Google Earth

Google Earth (https://eapl.org/GE)

A) What Is Google Earth? A Brief Overview

Google Earth is a 3D interface to our planet. Google Earth allows you to "travel" the world through a virtual globe and view satellite imagery, maps, terrain, 3D buildings, and more.

Google Earth has three versions:
1) Google Earth for Chrome
2) Google Earth for Mobile
3) Google Earth Pro (downloadable version for Windows)

* This class covers **Google Earth for Chrome** and **Google Earth Pro**.

B) Google Earth for Chrome

1. Google Earth for Chrome – Getting Started

First, go to the Google Earth website (https://www.google.com/earth/) and then click the blue **Launch Earth** button in the upper right. Google Earth will launch in a new window. (It may take about a minute before it opens).
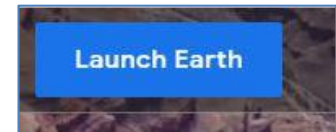
An image of the earth will display as shown here:

Google Earth

The following seven icons will display at the upper left. From here, you can access the following Google Earth commands (In order from top to bottom).

1. **Menu:** Settings and Help are here – as well as the **Photos** option.
2. **Search:** Here you can search for a specific place or location.
3. **Voyager:** A showcase of interactive guided tours, quizzes, and layers that aim to help educate everyone about the world, locations near and far.
4. **I'm Feeling Lucky:** Selects a random location on the earth.
5. **Make a New Project:** Make a Presentation by marking places on the Globe.
6. **Map Style:** Select the elements that you want in the map.
7. **Measure Distance and Area:** Select a starting point and end point.

*Exercise*: To get started, click **I'm Feeling Lucky** and see where we end up.

2. Look at the Ela Library

- Click the Search icon in the upper left and then type the library address in the search box (the full address is *275 Mohawk Trail, Lake Zurich, IL 60047*).
- The earth will appear to move as it zooms in on the library. You will see the library from above rotating. To stop the rotation, click once within the screen (and you may need to hold the click button down for a moment).
- Notice the Placemark above the library (the image of the book designates a library).
- In the lower right, you will see the gps coordinates of the location and the approximate height at which you are viewing the location (camera).

Camera: 806 m 42°11'44"N 88°05'04"W

The commands in the lower right of the screen:

- The minus and plus signs zoom in and out.
- The **compass** icon will reset the view so that north is on top.
- The **3D** icon will allow you to change the appearance of the screen from 3D to 2D.
- The image of the little person will bring you into street view.
- The top right image will "fly" you to your current location.
- The larger image of the "earth" will bring you back to the home screen.

Google Earth
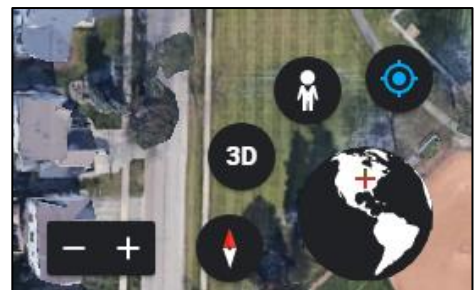
3. Street View

- Click the street view icon and drag it to the intersection of Route 22 and Old Rand (see image below). You can drag the icon to any place that has a blue outline.

- Click and hold on the screen to move to the left or right.
- To "move" back and forth on a street, click the up and down arrows that appear on the street.
- To exit street view, click the arrow in the upper left.
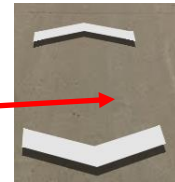
4. More Search Locations

When entering an address, Google Earth recognizes the following types of search terms. You can enter them with or without commas.

Format	Example
City, State	Detroit, Michigan
City, Country	Stockholm, Sweden
Number Street City State	1600 Pennsylvania Ave Washington DC
Zip code or Postal Code	60047
GPS Coordinates	43 52 44.77 N, 103 27 32.64 W

Exercise: Type in the following GPS coordinates **41.8902° N, 12.4922° E**. Do you recognize this location?

