

# Google Earth Across the Curriculum

*There's more to Google Earth than just finding your house.*

This guide was designed to provide teachers with some ideas for using Google Earth in their classrooms. Most people hear “Google Earth” and think of Geography, but Google Earth can be used as an instructional tool across the curriculum. The following pages offer some ideas for using Google Earth in the typical middle school and high school core courses.

This is not an all-inclusive how-to guide rather it is a quick-start guide that teachers can use to familiarize themselves with the basics of Google Earth. This guide links out to some excellent video tutorials that new Google Earth users should watch.



If you don't have Google Earth installed on your computer. You can download and install from [Earth.Google.com](http://Earth.Google.com) remember, it's free.

This guide was developed by Richard Byrne. Richard is a high school social studies, [Google Certified Teacher](#), and author of [Free Technology for Teachers](#). If you like this guide, please visit [Free Technology for Teachers](#) where everyday you will find new free resources you can use in your classroom.

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## English / Language Arts

The most famous use of Google Earth in English/Language Arts courses is Jerome Burg's [Google Lit Trips](#).

Google Lit Trips maps out the story-lines of books providing students with a geographic context for the stories they read. Google Lit Trips maps the biographies of authors. Some Google Lit Trips include video segments within the tour.

With a little instruction your students can create their own Google Lit Trips. Students can map their autobiographies. Switch to Sky mode and students can create sci. fic. stories about space travel.

## Mathematics

[Real World Math](#) is commonly regarded as one of the best collections of mathematics lessons that incorporate the use of Google Earth.

Some of the things that a mathematics teacher can do with Google Earth include measuring distances, angles, depths, and elevations. Switch Google Earth into Sky mode and challenge them to calculate distances between stars. Switch to Moon or Mars view and ask students to calculate and compare the size of the two.

[Real World Math](#) includes some excellent lessons which use Google Earth to explore fractals and graph theory.

## Science

There are numerous layers and features built into Google Earth that science teachers can utilize. If you're teaching lessons on astronomy or space exploration, switch Google Earth into Moon, Mars, or Sky mode. In the Moon mode students can explore Apollo landing sites and even listen to phone calls from astronauts to the President of the United States.

If you're teaching Earth Science your students can analyze earthquake data.

Teachers of environmental science will want to explore the climate data layers. Biology teachers may want to look at endangered species habits.

## Social Studies

The possibilities are endless for Social Studies teachers to use Google Earth in their classrooms.

In history classes students can view and create their own tours of military campaigns. Take advantage of the historical imagery in Google Earth to compare and contrast the views of cities today with the views of the past. Go on a virtual field trip to the Great Pyramid.

In a Civics course you could have students record a narrated tour of their hometown as part of a "tourism campaign."

Use the [KML Factbook](#) to create layers of demographic data.

## General Interest

Take health and physical education students on a virtual climb of Mount Everest to inspire interest in life-long physical activity.

High school students exploring their college options may want to virtually tour campuses and their surrounding cities. [Egiate](#) makes an application for that.

