

The How-To Guide for using .KMZ files in Google Earth

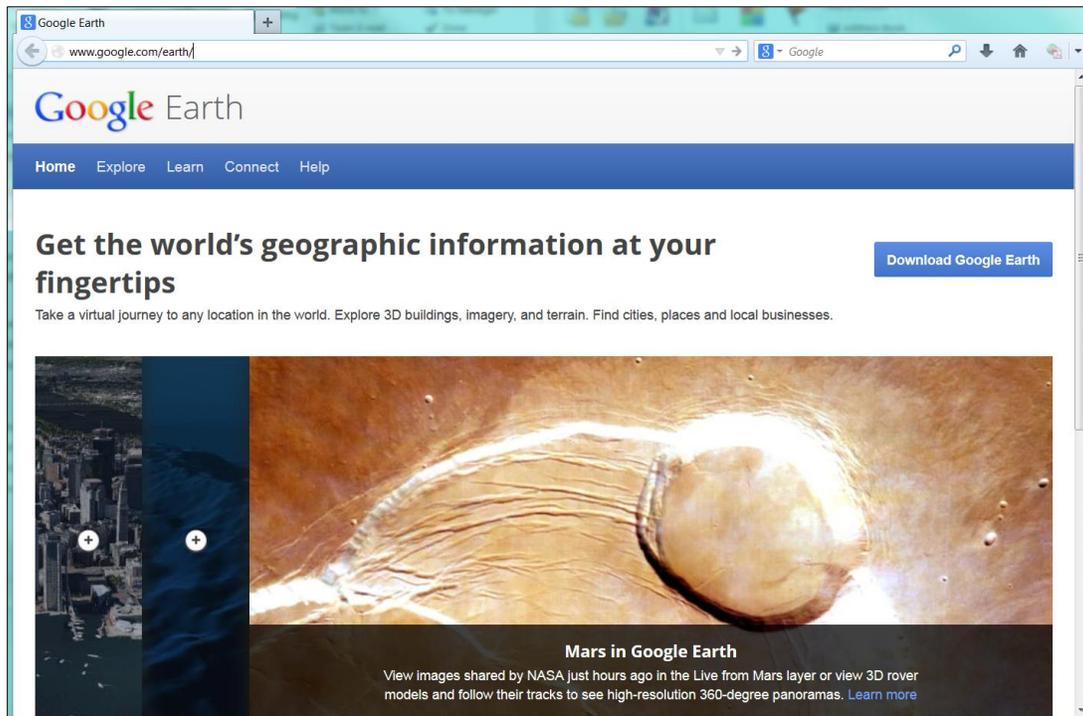
Your computer may already have Google Earth installed. If so, skip ahead to the overview. If not, obtain permission to download the **FREE** program and install it according to the online directions. Some useful links are provided below.

