

Around the World with DISCUS and Google Earth



EdTech 2009 Conference

Wednesday 10/14/2009

8:30-10:45 AM

Ballroom B

Amy Duernberger and Donna Teuber

Tools to use tomorrow! Participants will learn how to engage students in the research process with place-based activities. In this hands-on workshop, participants will create exciting trips through neighborhoods, history, science or literature using Google Earth and DISCUS resources. Please bring a wifi-ready laptop and a thirst for adventure.

Agenda

8:30 – 9:00	DISCUS Overview and Durable URL Hands-on Practice
9:00 – 9:30	Curriculum Examples
9:30 – 10:45	Hands-on Practice creating Placemarks and Adding Images to Google Earth

Handouts available at <http://www.rvhs.org/programs/InstructionalTech/>

Google Earth in the Curriculum

Google Earth is a free program which allows the user to view satellite images of any location on earth. The program can be downloaded from <http://earth.google.com>. Google Earth is used in place-based learning in a variety of ways. The Google Earth user guide has step-by-step instructions for navigating in Google Earth. The guide is available at <http://earth.google.com/userguide/v5/>.

Google Earth Lessons: <http://www.gelessons.com/lessons/>

Social Studies Central – Seeing is Believing:
<http://www.socialstudiescentral.com/?q=content/seeing-believing-using-google-earth-improve-learning>

Using Google Earth for Social Studies Projects:
<http://www.classroom20.com/forum/topics/using-google-earth-for-social>

Google Earth Gallery:
<http://www.google.com/gadgets/directory?synd=earth&cat=featured>

3D Gallery:
<http://sketchup.google.com/3dwarehouse/>

Bernie Dodge: Place Puzzles NECC 2009 Presentation:
<http://istevision.org/watch.php?vid=aaa33315cc84ebad07f3684b25bf57b127a961fd>

Place Puzzles Handout:
<http://techcoachpatti.wicomico.wikispaces.net/page/pdf/Place+Puzzles>

Caravans Project:
<https://mail.qfs.org/~reenehawkins/FOV1-000275F5/>

GeoMystery Project:
<http://www.hawaii.edu/hga/GEOMystery/geomys.html>

Degree Confluence Project:
<http://www.confluence.org>

Global Positioning of History Lessons -
[http://sites.arnold.k12.ne.us/gswingle/stories/storyReader\\$4](http://sites.arnold.k12.ne.us/gswingle/stories/storyReader$4)

Tom Taylor's Google Earth Resources - <http://www.geopackrat.com/>

Google Earth How-Tos: <http://gelessons.com/lessons/>

Google Earth Lit Trips - <http://googlelittrips.com/>

Google Earth and DISCUS Project Ideas

Language Arts:

- Create a literary places virtual field trip using placemarks and overlays.
- Have students choose a location they have visited and journal about what they did at that location. Use images from DISCUS.

Science:

- Study environmental hot spots or the incidence of diseases around the world.
- Ask students in middle school to research plants in a specific area of the world and have them create a presentation on the plants.

Social Studies:

- Use population density overlays and other data from DISCUS to study issues in various countries.
- Elementary students studying habitats could create a tour of different habitats using DISCUS resources.
- Create a place puzzle about a historical location and have the students use DISCUS resources to find specific information about the places

Math:

- Use measurements to determine the area of a region or study the relationship between time zones and longitude coordinates. Link to math resources in DISCUS.

Fine Arts:


- Students can place images of sculptures and paintings on an art history overlay.
- Create a field trip to locations where famous musicians have lived. Have the students insert links to music created by each composer.

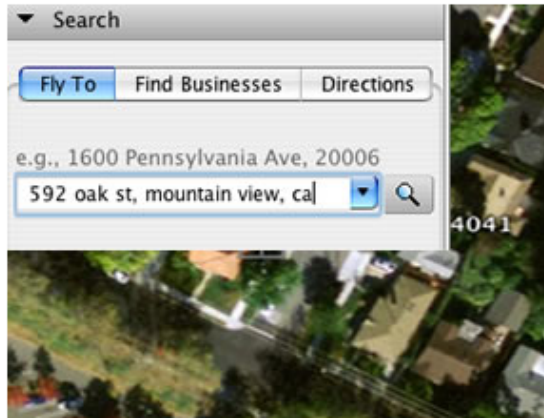
Foreign Languages:

- Have students choose a location and create placemarks with conversation (in the foreign language) about the location.