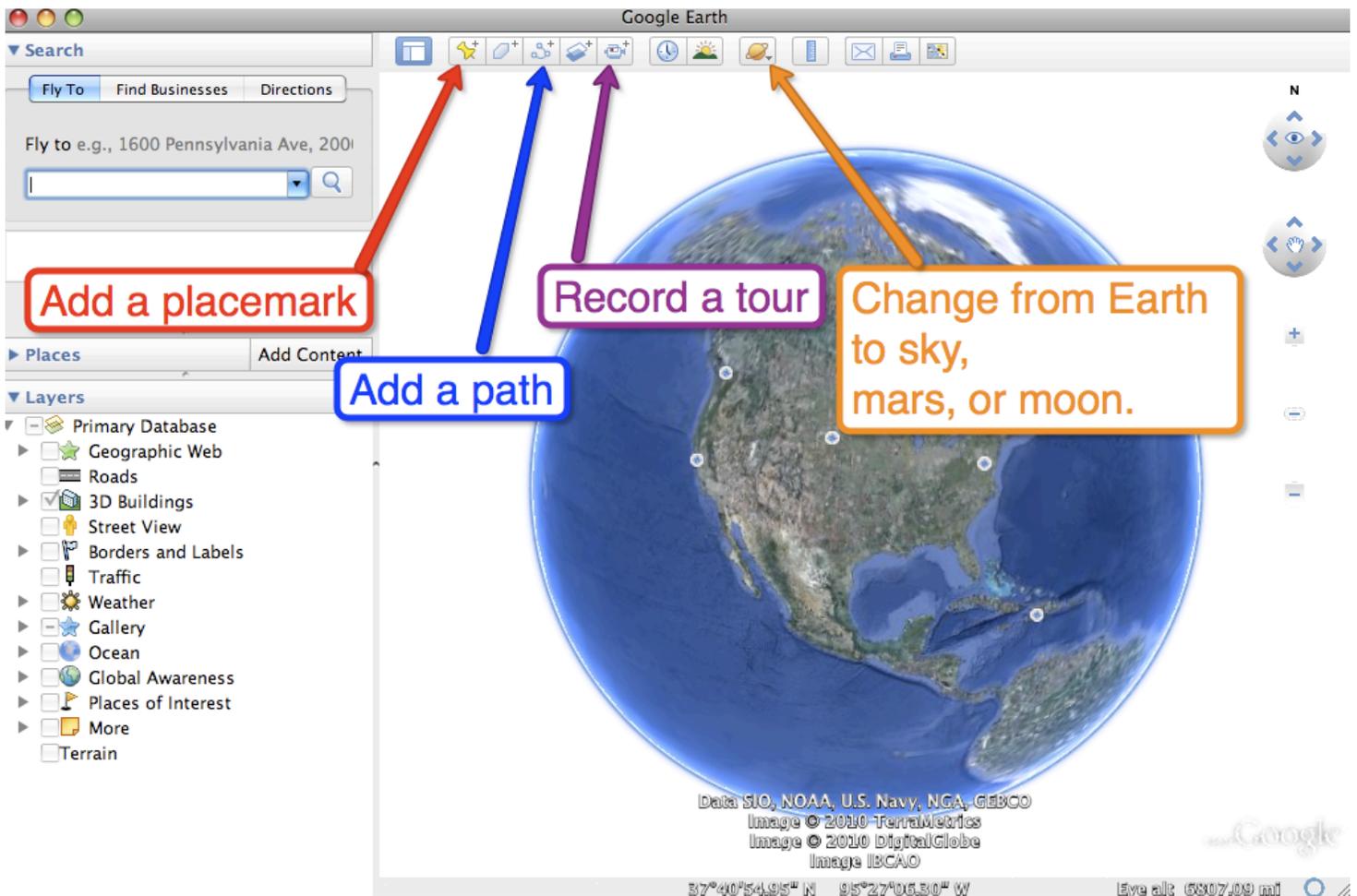
Take a virtual submarine tour via [Sea Seek](#).

Turn on the Wikipedia layer to conduct research by location.

Use the 360 Cities layer to have a panoramic look at cities and tourist attractions.

