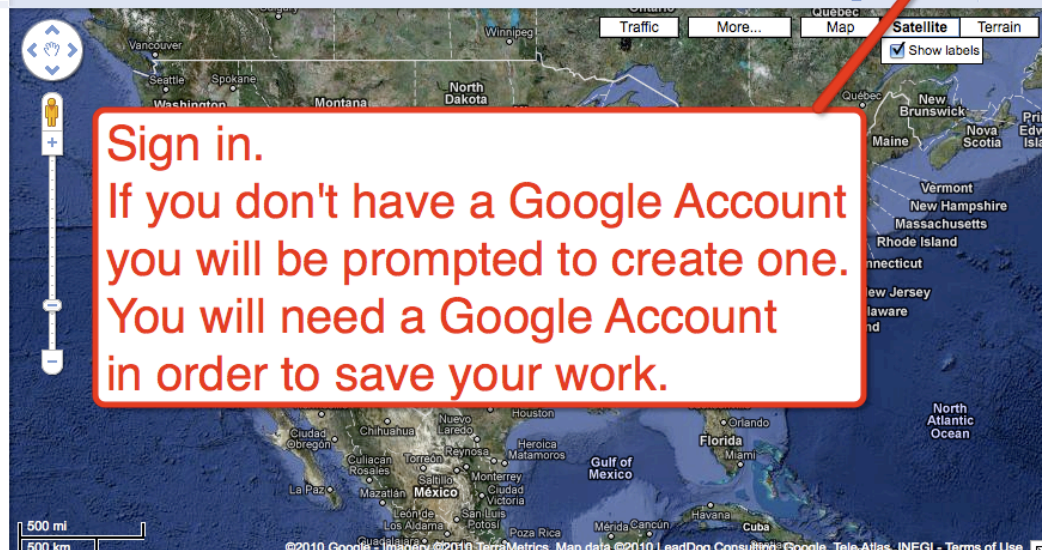
How to Create and Save Placemarks in Google Maps

Step 2 - Select My Maps

After signing in, select My Maps.
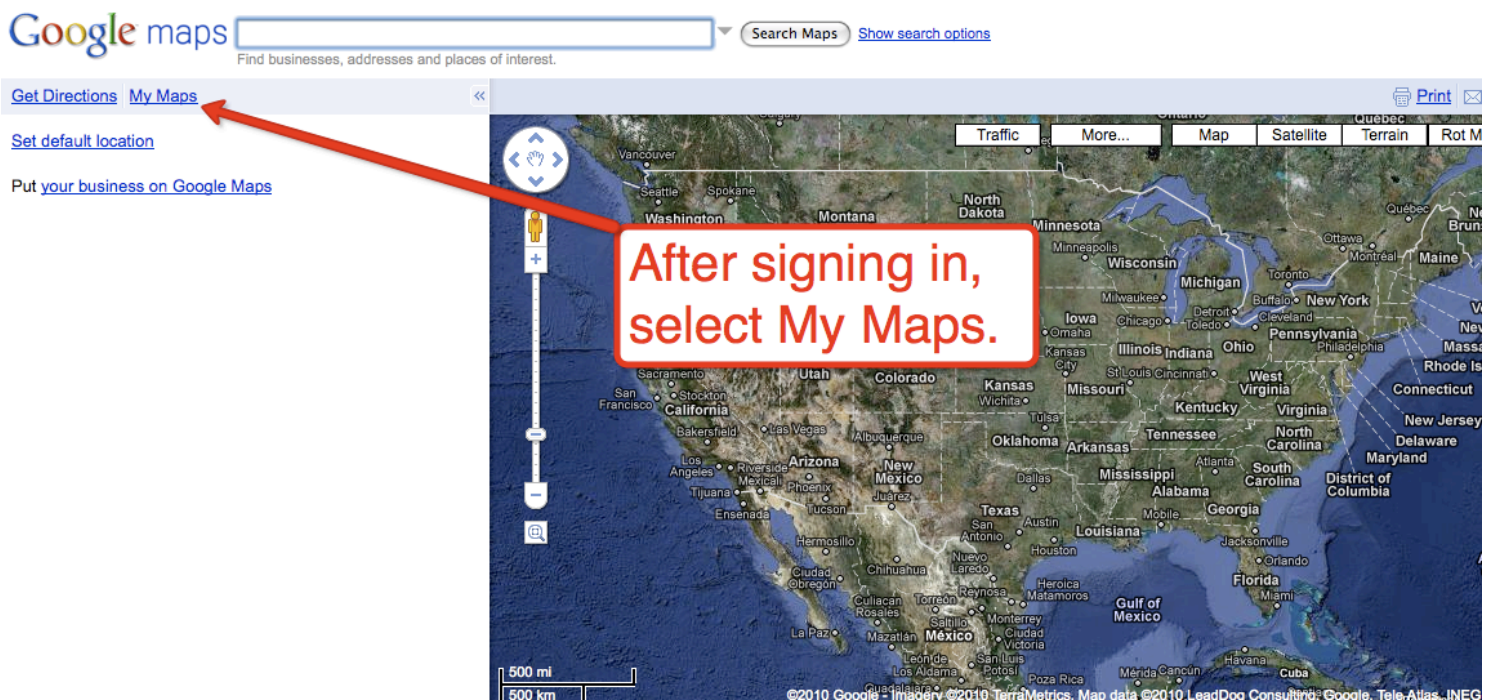
How to Create and Save Placemarks in Google Maps