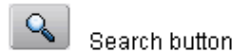
My Community: Google Earth Placemarks and Image Overlay Activity (adapted from Google Earth Tutorials)

Step 1 - Open Google Earth and go to your home address:

 **Tip:** Find your house on Google Earth




Click *Fly To*. Enter the address in the input box and click the *Search* button.



In the search results, double click the address. Google Earth flies you to this address.

[Find more cool stuff on Google Earth »](#)

Step 2 - Mark your house with a placemark:

1. Click the Placemark button on the toolbar . The New dialog box appears and a placemark icon appears in the center of the 3D viewer.
2. Try moving the placemark by clicking and dragging it.
3. In the New dialog box, enter the following information.:
 - a. *Name:* My House
 - b. *Description:* "This is where I live."
4. Click *OK*. Google Earth displays your placemark in the 3D viewer and at the top of the *My Places* folder in the Places panel.
5. To view your placemark at any time, double click the placemark in the Places panel. To display the balloon description of the placemark, single click it in the 3D viewer or the Places panel.

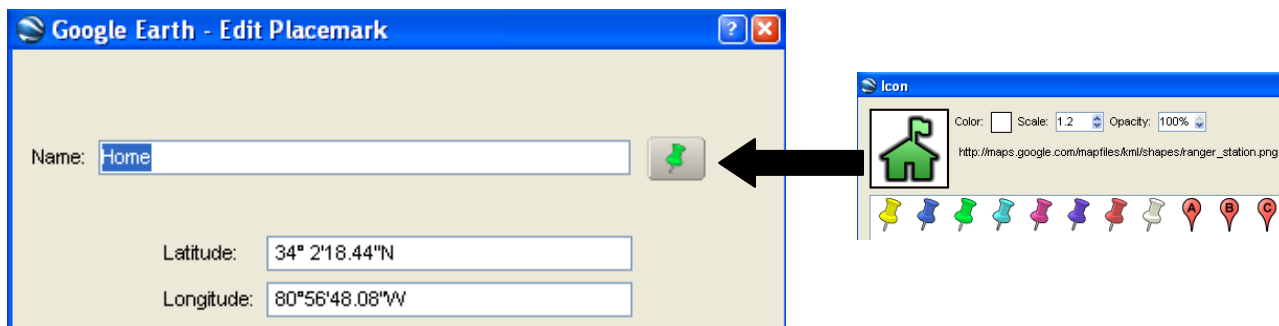
Note - A placemark appears in the 3D viewer only if it is checked. If you cannot see a placemark in the 3D viewer, be sure the box next to it in the Places panel is checked.

Step 3 - Editing Your Placemark:

You can edit, move or delete any placemark that appears in the My Places folder. To edit and move the placemark:

1. Right-click the placemark in the 3D viewer or in the Places panel. Choose *Properties*. The Edit Placemark dialog box appears.

2. Click on the Placemark icon and choose a different icon for your placemark. Click OK.



3. Click and drag the placemark icon to a new location (keep it close to your home).
4. Click *OK*. Google Earth saves the new position of the placemark.

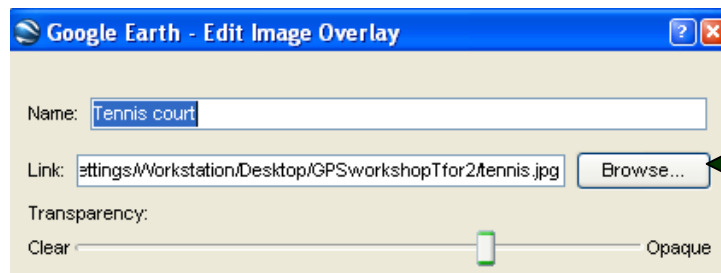
Step 4 – Adding Additional Placemarks:

Add at least two more placements for areas in your community (grocery store, shopping center, school, street name, etc.)

Step 5 – Adding an Image Overlay:

1. Using the Internet, find an image that can be used as an overlay for one of the locations that you have marked with a placemark (school, store, church, etc.).
2. Save the image file to your My Documents folder.
3. Position the 3D viewer in the location where you want to place the overlay image file. If the overlay is of a detailed view, zoom into the subject area so that you don't have to make large adjustments later. If the overlay covers a large area, make sure the entire area is encompassed in the 3D viewer with some margins for adjusting the imagery.