5. Look at Photos

- Photos are a good way to way to "see" more of the area.
- From the current location, click the settings icon at the top.
- Click on the "Photos" setting so that it changes to blue.
- A number of photographs will appear in the screen (inside circles). Click on some of the images to view the full photograph. (The arrow in the upper left will bring you back to the Google Earth view).
- In some cases, you will have multiple photos, which you can scroll through with the arrows on the left and right of the image.
- Click back on settings and click "Photos" to remove the photos from view.

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6. Visit another famous landmark

- From the search box, type "Washington Monument." If necessary, click reset so that north is on top.
- Click the **map style** icon (the second from the bottom). Then from the options that appear, select "Clean" to see how the appearance of the screen changes.
- Now click "Everything." This will display all borders, labels, places, roads, transit, landmarks, and water.
- Click "Custom" if you want to choose your own look and feel. Uncheck everything except "Landmarks."
- Zoom out and click a nearby landmark (the Lincoln Memorial).
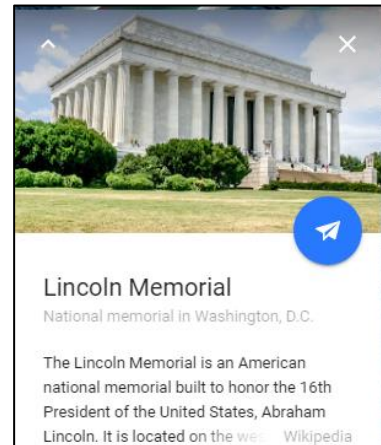
- From the popup window at the upper right, click the blue paper airplane. This will "Fly" you to the landmark.
- For more information on the Lincoln Memorial, click the text in the popup window.

7. Measure distance and area

- Click "Measure Distance and Area" (the icon on the bottom). A small popup window will display in the upper left.
- If you need to, zoom out so you can see both the Lincoln Memorial and the Washington Monument.
- The cursor will appear as a cross or plus sign. Click the first location (Lincoln Memorial) to select starting point.
- Click the Washington Monument to select ending point. The distance will appear in the popup window.
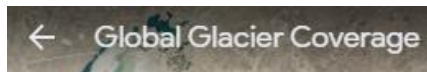
8. Explore Voyager

- Click the "Voyager" icon (it looks like a ship steering wheel).
- Scroll down to view "Editors picks."

Exercise: Explore some of the layers.

- Click "Layers" and select Global Glacier Coverage. Then click "Greenland" in the pane that appears on the right.
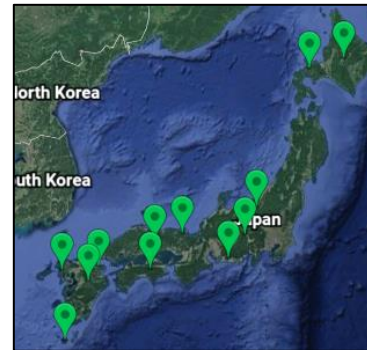
Google Earth

- Click the arrow in the upper left to go back to "Layers."

- Scroll down somewhat and now try "Tsunamis in History." Click one of pink markers (perhaps near Indonesia) for information on one of the specific historical tsunamis.

Exercise: Use street view to "discover Japan."

- Click back to the main "Voyager" page and then click "Street View."
- Click "Discover Japan." Google Earth will "fly" you to somewhere over Japan. All the green marks designate an area that you can see in street view.
- The names of the locations will appear in a popup window on the right. You can click one of these as well to enter street view. Click "Kyoto."
- In the popup window on the right you can access the table of contents. Click the arrows to go through all the views.

