

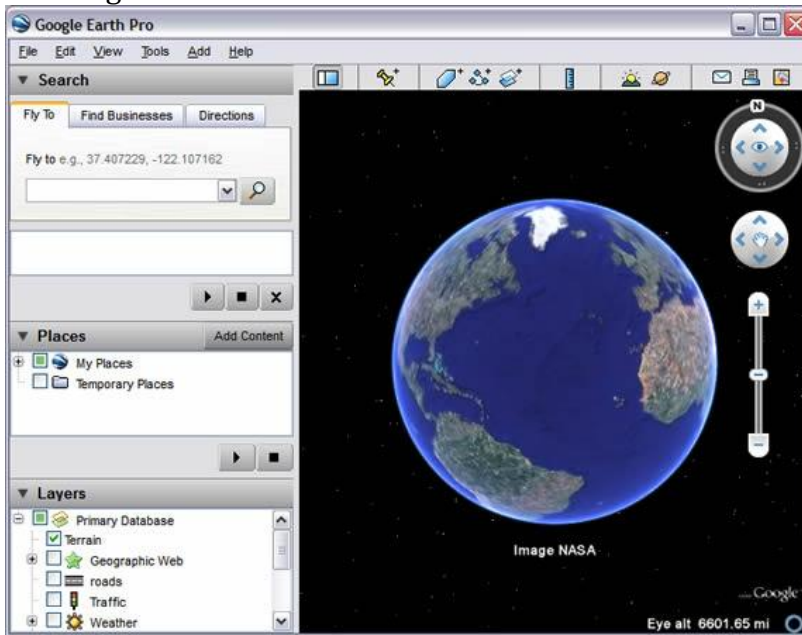
Garrigus Google Earth Tutorial

[Complete this before starting the worksheet]

When you finish this tutorial you should have the skills necessary to complete the attached worksheet. This includes being able to

- navigate within Google Earth
- turn “layers” on and off
- use the Ruler tool to measure lines and paths

1. Using your internet browser, go to Download Google Earth
2. If you don't already have a Gmail account, you must register for a Google account
3. Launch Google Earth. This is what it will look like:



4. Like Google Maps, Yahoo Maps or MapQuest, Google Earth maps locations you type in, using your internet connection to bring in the data and images. Unlike those map programs, Google Earth works in 3-D, giving you a much richer experience
5. The first thing to do is to play with the four navigation tools you see on the right-hand side of the screen when you move the mouse in that direction. You can also use your mouse or the keyboard. Here are the tools:
 - a. “North-up” button
 - b. “Look” joystick
 - c. “Move” joystick
 - d. Zoom slider

Start by playing with the zoom slider. Click on the plus sign to zoom in and the minus sign to zoom out. You can also move the slider or use the middle



on

button on your mouse. Notice that if you use the plus sign to zoom all the way down to the ground level, the view will eventually swoop up, giving you a view of the horizon.

Next, try playing with the “North-up” button. Using the mouse, drag the N around the circle and watch the perspective change. To get back to North-on-top quickly, click once on the “N”.