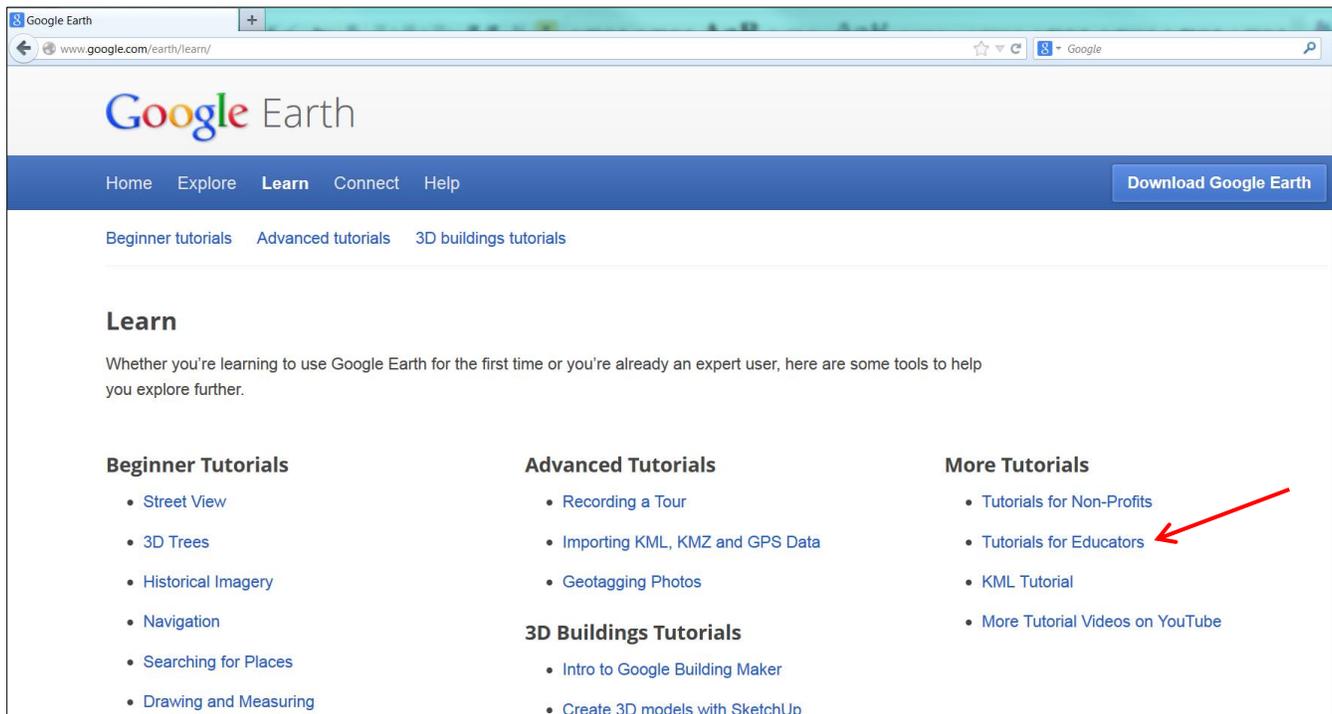
<http://www.google.com/earth/>

<https://support.google.com/earth/>

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<http://www.google.com/earth/educators/>





Overview of Google Earth

Google Earth allows you to travel the world through a virtual globe and view satellite imagery, maps, terrain, 3D buildings, and much more. With Google Earth's rich, geographical content, you are able to experience a more realistic view of the world. You can fly to your favorite place, search for businesses and even navigate through directions. It's all up to you!

Although the options within Google Earth are endless, here are a few things you can do:

- *Discover the Earth:* Fly to any location in the world, learn about a city and its geographic features, find local businesses, and create tours.
- *Explore the Sky:* Enjoy the wonders of the heavens and learn about our solar system.
- *Dive in the Ocean:* Go beneath the surface and visit the depths of the ocean and explore the planet's deepest underwater canyons. Learn about ocean observations, climate change, and endangered species. You can even discover new places to surf, dive and fish.
- *Walk on the Moon:* Take tours of landing sites narrated by Apollo astronauts and view 3D models of landed spacecraft.
- *Visit Mars:* Travel the Red Planet and explore NASA's latest imagery of our galactic neighbor.

Google Earth is simply your ticket to explore the Universe! Now, learn how to get started!

(Information from www.google.com/earth)

Google Earth: Google Earth Download

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English (US)

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Google Earth Download

Google Earth lets you fly anywhere on Earth to view satellite imagery, maps, terrain, 3D buildings, the ocean and even galaxies in outer space. Explore rich geographical content, save your toured places, and share with others. Download the latest version for free.

Download Google Earth

Available for free on PC, Mac, and Linux

Google Earth 6 Features



Zoom from outer space to Street View



View buildings, bridges and trees in 3D



Find locations, driving directions, and more

System requirements:

PC
Windows XP, Windows Vista, or Windows 7

Mac
Mac OS X 10.5.0 or later

Linux
LSB 4.0 (Linux Standard Base) libraries

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Help

- Getting to know Google Earth
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Basic features user guide

Getting to know Google Earth

Next: Sightse...

The following diagram describes some of the features available in the main window of Google Earth:



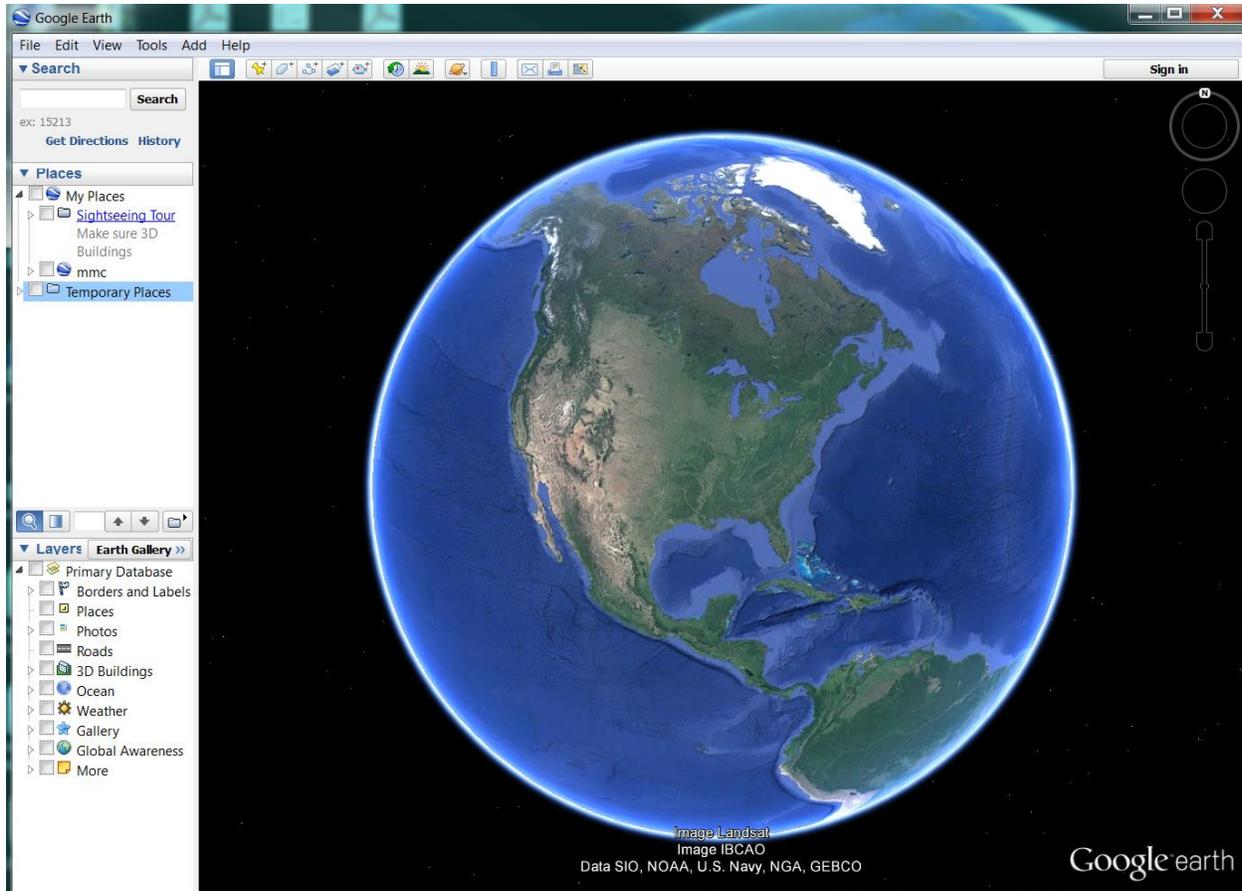
1: Search bar
2: Navigation controls (compass, pan, tilt, rotate)
3: Layers panel
4: Street View pegman
5: Sign in button
6: Street View pegman
7: Places panel
8: Layers panel
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10: Layers panel
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Related

- [Download Google Earth](#)
Start using Google Earth
- [Google Earth Community](#)
A discussion forum to share discoveries, insights, and unique user-generated maps