Steps 3 & 4 - Select Create New Map then title map.

Select Create New Map.

Title your map.
Select privacy setting.

How to Create and Save Placemarks in Google Maps

Important!
Make sure you click save after updating your map.
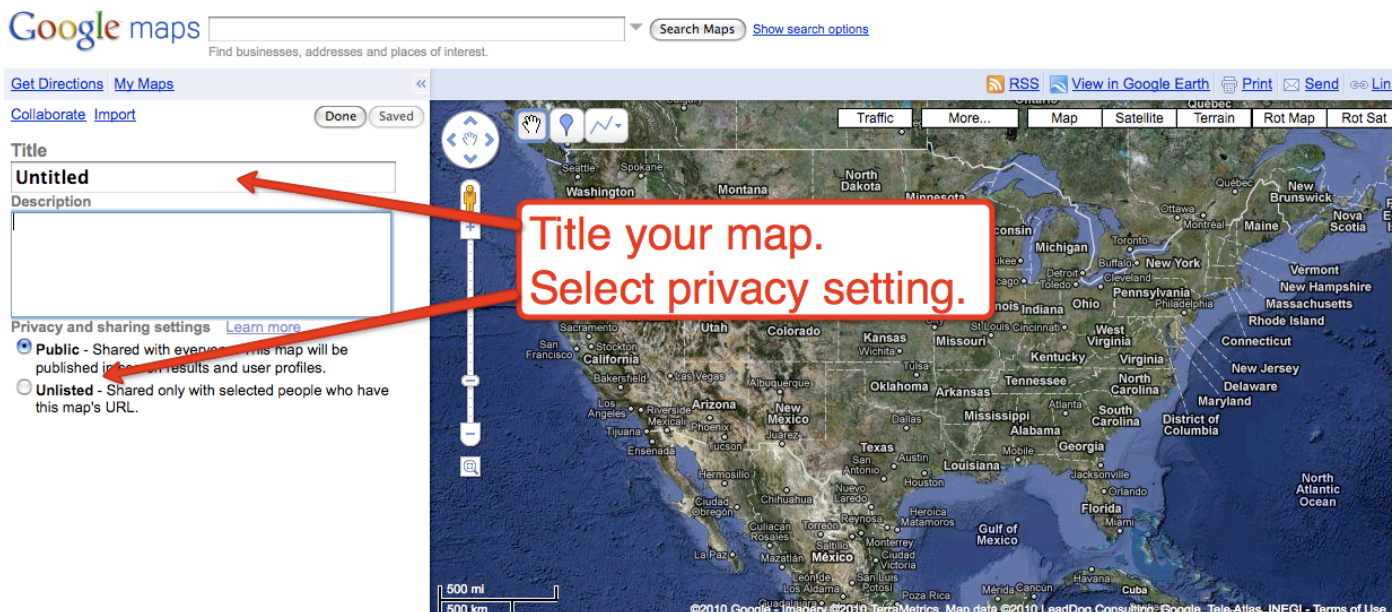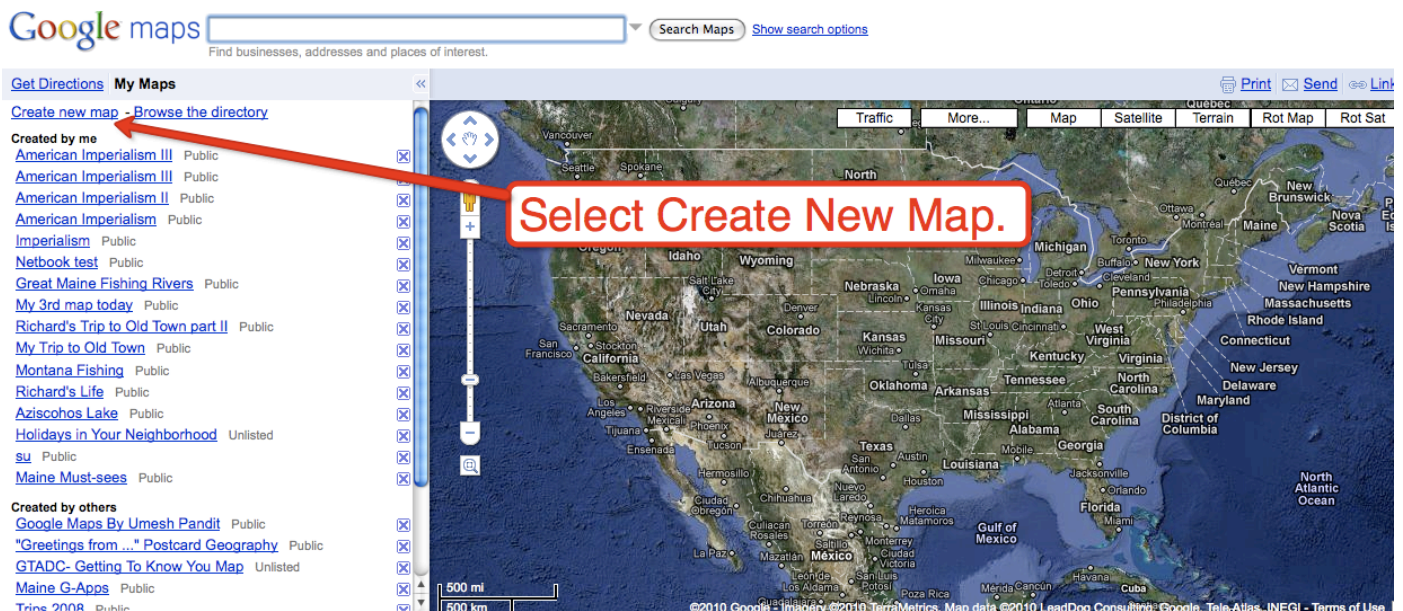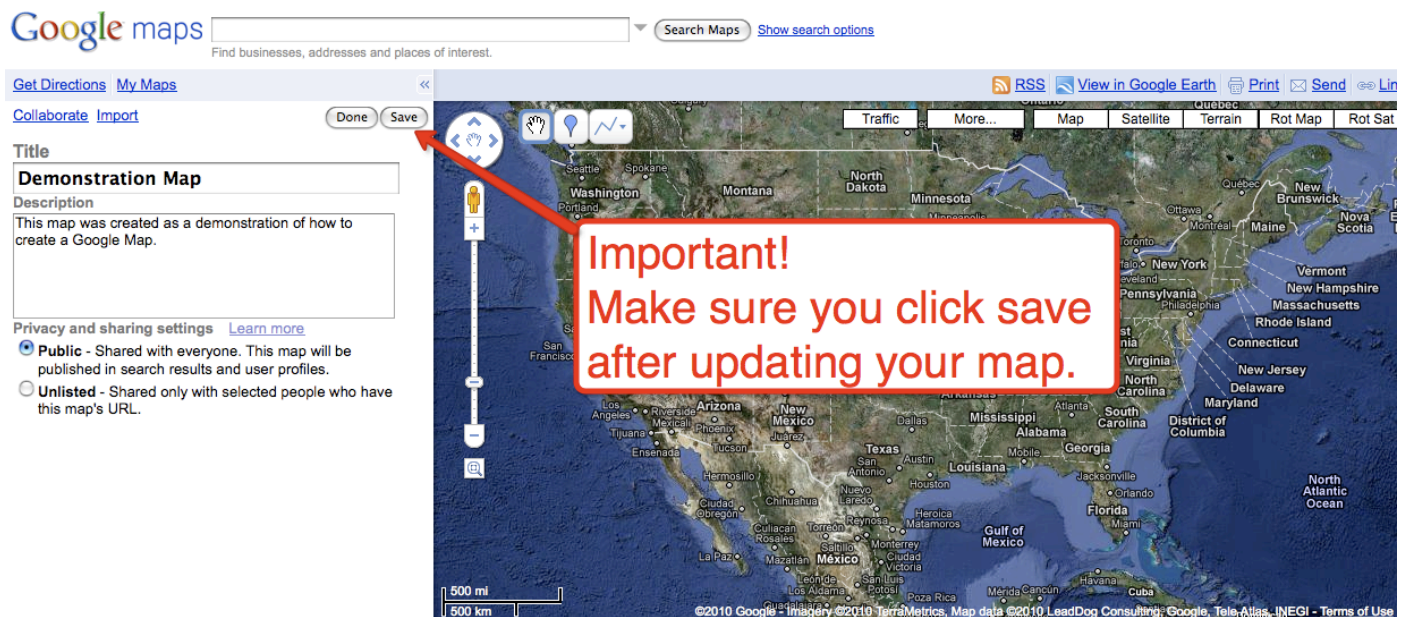
Step 5 - Find location and select placemark icon.