Google Earth

C) Google Earth Pro
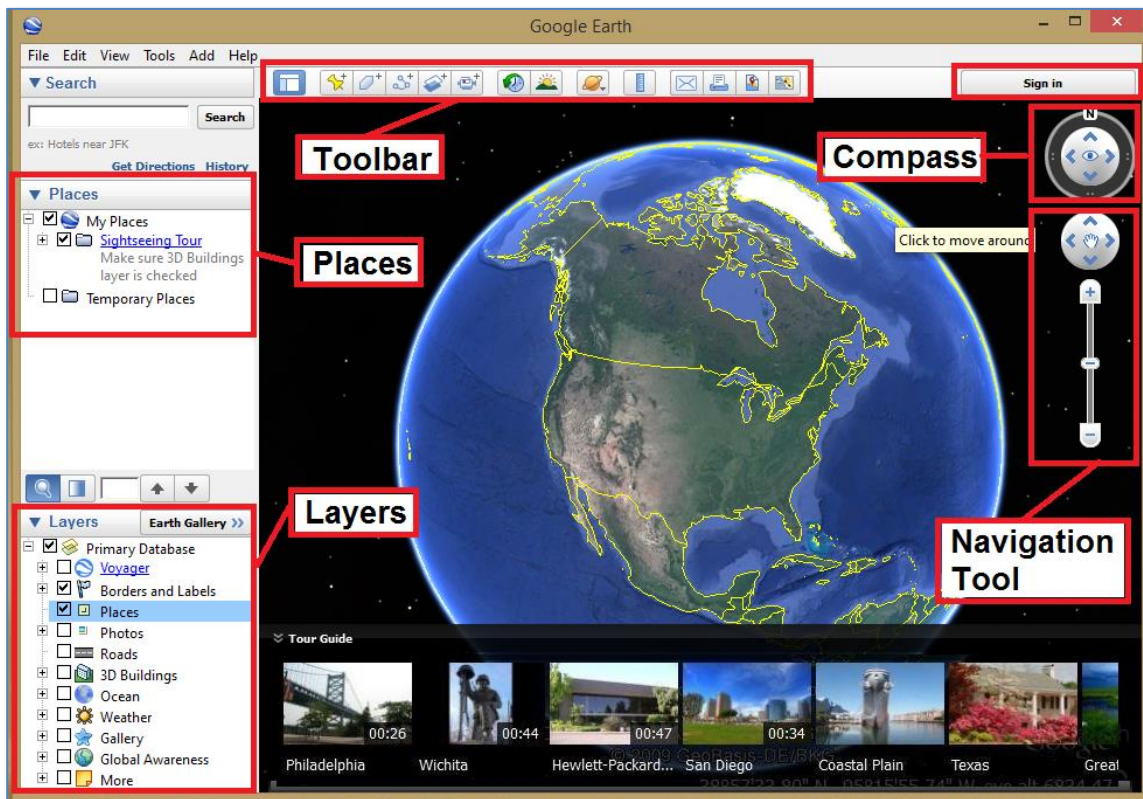
Toolbar: The toolbar at the top contains the following icons (with explanations):
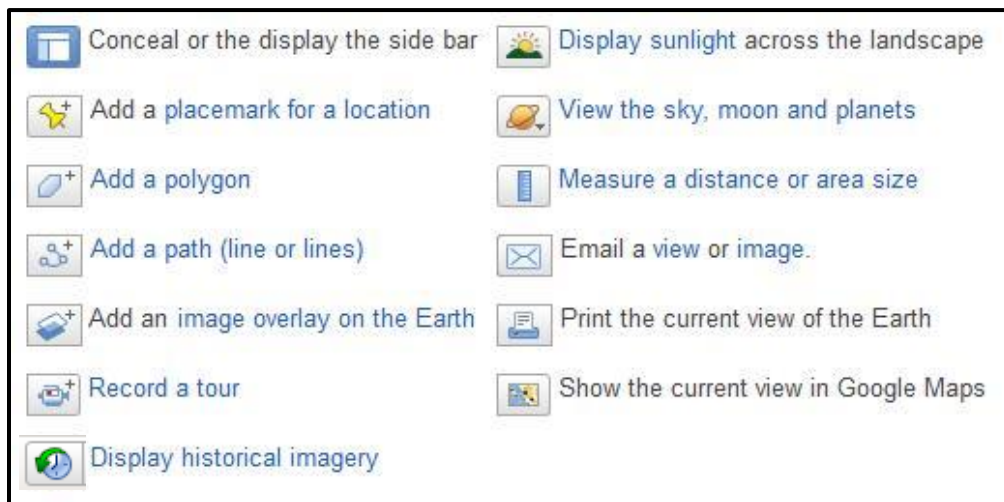
Places: Use "Places" to organize your saved data in a way similar to how you would organize files and folders on your computer's hard drive. A **Sightseeing** folder inside the "My Places" folder contains a number of points of interest already marked for you to explore.