Getting started

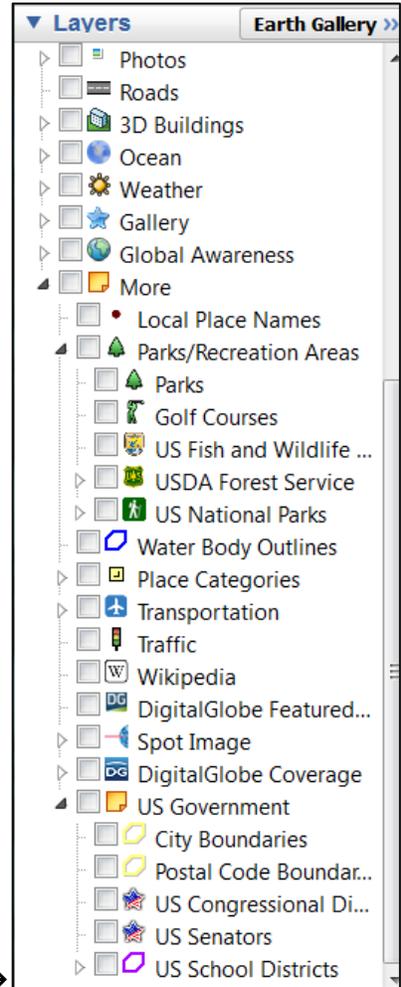
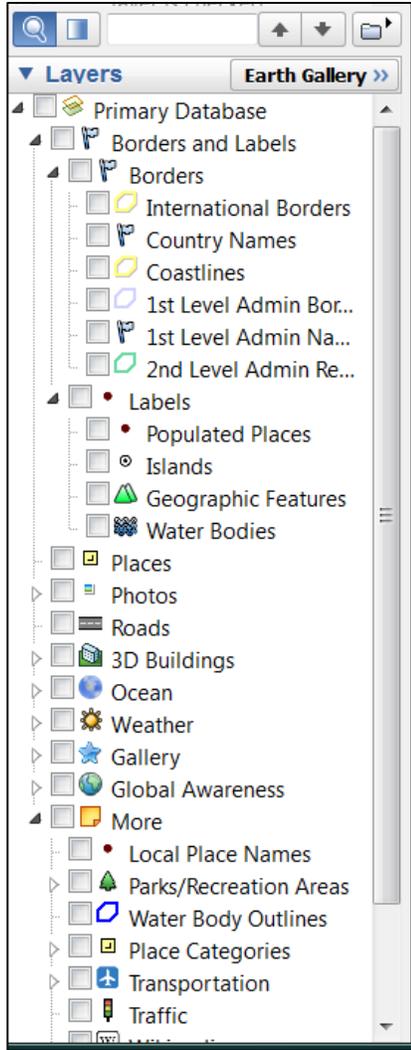
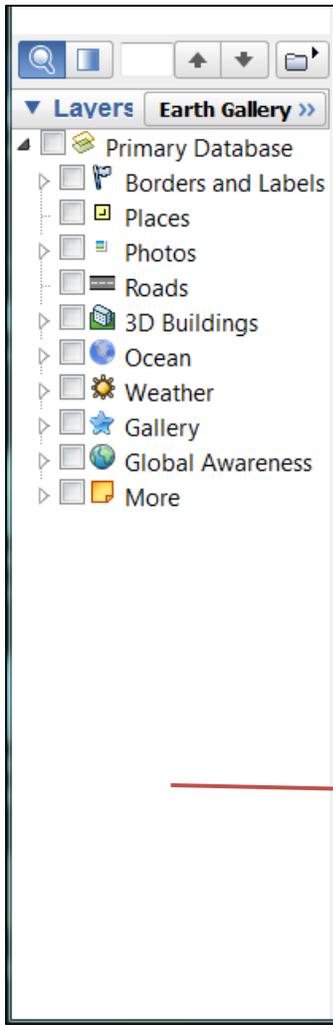
When you first open Google Earth, you should see the ‘blue marble’ that is Earth and may see some of the “Layers” (like boundaries, roads, etc.) already turned on.