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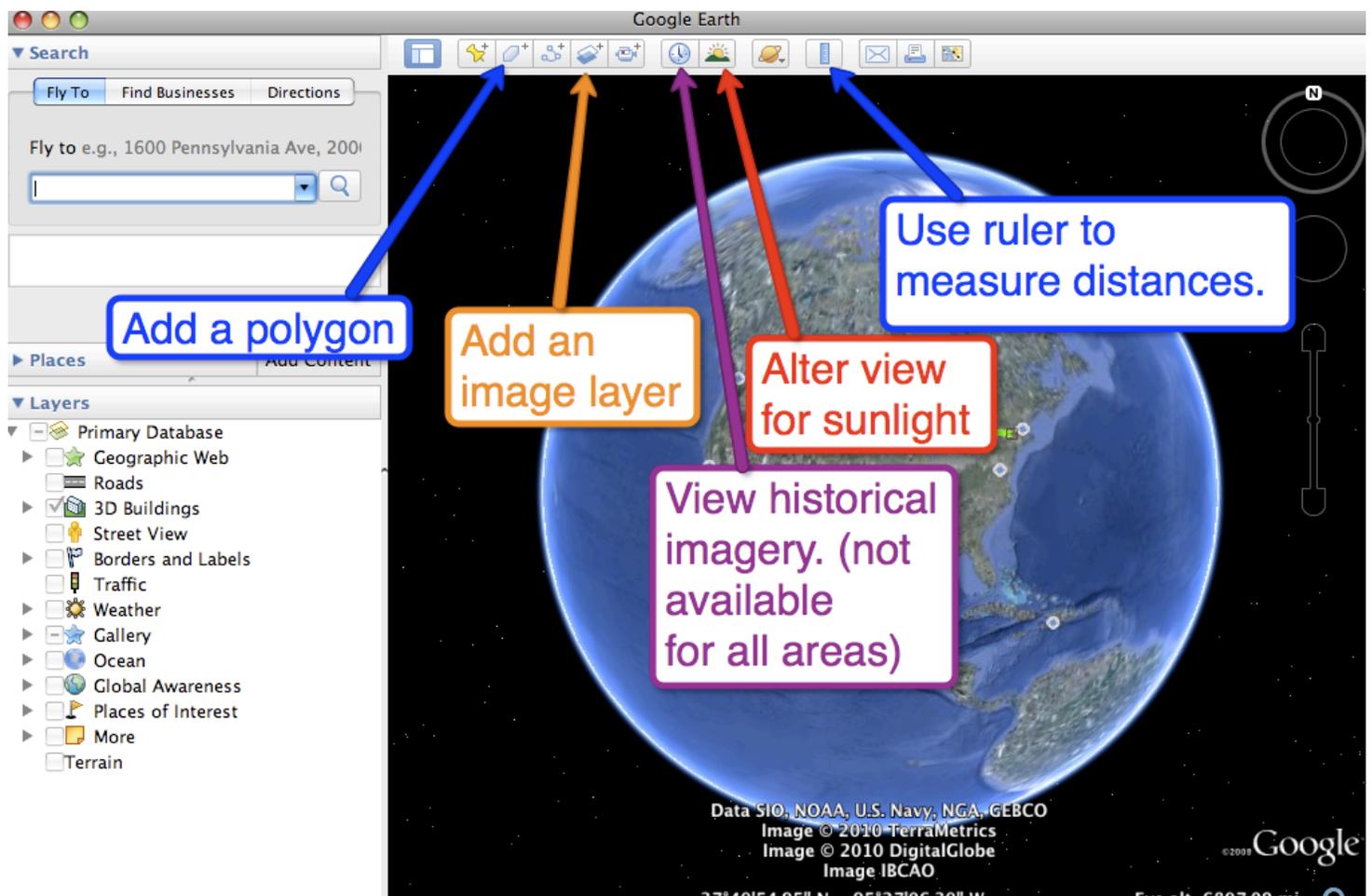
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Watch a [video](#) from Google about viewing Mars.  
 Watch a [video](#) from Google about viewing the Moon.