Select placemark icon and drag it to your desired location. You may want to zoom in on your location before dragging placemark icon.
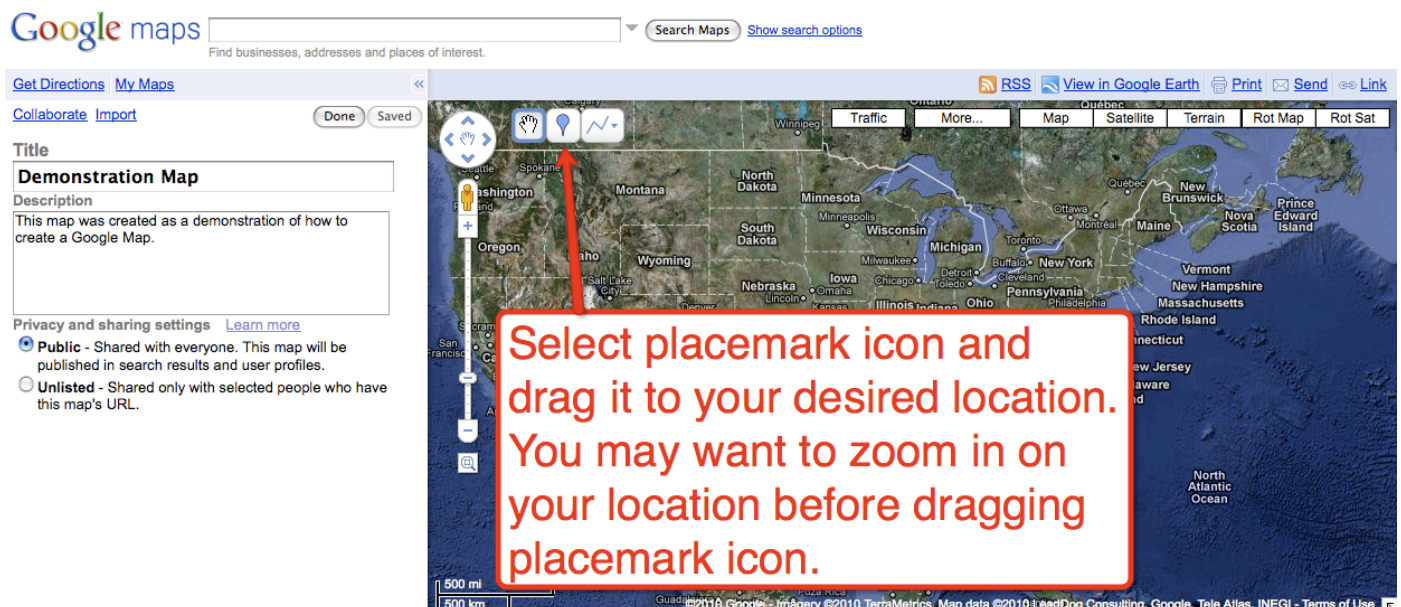
How to Create and Save Placemarks in Google Maps