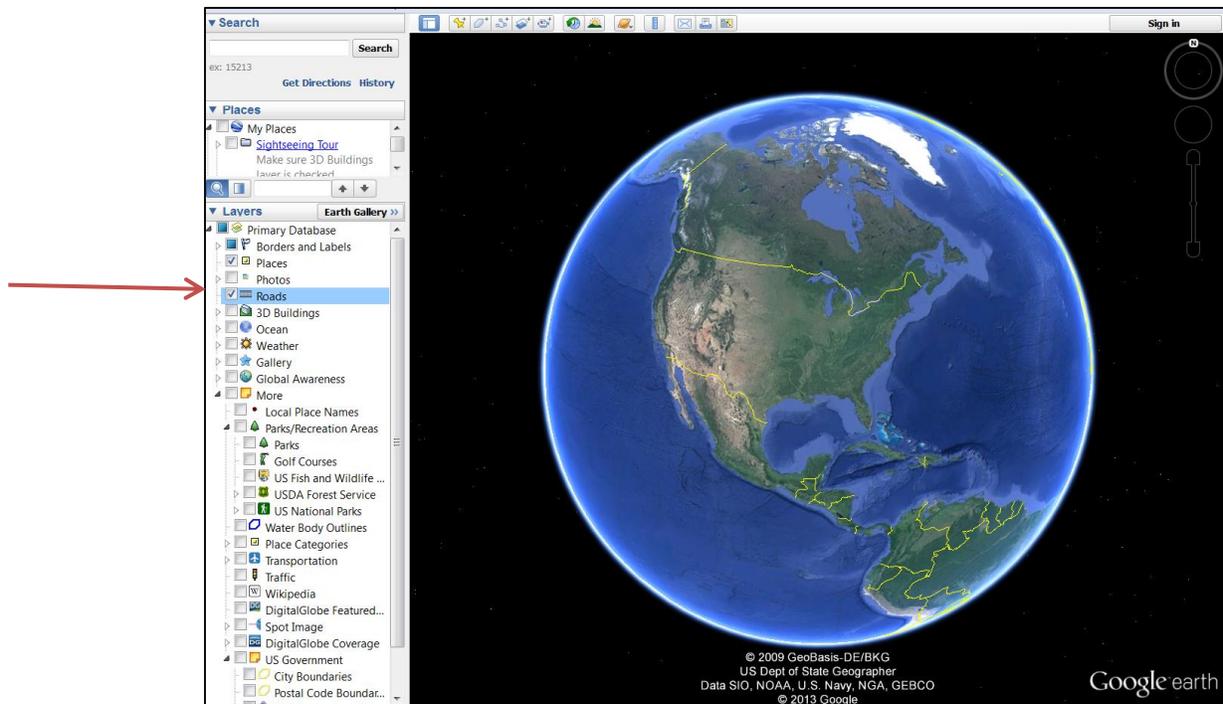


The built in or pre-loaded “Layers” can be turned on or off by clicking in the box to the left of the name. A checkmark means the layer is ‘on’.

You can also ‘expand’ the list of each layer category by clicking on the small triangle to the far left of the name. If there is no triangle, the layer cannot be expanded.

Take some time to explore some of these pre-loaded layers. Consider completing one of the many online tutorials to learn how to take advantage of all Google Earth has to offer.





Some Layers are scale-dependent meaning they only show up once you've zoomed-in enough. For example, the “**Roads**” layer is checked but is not visible. This is to prevent the cluttered mess that would appear if you could see every road on earth from space.

Depending on your computer and equipment, there are many ways to Zoom In or Out.

- Use the ‘wheel’ in the center of your mouse to scroll in or out.
- Double-click the left mouse button to zoom in (or the right button to zoom out).
- Use the + or – near the upper right hand corner, like you would on Google or Bing maps.
- You can also type a specific address or a general location into the “**Search**” window in the far upper left corner of the screen. Click ‘search’ and the screen will zoom in to that location.
- Notice when you are Zooming In that the order in which the streets become visible relates to their scale in real life. In other words, large interstate highways are visible sooner (from father away) than smaller county roads.

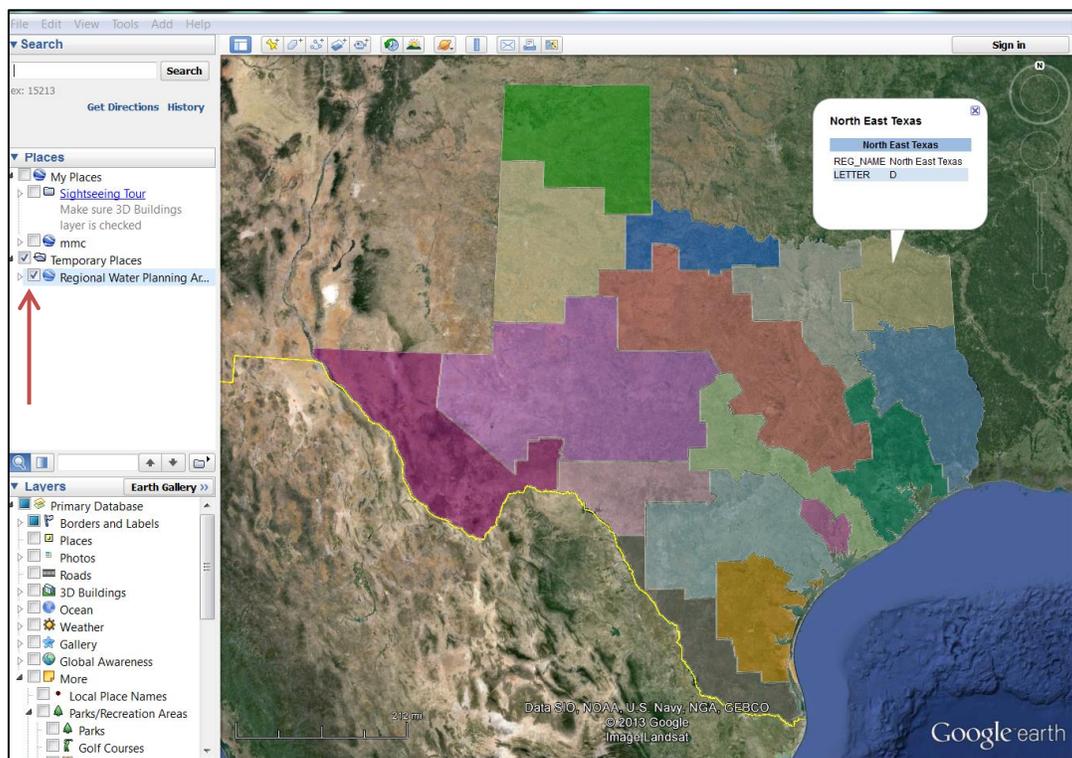
Try typing a location into the search window/box that is **not** in the United States. The earth will rotate as it relocates you to that location. (In the future- look up how to create and ‘record a tour’ or what it means to enter the “Flight Simulator”.)