Google Earth

Layers: The Layers panel in Google Earth allows you choose what kind of information you'd like to see displayed over the place you're viewing in your 3D viewer. Selecting and deselecting a checkbox next to particular layer turns it on or off. Layers with small plus signs (+) next to them are hiding more layers inside.
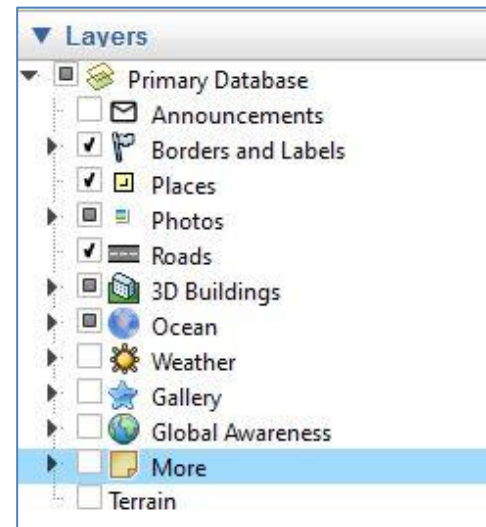

Brief Description of each layer:
- *Announcements*: might be related to the announcements about things like inclement weather and natural hazards.
- *Borders and Labels*: Helps to define geographic boundaries clearly.
- *Places of Interest*: For example, businesses, transit stations, parks, etc.
- *Photos*: Contains current and authentic location pictures submitted by users.
- *Roads*: Traditional map information (highways, routes, & streets) for map reading skills.
- *3D Buildings*: View buildings at a location in 3D.
- *Ocean*: Chart temperatures and cloud watching.
- *Global Awareness*: See what organizations are present in an area.
- *More*: Offers other information from "Local Place Names" to "US Government."

Compass: Use the compass to "look around" and rotate direction by clicking the arrows. You can also click and hold anywhere on the circle and move it to rotate direction.