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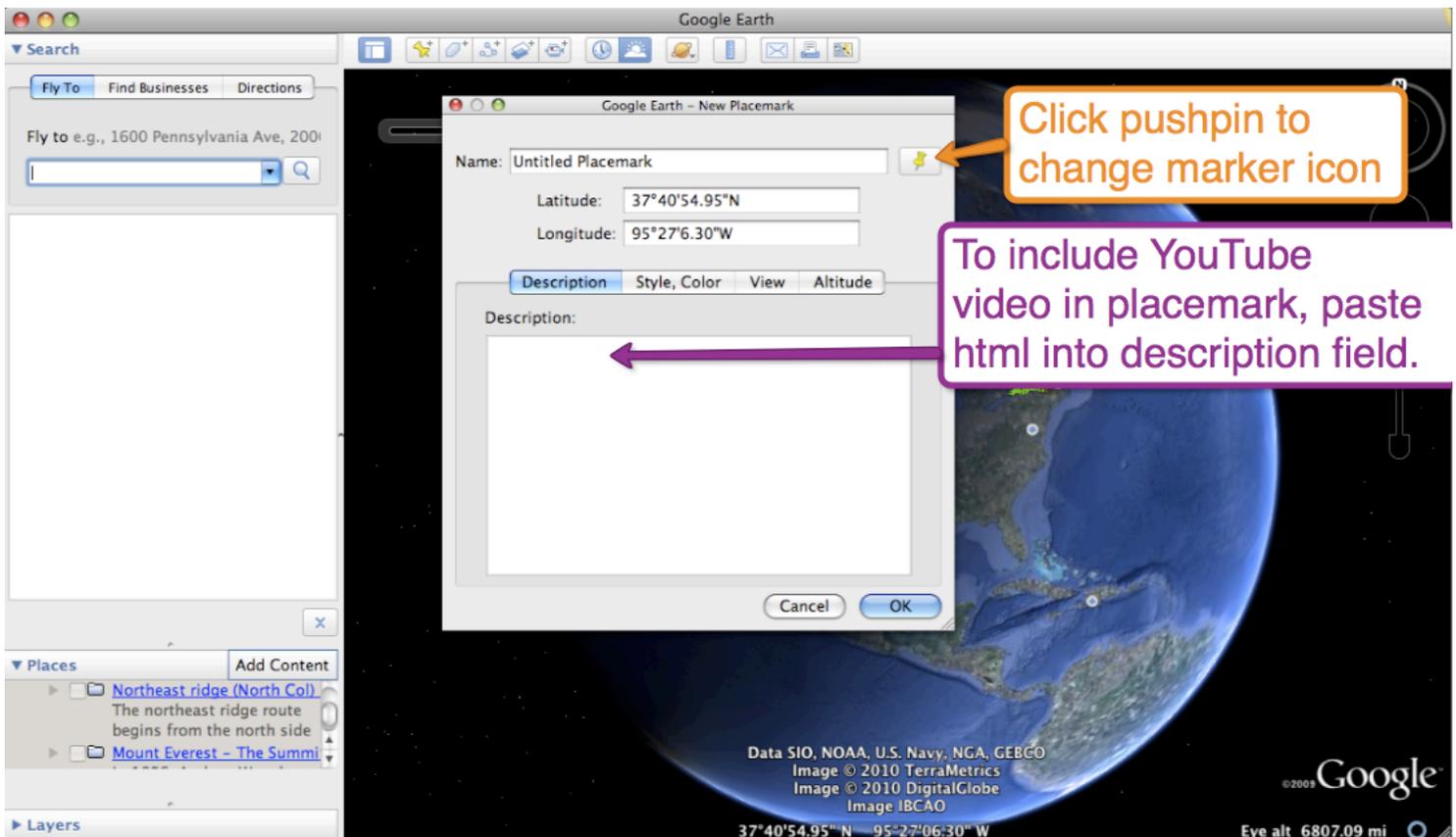
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Watch a [video](#) from Google about historical imagery.