To get back to Texas, either type a Texas location into the search window, or using your mouse you can click and drag to rotate the earth. Spend some time in the tutorial learning all the different ways to navigate the earth (and underwater! and the moon! and Mars!).

To use the .KMZ files included on the CD

For this example, the file “Regional_Water_Planning_Areas.kmz” will be used.

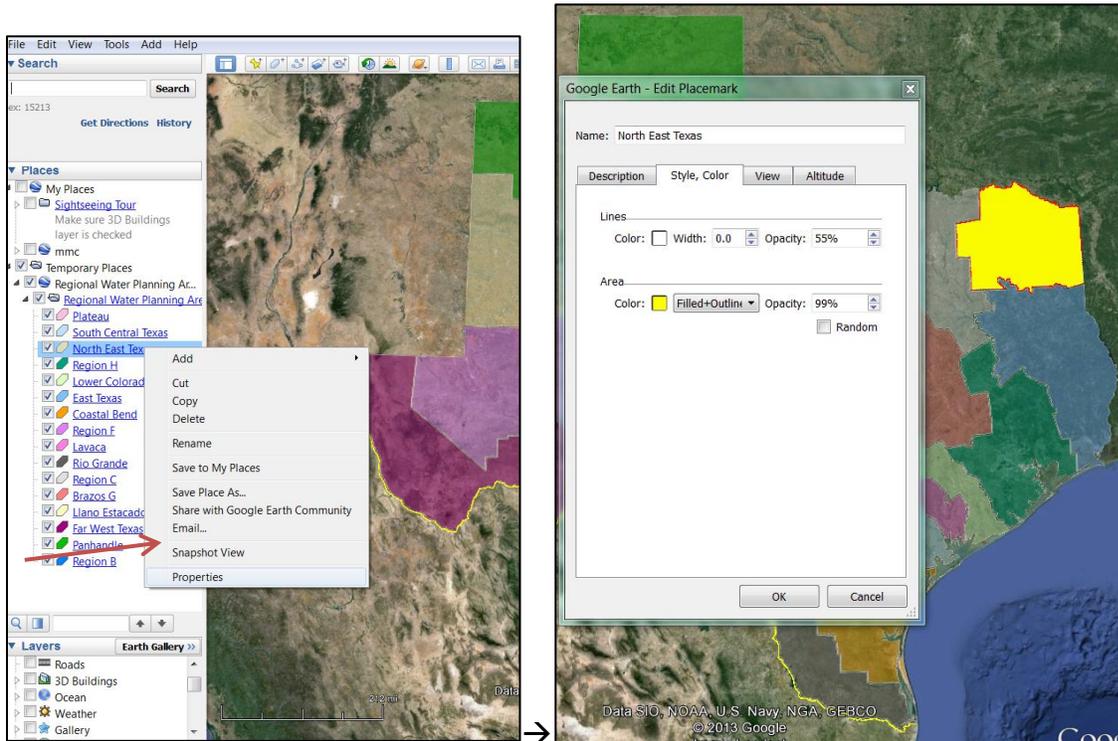
Find the .kmz file you would like to explore and double-click it. Google Earth should automatically open and zoom to the resolution of Texas. (You may have to choose which program to use: Choose Google Earth and check the box to ‘do this from now on’.)



Notice that if you click somewhere on a colored region, an information balloon will open. In this case, the info for Region D: North East Texas is displayed. (**Note:** Most pre-loaded “Layers” will also display additional information if you click on the layer or on the icon (like for a Park).

You can see other “Layers” along with this one. In fact, viewing multiple layers simultaneously is one of the neat things about Google Earth. (This technology is similar to GIS, or Geographic Information Science. Viewing multiple ‘layers’ of geographic information allows us to see patterns and complete analyses.) Try zooming in very close to your hometown using your mouse or by typing it into the search window. Are any of the other pre-loaded “Layers” turned on?

(Remember to click inside the box to the left of the layer name. A check-mark means it is 'on'.)
Try viewing the regional planning areas along with any of the other .kmz files from the CD.