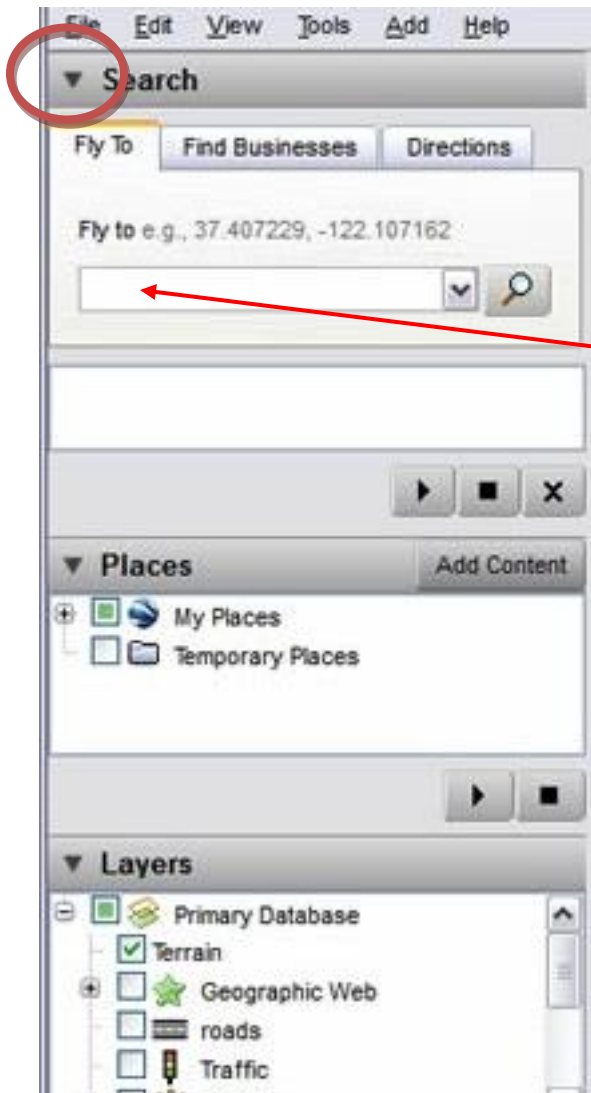
Now play with the “Look” joystick. Use the mouse to press on various parts of the circle. Notice that if you press at the top of the circle, near the edge, your view lifts up. If you press at the bottom of the circle, you “look” down. The right and left sides of the circle orient the view in those directions.



Now play with the “Move” joystick. By now you may have discovered that you can use your mouse to move around the scene, without using the navigational controls. (If you have a mouse wheel, you can use it to zoom in and out, just like with the Zoom slider.) But the “Move” joystick will move you around more rapidly and more smoothly.

You can find a very useful and brief video tutorial on navigating at <http://earth.google.com/userguide/v4/index.html#navigating>

6. The next important part of the program is the set of “panels on the left hand part of the screen, labeled “Search”, “Places” and “Layers.” Note that you can collapse and expand each individual panel by clicking the triangle before its name.

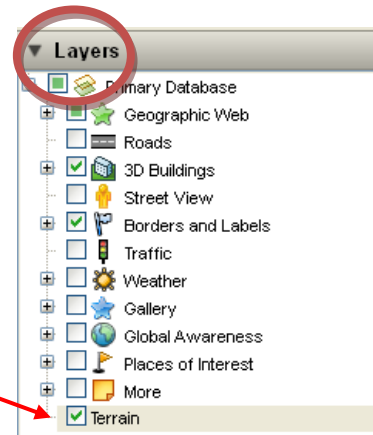


You can also click on the far-left icon on the icon bar to turn the entire panel display on and off.

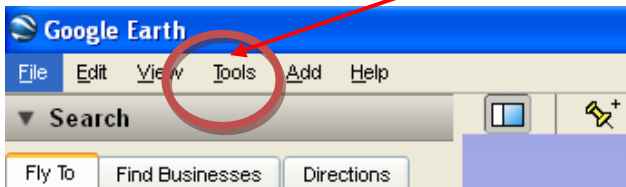


7. Let’s start with the “Search” panel. Type the name of a place in the “fly to” box. This can be a specific address, but it can also be the name of a city or a place. Let’s try the Grand Canyon. Once the program takes you there, get more familiar with the navigation tools by zooming in and out. To get the maximum 3-D effect, use the “Look” joystick to get a horizon view. Then zoom in and out. Use the “North-up” button to change your orientation.