Compass

**Navigation Tool:** Click the arrows in the circle to move around in a specific direction. Use the plus sign and minus sign to zoom in and out. You can also zoom in and out with the slider bar between the plus and minus signs.
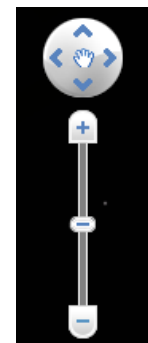
Sign In: If you have a Google account, when you sign in, you can share information to Google+ or email what you're viewing in Google Earth.
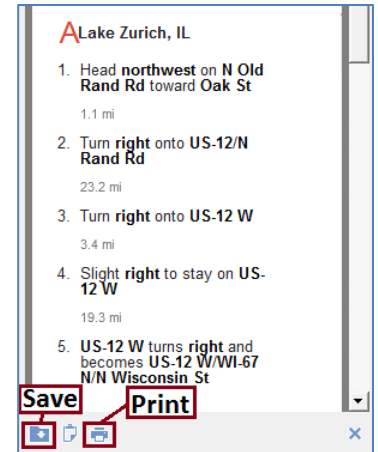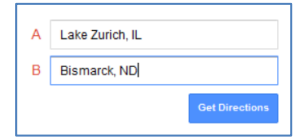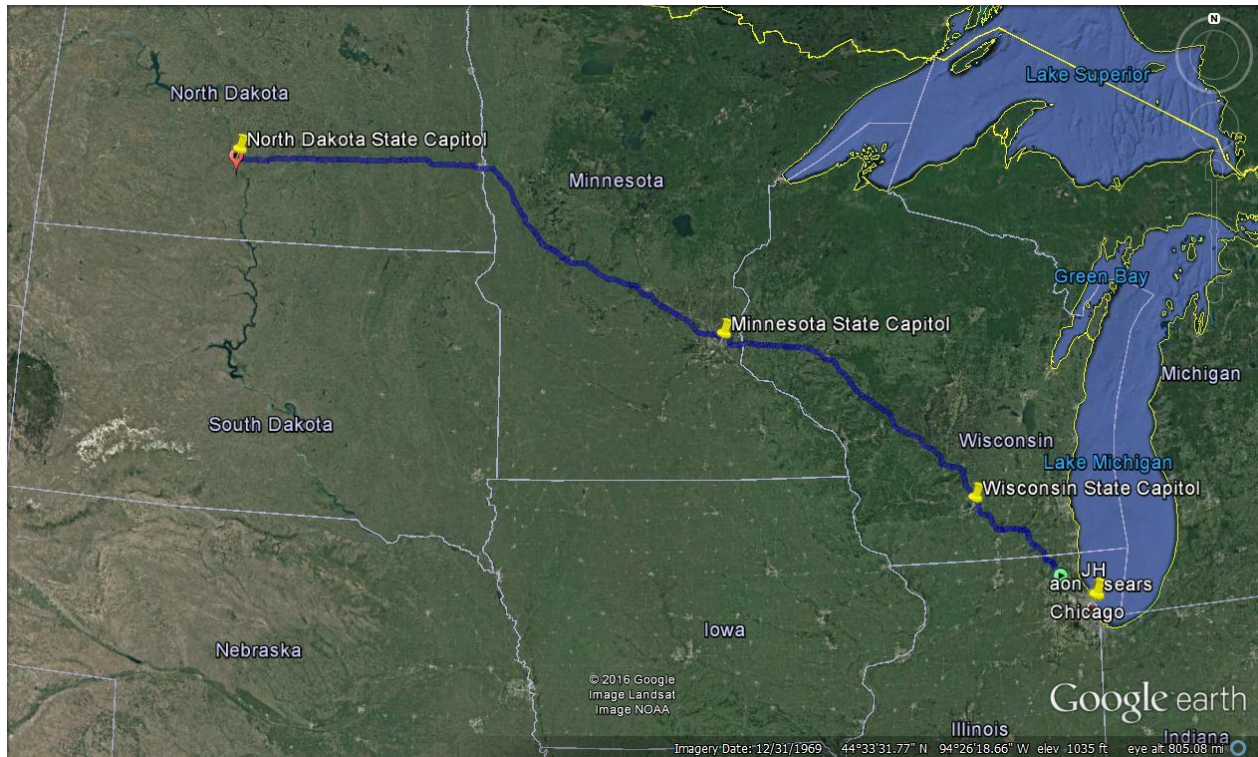

Sign in

Navigation Tool
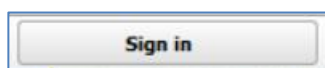
Google Earth

1. Driving Directions

Exercise: Find driving directions from Lake Zurich to Bismarck, North Dakota.

| A | Lake Zurich, IL |
| B | Bismarck, ND |

Get Directions

- Click **Get Directions** button under search box. Type "Lake Zurich, IL" in box A and "Bismarck, ND" in box B. Then click **Get Directions**.
- Your route will appear on the "Earth." The starting point will be designated with a green marker and the end with a pink marker.
- Directions will appear on the left. You can copy the directions to My Places or print them with the icons located below.
- Click the small blue folder icon to save directions into **My Places**.
- Look in **My Places** to find directions we just saved (it will probably call the search I-94 W). Right click the saved directions, click "rename" and then type "To Bismarck."
- Look at the icons above the search. The first icon (small car) gives you the driving directions. The second icon is by public transportation, the third by walking, and the fourth by bicycle.