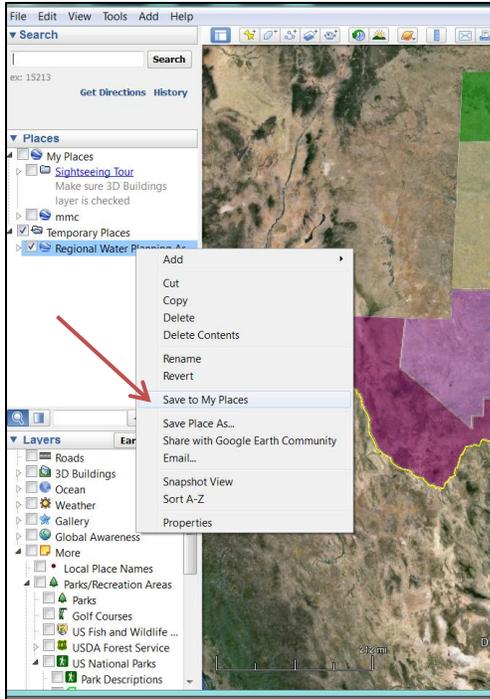


You can also adjust how layers like the Regional Water Planning Areas layer are displayed.

Click the white triangle next to the name of the layer to expand it as you did with the pre-loaded layers before. Each item in the layer (in this case, each planning area) can be turned on or off. Or you can change the actual **Properties** of the layer.

(**Note:** If you get an error message about “editing part of Multi Geometry”, just click ok. It is reminding you that the color palette and transparency choices of each planning region were chosen at the same time by someone else and that by changing one, you may change others. Keep in mind that if you accidentally alter the layer until it is unrecognizable, just delete it and open it again from the CD.)

Keep in mind that most of the KMZ files provided on the CD are meant to be viewed at the statewide or regional level rather than at the street level. Therefore, if you zoom in too tightly on a specific area, the information may appear pixelated.

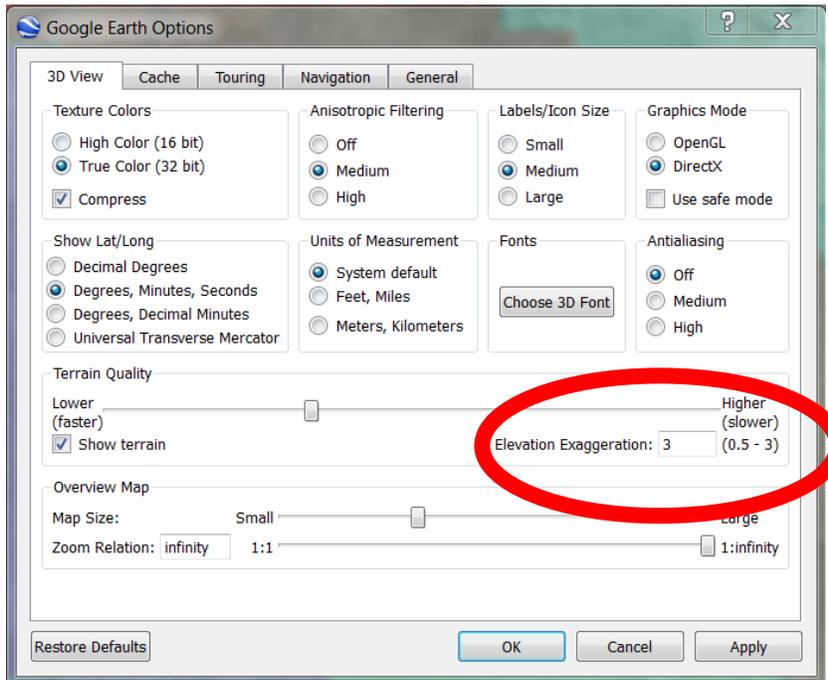


Finally, notice that the ‘Regional Water Planning Areas’ layer is listed in the Table of Contents pane under “Temporary Places”. If you think you might use this layer again in the future, you can save it by right-clicking on the name of the layer and choose “Save to My Places”. The next time you open Google Earth, the layers you saved will be listed under “My Places”.

Other handy tips and tricks

The idea of Google Earth is that you're viewing things from above. You can adjust how high you are above the earth, the angle from which you are viewing things, and other features by clicking **Tools**→**Options** from the menu at the top of the screen. Some of these features should be adjusted based on your computer and/or screen settings. (See also the online tutorials.)