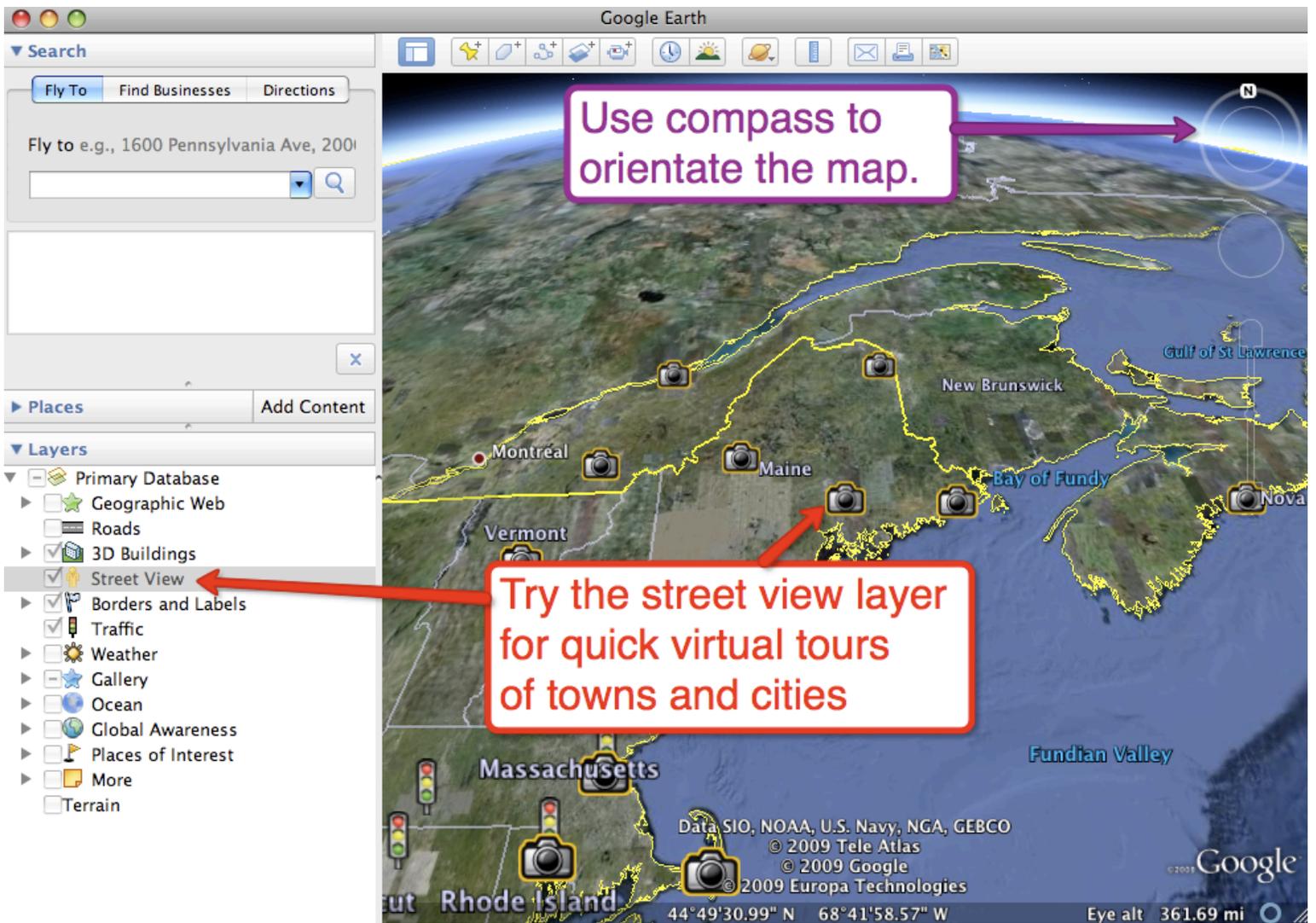
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For detailed video tutorials on adding placemarks and creating tours, watch [this video](#) and [this video](#) created by [Joe Wood](#).

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To learn more about using StreetView in Google Earth watch this [video](#) and read these [directions](#) from Frank Taylor.

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In "moon mode" turn on the Apollo Missions layer to view moon landing sites.

**Apollo 11 Landing Site**

Launched: 16 July 1969  
 Landed on Moon: 20 July 1969  
 Landing Site: Mare Tranquillitatis  
 Returned to Earth: 24 July 1969

Neil Armstrong, commander  
 Michael Collins, command module pilot  
 Edwin "Buzz" Aldrin, Jr., lunar module pilot

Zoom in to explore this landing site.

Image NASA / USGS / JAXA / SELENE

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0°06'00.00" N 0°06'00.00" E elev -2402 ft Eye alt 1863.66 mi

Watch a [video](#) from Google about viewing the Moon.

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Fly to e.g., 1600 Pennsylvania Ave, 2000

Try the Global Awareness gallery for layers and tours related to environmental science.

Layers

- Global Awareness
  - Appalachian Mountaintop ...
  - ARKive: Endangered Species
  - Earthwatch Expeditions
  - Fair Trade Certified
  - Global Heritage Fund
  - Greenpeace
  - Jane Goodall's Gombe Chi...
  - The Earth from Above with ...
  - The Elders: Every Human H...
  - UNDP: Millennium Develop...
  - UNEP: Atlas of Our Changi...
  - Unicef: Water and Sanitation
  - USHMM: World is Witness
  - USHMM: Crisis in Darfur
  - WaterAid
  - WWF Conservation Projects

Data SIO, NOAA, U.S. Navy, NGA, GEBCO  
© 2009 Europa Technologies  
US Dept of State Geographer  
© 2009 Tele Atlas

37°40'54.95" N 95°27'06.30" W Eye alt: 6831.99 mi

Watch a [video](#) from Google Earth Outreach which demonstrates use of Global Awareness layers.