A Lake Zurich, IL
1. Head **northwest** on N Old Rand Rd toward Oak St
   1.1 mi
2. Turn **right** onto US-12/N Rand Rd
   23.2 mi
3. Turn **right** onto US-12 W
   3.4 mi
4. Slight **right** to stay on US-12 W
   19.3 mi
5. US-12 W turns **right** and becomes US-12 W/WI-67 N/N Wisconsin St

Save **Print**

⛟	🚊	🚶	🚲
1	*2*	*3*	*4*

You can also save a map of your route as a jpg on your computer:

Google Earth

To Save a Map as an Image:

Select File > Save > Save image... or click the **Save Image** button on the toolbar.

A dialogue box will open which will allow you to give the image a name and choose the computer location where you'd like to save it.

(Google Earth users can save images at the current resolution only. For Google Earth Pro and EC users, the Save Image toolbar appears, displaying the Resolution button.)

2. Find a Business

Exercise: Search for business in Bismarck, ND.
- Type "ATMs in Bismarck, ND" in the search box (or you can type "ATMs *near* Bismarck, ND").
- A list of ATMs will appear on the left. Click the first option in the list. You will zoom in on the location.
- Click the search button again to go to your original ATM search. Click one of the ATMS in the map to get a popup with more information.
- If your search has more locations than what will fit on the list, you will have the following image (grey squares) after you scroll to the bottom of the list:

- Try typing "Starbucks in New York City." Then scroll to the bottom of the list and click the 2nd square.

3. Add a Placemark to a Location

Exercise: Add a placemark to a location with a photo and Internet link.
- Enter the following address: *1133 E 600th Ave, Pittsburg, KS 66762, USA*.
- Click the yellow tack on the upper left of map.
- In the box type "Chicken Mary's" under name.
- Click "Add link" button and add: http://www.yelp.com/biz/chicken-marys-pittsburg (then click OK).
- Click "Add Image" and then search for an image of the location on Google. Copy the image URL and click OK.
- Go to the "Style, Color" tab to change text and icon color (if you wish).
- Click the OK button on bottom of box.
- Google Earth adds this location under **Places** on the left and adds a thumbtack icon directly on the location. Click icon to see the photo and connect to link.
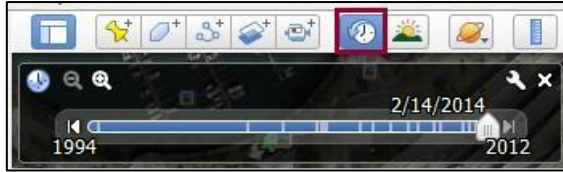- To remove placemark, right click the thumbtack and delete.

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4. Historical Imagery

Exercise: Use historical imagery to view how places have changed over time.
- Type "Citi Field, NY" in the search box.
- Click the historical imagery icon on the tool bar (looks somewhat like a clock).

- Use the scroll bar to arrow back to previous dates. Notice how the area has changed.

5. Go to the Moon

Exercise: "Travel" to the spot of the first Moon landing.

- Select the "Moon" from the planet icon at the top.
- Type "Apollo 11" in the search box.
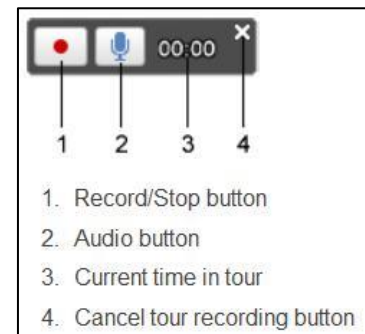- Zoom in for better view.

BONUS: Create a Tour

We can create our own tour and save it under Places on Google Earth.