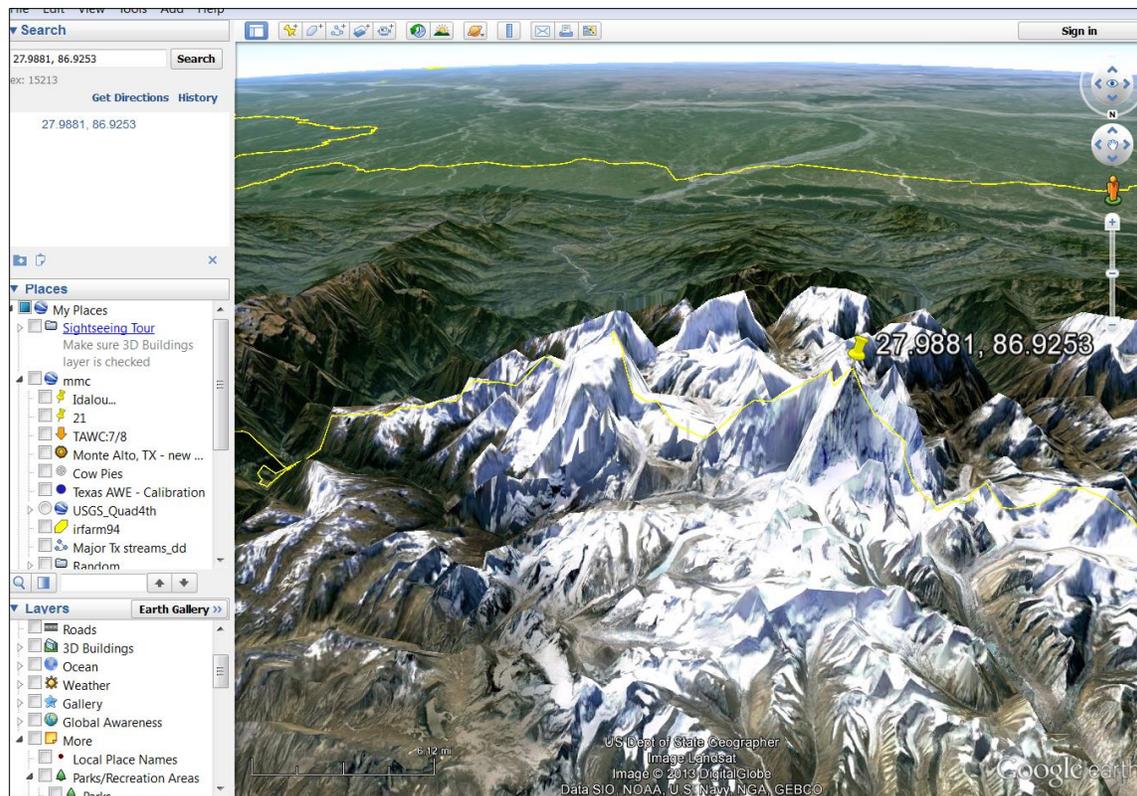
One of the coolest features of Google Earth is the 3-D aspect or "Terrain". It is much easier to teach about 'drainage divides' if you can show students the high points in the terrain. To make the scenery more dramatic, turn up the "Elevation Exaggeration" to 2 or 3.



Now fly to (that means search for) any place on earth with mountains.

(Note: In addition to typing in the names of places, you can also type in coordinates. Try it by entering "**27.9881, 86.9253**" *without the quotation marks* and click Search.) You're now at the top of Mount Everest. Zoom out a little if needed because it might place you "on the ground". Now, **hold down** the center 'scroll' button on your mouse and move the mouse slowly.

If your mouse doesn't have a "scroll button", you can use the 'wheel' in the far upper right corner of your Google Earth screen. (Hover over the items for tips on how to navigate.) You can 'tilt' your view or rotate it using the uppermost circle. The second circle lets you move around by "panning". The yellow guy standing on a circle will let you drag to "street view" if it exists, or place you "on the ground" if you were perched in the sky.



[Now enter (31.891170, -104.861381). You're at the tallest peak in Texas!]

Many other .kmz files or layers exist already and can be found through a quick internet search. Just search for the subject you're interested in along with either ".kml" or ".kmz".

You can show recent and historical earthquakes (US Geological Survey), track weather systems and hurricanes across the globe (National Oceanographic and Atmospheric Administration), and even load GPS (Global Positioning System) points you gathered at a local park.

The .kmz files included on this CD are meant to enhance the curriculum provided about water in Texas. Feel free to share these files, and if you're interested in a water-related layer that isn't included on this CD, please contact the Texas Water Development Board Conservation staff at 512-463-7955 or send an email to (consedu@twdb.texas.gov).