4. Select *Image Overlay* from the *Add* menu. The *New Image Overlay* dialog box appears.



5. Provide a descriptive name in the Name field.

6. In the Link field, use the *Browse* button to locate the image on your computer or network. The image appears in the 3D viewer, with anchor points that you use to position it.

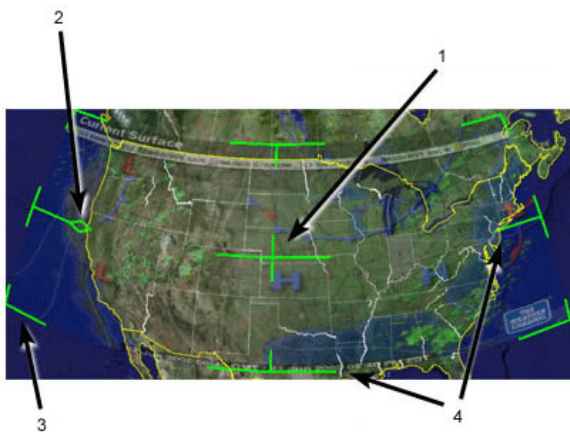
7. Specify the descriptive information for the overlay.

8. Set the default transparency for the imagery using the slider. The transparency setting for image overlays can be adjusted at any time when you are viewing an overlay.
9. When you select the View tab, you can modify the view settings for the overlay just as you would any place data.
10. Use the directions below to position the image in the viewer to your preferences and click OK to complete the creation. If you later want to correct the overlay or reposition it, simply edit the overlay as you would any other places data.

Step 6 - Positioning the Imagery in the Viewer:

Once you have inserted the overlay image into the viewer, you can use the green markers to stretch and move the image in a number of ways to get the most exact positioning required. An overlay image will have corner and edge marks that you can use to stretch the image, a central cross hair marker to position the image, and a triangle marker that you can use to rotate the image.

When you select one of these markers, the cursor changes from an open hand to either a finger-pointing hand or an arrow to indicate that an anchor point is selected. The following illustration describes the anchor points in detail.



1. Use the center cross-hair marker to slide the entire overlay on the globe and position it from the center. (Tip: do this first.)
2. Use the triangle marker to rotate the image for better placement.
3. Use any of the corner cross-hair markers to stretch or skew the selected corner. If you press the Shift key when selecting this marker, the image is scaled from the center.
4. Use any of the four side anchors to stretch the image in or out of from the selected side. If you press the Shift key when doing this, the image is scaled from the center.

Placing Google SketchUp 3D Models

Google 3D Models are available from <http://sketchup.google.com/3dwarehouse/> . Search for a model. If the model indicates that you can view it in Google Earth, click on the link to view the model. Save the model in My Places before exiting Google Earth. Go to File – Save and choose Save My Places.

Embedding Images in Google Earth Placemarks

1. Go to a web page with an image that you would like to embed
2. Right click on the image and choose Properties
3. Copy the web address for the image file
4. In Google Earth, create a placemark and paste the web address for the image file in the description. Include the html image source tag below:

``

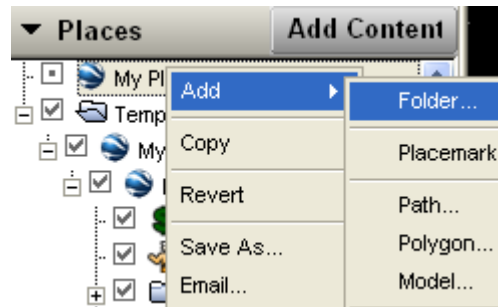
5. Save the placemark and your image should be embedded

Saving Your Placemarks and Image Overlays to a KMZ File

You can organize your placemarks, paths, polygons, and overlays into folders in the My Places window.

There are two main file types – KML or KMZ. A KML is basically an xml document with a set of directions/descriptions. A KML will not include image overlays in the file so the images will have to reside on a server and then be linked. A KMZ is basically a compressed KML file that will package image content and placemarks in the file. When you are saving a file with images and placemarks, use the KMZ file format.

1. Create a folder to store your placemarks by right clicking on My Places and choosing Add – Folder. Name your folder My Community.



2. Drag and drop all of your placemarks and image overlays into your my Community folder. Make sure that you have placed a check mark by each of the items that you wish to save in the KMZ file.
3. Save the KMZ file by right click on your My Community folder and choosing Save As. Name the KMZ file and save it to a location on your computer or on the network.
4. You can open this file on any computer that has Google Earth installed and all of your placemarks and images will be visible.