Step 6 - Edit text and images in placemark

Title placemark.
Select "Rich Text" to edit font style, insert links, and insert images.

Step 7 - Inserting videos from YouTube

Select "Edit HTML" to insert a video.
Copy the embed code from YouTube and paste into form.

How to Create and Save Placemarks in Google Maps

Step 8 - Click OK after editing placemarks. Click save, then done. Videos won't display until "Done" has been clicked.

After inserting code click "ok," "save," then "done." Video won't display until after you have clicked done.

Step 9 - Click Edit to add more placemarks or edit/remove old placemarks.

Click edit to go back and add more placemarks or edit/ remove existing placemarks.

For more information and more tutorials (including videos) please visit **FreeTech4Teachers.com** *and select "Google Tools Tutorials" from the top menu.*

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About the Author
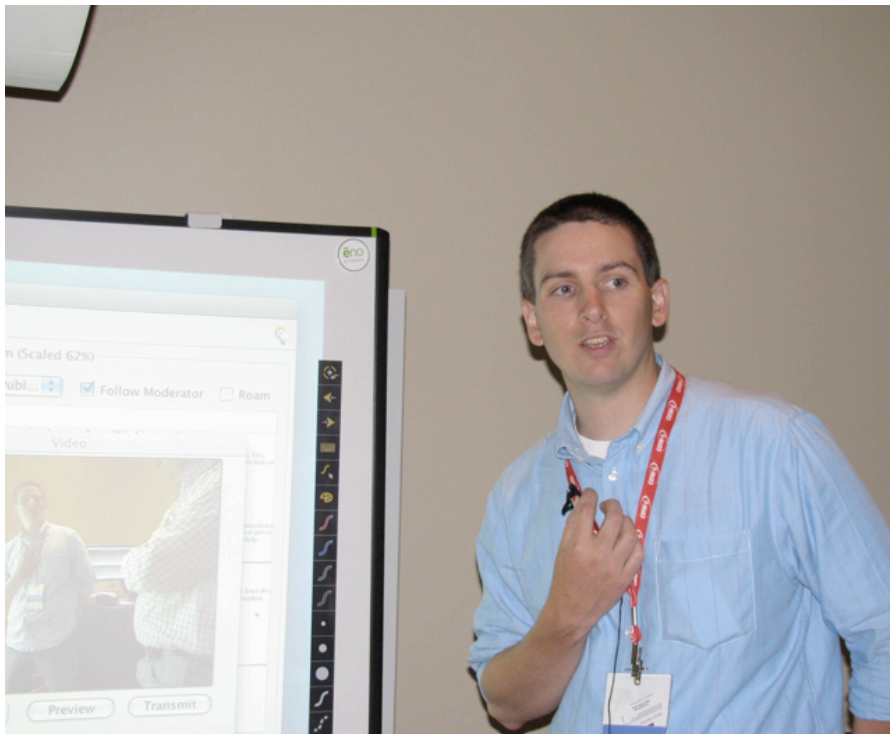
Richard Byrne is a social studies teacher at a Western Maine High School. When not teaching Richard writes the award-winning blog Free Technology for Teachers.

Richard is a Google Certified Teacher available for speaking and conducting workshops at your school or conference.

To see a list of places where Richard has presented in the past, please visit:

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