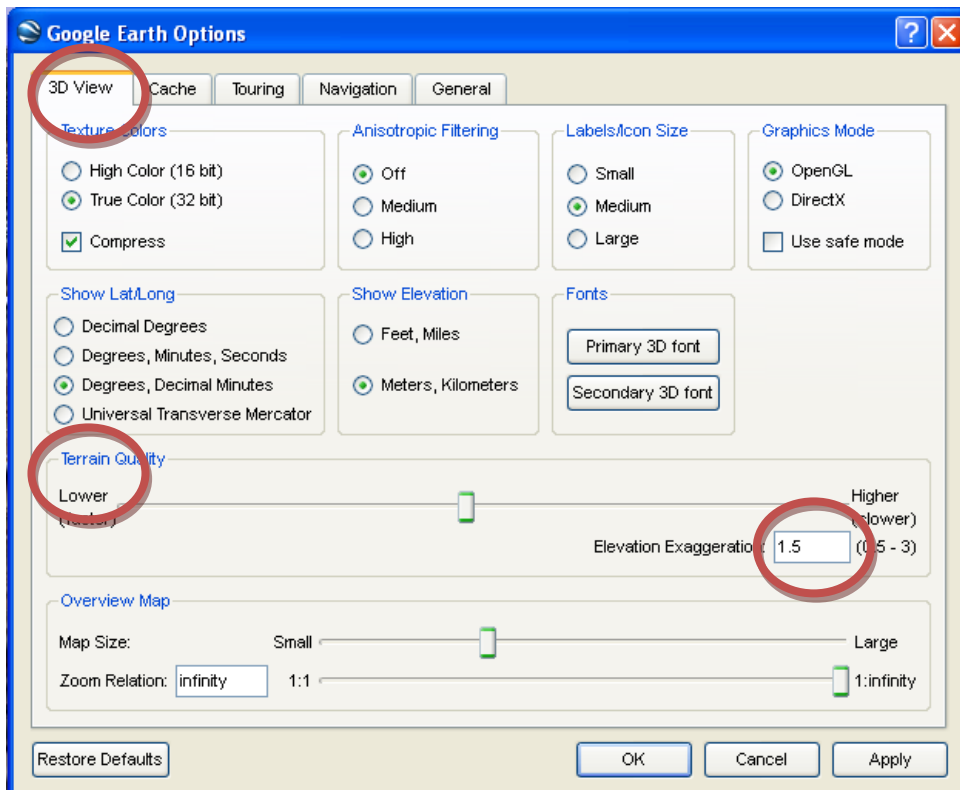
8. The landscape that you view can be changed by turning various layers on and off in the “Layers” panel. At the bottom of the “Layers” panel is an item called “Terrain”. Click it on and off to see how the display changes from 3-D to 2-D.



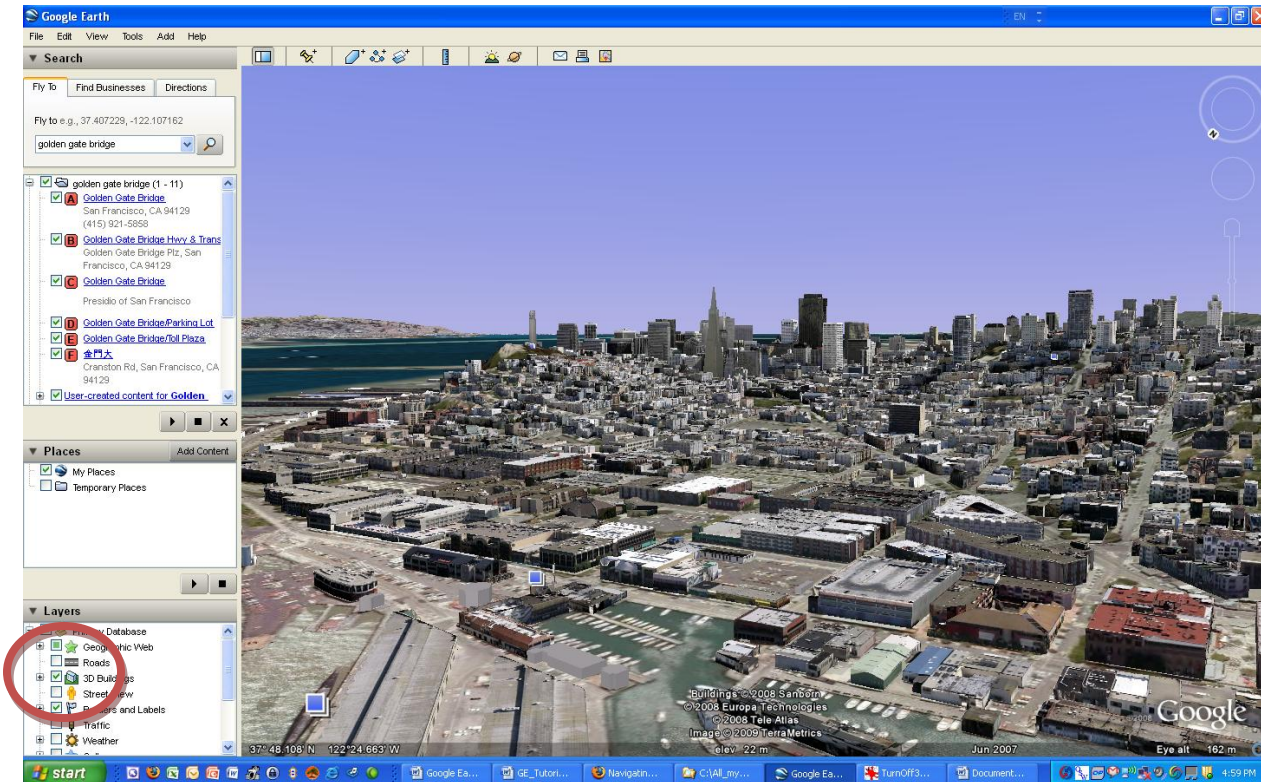
9. Something that will increase your enjoyment of Google Earth is to slightly exaggerate the 3-D effect of the elevation. To do this click on the “Tools” item on



the top menu. Then choose “Options”. Choose the tab labeled “3-D View” and then “Terrain Quality” in the middle of the window. In the box labeled “Elevation exaggeration” type 1.5. Then click on “apply” and “OK” to exit back to the main screen.

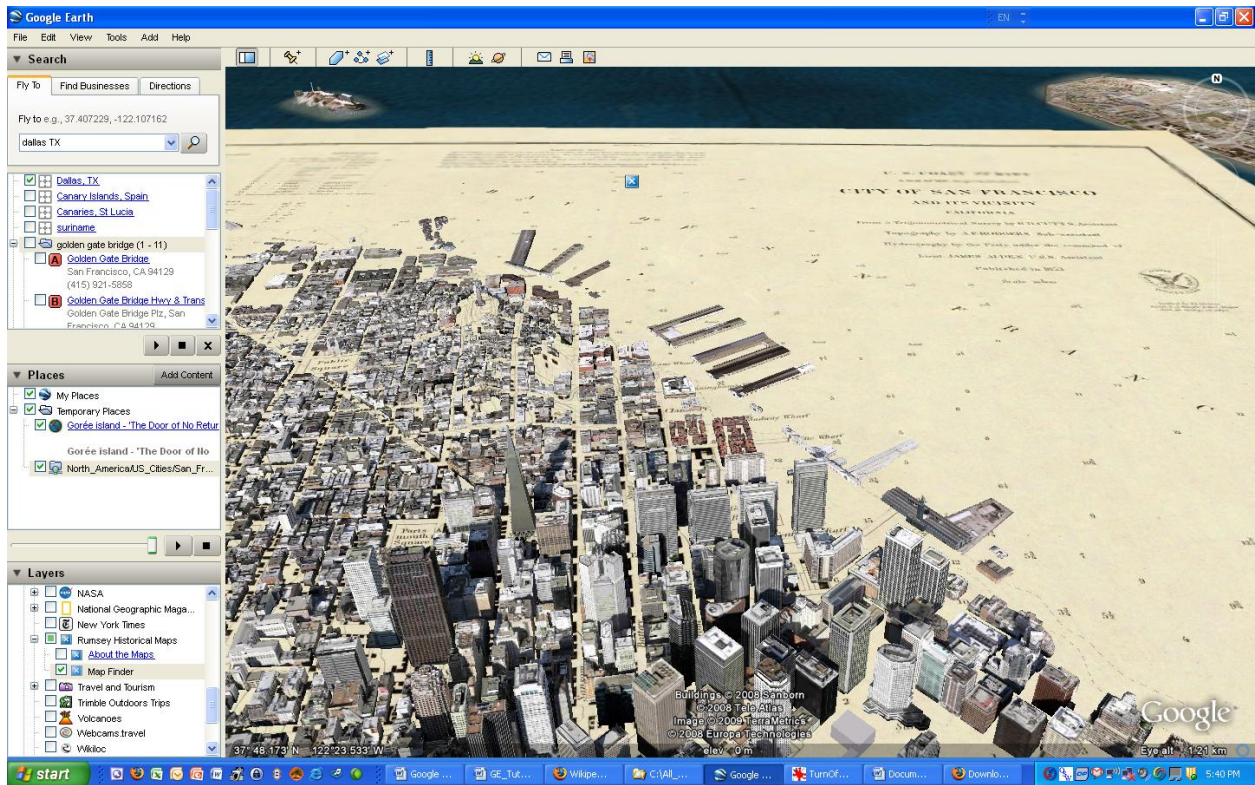


- Another 3-D aspect of Google Earth is its ability to show models of buildings. You can see this by typing “Golden Gate Bridge” into the “fly to” box. Use the navigation tools to get a horizon view and then, use the “North-up” button to turn so you’re facing roughly south and the city of San Francisco appears in the distance. If you don’t see the city [in the distance] in 3-D like below, then be sure that the “3D-Buildings” is turned on in the “Layers” panel, like below. (Depending on the speed of your internet connection and

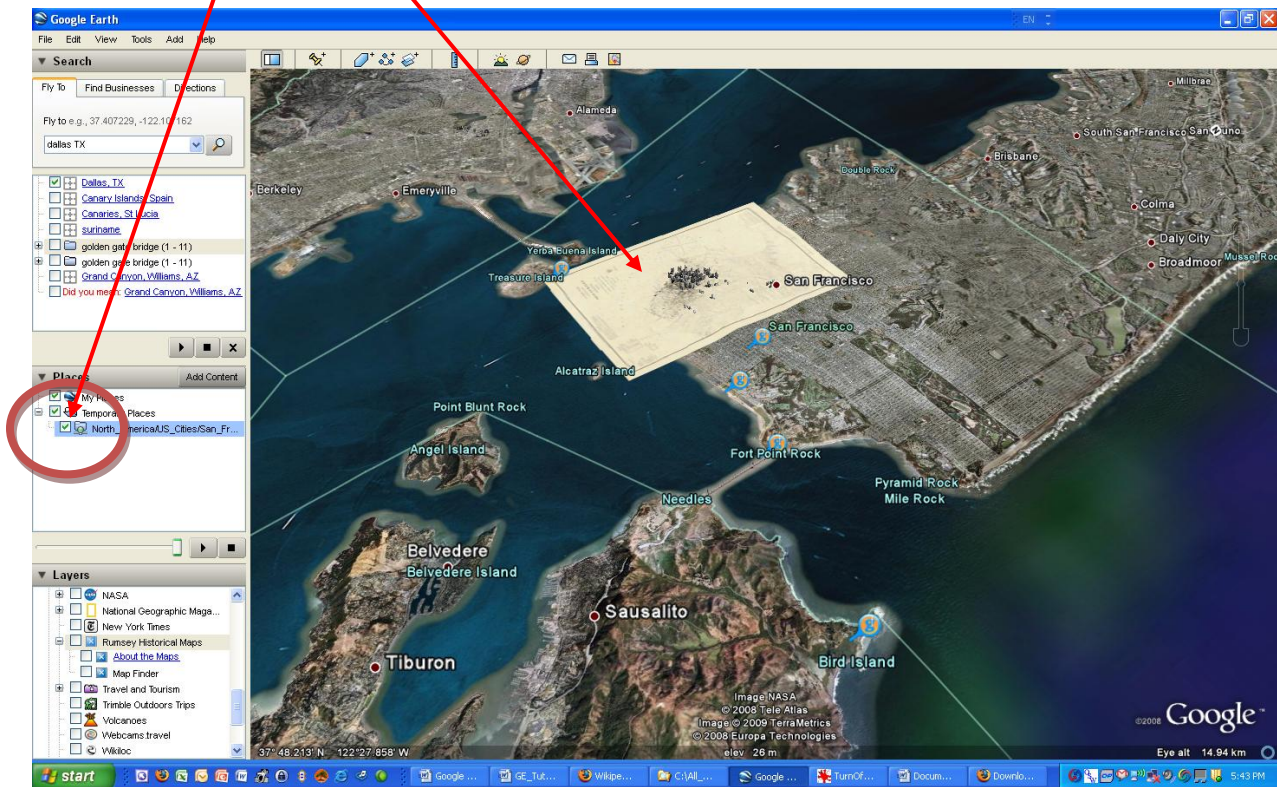


computer, it may take some time for all the buildings to appear.)

- Now that you are in this urban landscape, play with the other “Layer” options. Turn “Roads” on and off. Click on the “Geographic Web” layer and under that heading, click on the “Wikipedia” layer. As you zoom into San Francisco, notice the white boxes with the W inside them. Click to get a Wikipedia article associated with that place. Turn the Wikipedia layer off. Some more fun layers to try are under the “Gallery” layer. Try “360 Cities” or “YouTube” to see some panoramic views and video of the city.
- Then try “Rumsey’s Historical Maps”, still under the “Gallery” layer. Click on the Map finder and then click on the big blue x that appears in the water off the coast of the city. Click on the thumbnail to launch the application. You should see the 1853 map of the city superimposed on San Francisco, as in the picture below.



Zoom out to get this view. To turn the map off, look in the "Places" panel and click the place named "North_America/US_Cities..."

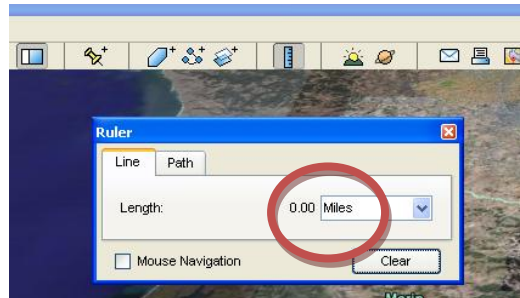


13. Our final exercise involves learning to use the Ruler tool, which you can see on the icon bar.



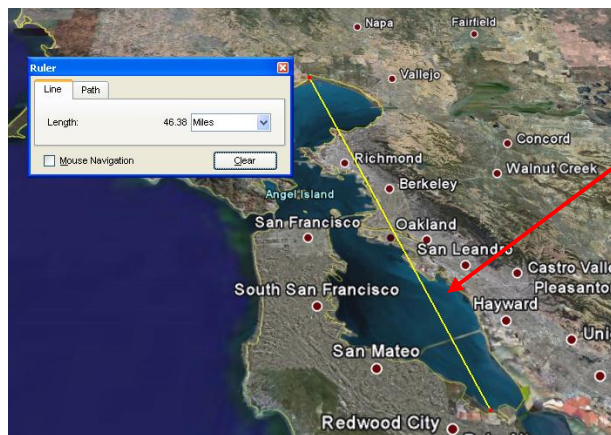
a. Still staying in San Francisco,

click on the Ruler tool and chose the “Line” tab and “miles” in the box.



b. Click the “North-up” button once to orient the Google Earth view towards the north. Now zoom out so you can see San Francisco Bay. How long is the bay from north to south?

Since the Ruler tool is on, you can click the mouse on the north part of the bay and drag it down to the south end of the bay. When you release the mouse button, you can read the measured distance, in miles or any units you chose.



Here is the measuring line, in yellow.

c. Click the “Path” tab on the Ruler tool. Notice how this allows you to draw multiple lines, and adds up the distance involved. Notice how the ends of the lines turn green when you click on them. This allows you to move the various nodes of the path you create.

That’s the end of this introduction! Exit Google Earth or move on to the worksheet.