Exercise: Record a "Trip" to the state capitals of Wisconsin, Minnesota and North Dakota.
- Type "Wisconsin State Capitol" in search box and then save to Places by clicking the blue folder under the Wisconsin Capitol and address.

- Do the same for the capitals of Minnesota and North Dakota.
- Go back to Wisconsin State Capitol by double clicking the upside-down pink "teardrop". Zoom in a bit and then click the "Record a Tour" icon. Then click the Record button.
- Click the Minnesota State Capital link under Places. Zoom in when you "arrive." (Double click the pink "teardrop" on left).
- Click on North Dakota State Capital Grounds. Zoom in and select street view. Click stop button to end recording.
- The tour automatically plays. To save the tour, click the Save button in the playback controls that re-appear. Your tour appears in the Places panel.

1. Record/Stop button
2. Audio button
3. Current time in tour
4. Cancel tour recording button

Recommended Additional Resources:

Other technology classes
Go to http://www.eapl.org/events to view and signup for other computer classes.

Class handouts
Go to http://eapl.org/events/computer-programs/class-handouts to download copies of class handouts and exercise files.

Librarian and computer aide assistance
We are glad to help you out at the second floor reference desk as best we can while helping others.

Help appointments
Ela Library cardholders can schedule one-on-one appointments with librarians for further help. We can help with our Digital Media Labs or with general technology questions in our areas of expertise. Appointments last up to one hour. Paper appointment request forms are available at the 2nd floor reference desk. You can also request appointments online:

- Go here http://www.eapl.org/DMLhelp to sign up for a Digital Media Lab appointment.
- Go here http://www.eapl.org/computer-programs/one-one-technology-help-appointment-request to request a general tech help appointment.

Databases
The Library offers card holders access to many premium databases. These include two which can help you learn more about technology.

- Gale Courses offers a wide range of highly interactive, instructor led courses that you can take entirely online. As an Ela Area Public Library card holder in good standing, you are entitled to these courses at no cost. Courses run for six weeks and new session begin every month.
- Lynda.com offers technology training with over 20,000 training videos on over 300 topics with exercise files included. The Library pays for you card holders in good standing to access this resource, however you will be required to create a free account. *Please remember to log out when you are finished.*

Access both of these databases from the library Research page: http://www.eapl.org/resources

Books
A few books in the library collection related to this book are:

- **Google Earth for Dummies** by David A. Crowder
  Call Number: 005.5 GOOGLE EARTH
- **Google Earth forensics : using Google Earth geo-location in digital forensic investigations** by Michael Harrington
  Call Number: 005.8 HAR

Free online tech training websites
http://www.gcflearnfree.org/ , https://techboomers.com/ , http://digitallearn.org/

Computer Class Evaluation

Class Title: **Google Earth**   Date: _**8/19/2021**_

In terms of your skill with computers, how do you consider yourself?

□ Absolute Beginner (no or little experience with computers, *NOT* yet comfortable using
　 a mouse and keyboard)
□ Beginner
□ Intermediate
□ Advanced

In terms of your skill using *Google Earth*, how do you consider yourself?

□ Absolute Beginner (no experience)
□ Beginner (some experience, but not comfortable using)
□ Intermediate (some experience, comfortable with the basics)
□ Intermediate/Advanced (experienced with basic and intermediate functions, but require
　 training on advanced functions)

How much do you feel that you learned?

□ I learned a lot
□ I learned some
□ I didn't learn much
□ I learned nothing

How did you perceive the pace of the class?

□ Too Fast
□ Just Right
□ Too Slow

Were the handouts helpful?

□ Yes　□ No　　If no, why not?

What did you like most about the class?

What did you like least about the class?

What other topics would you like to see in a future computer class?

How do you normally find out about library computer classes?

□ Footnotes (Library Newsletter)
□ Library Website
□ Other _____

If you are not an Ela Area Public Library card holder, where is your home library?

Any additional comments: