Maps of New York State and their Interpretation
This exercise is due on September 19, 2011. Late submission will be penalized.

The purpose of this exercise is to introduce you to web sites where you may view historic maps and experience interactive mapping resources. Public and university libraries house a treasure of old and modern maps. Historic maps have been photographed, scanned and made available to the public via the Internet. Digital maps that can be queried and altered are available at governmental and commercial websites. You will start by looking at historic maps of the New York region. Then you will go the depositories of modern maps and navigate through their offerings.

INSTRUCTIONS:
This exercise has three parts each with several subsections. Please number your answers. Be sure to address all bold-faced questions and comments embedded in the text of each part. Type this exercise on a separate sheet of paper. Print and attach a copy of each map discussed in the exercise. When copying the maps, do not use thumbnail-size portrayals. The maps need to be readable; usually 3 inch x 6 inch or 2.5 inch x 5 inch maps are good sizes. Color is optional. Include as a footnote the title and source citation for each map you print.

PART I. Map Collection Websites. Search the SUNY-Stony Brook Library Map Pathfinder site. Look for maps that include an area of one or more of your counties. If no maps exist, use one from a nearby area.

Additional maps may be found at the Library of Congress Map Library (www.loc.gov/index.html) and its specialized pages:
Maps and Geography: http://www.loc.gov/topics/maps.php
Geography and Map Reading Room: http://www.loc.gov/rr/geogmap/guides.html
American Memory Map Collections: http://memory.loc.gov/ammem/gmdhtml/gmdhome.html


1. Go to the NYS Map Pathfinder site at www.sunysb.edu/libmap/nypath1.htm.
2. Click on Early Maps (prior to 1800).
3. Select and print one (interesting) map. Be sure to include the date of the map.
   Question I-A: Comment on the map’s style and portrayal of information.
4. Return to the NYS Map Pathfinder site and click on Panoramic Maps.
5. Using a NYS road map or atlas, look for maps of places within your counties. If none exists, select and print a panoramic map from a nearby area.
   Question I-B:
   a) How do panoramic maps portray reality?
   b) Comment on their helpfulness to you when studying the area shown.

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6. Go back to the NYS Map Pathfinder site and click on Nineteenth Century Maps.
7. Select and print an interesting map from the 1800s.

**Question I-C:** Comment on the map’s style and portrayal of information in comparison to the maps created prior to 1800.

8. Return again to the NYS Map Pathfinder site and click on Twentieth Century Maps.
9. Look through the maps. Select and print a map that was created after 1980.

**Question I-D:** How do they differ in appearance from the maps in the other files?

**PART II. Historic USGS Maps of New York State**

1. Go to http://docs.unh.edu/nhtopos/NewYork.htm or http://www.nysgis.state.ny.us/gisdata/quads. This will bring up the NYS index map of topographic maps by county.
2. **Locate your counties.** NOTE: Nassau and Suffolk counties and the counties of NYC do not appear on the UNH index map. If you have Nassau County or Suffolk County use the NYSGIS index.
3. Click on the boxes within your counties to bring up the map names. As the cursor arrow is moved over the grid, the name of the topographic map will appear. (Write it down the ones you want to visit.)
4. Select two (2) interesting maps from any of your counties (but only one from any county) and print them. Use the southeast corner option as this will allow pertinent map information to show. You may want to compare maps of different years to see change.

**Question II:** Describe the area covered by each map by including the following:

- **QII-A.** What is the area’s topography on each map? Hilly/level/mixed?
- **QII-B.** Is it a forested, agricultural or urbanized area?
- **QII-C.** Describe the system of roads. Is it a grid system or do the roads follow the lay of the landscape?
- **QII-D.** Describe one feature on each map that caught your attention and tell why you noticed it.

**PART III. USGS and MSR Websites**

**A: USGS Topographic maps**

Go to the following USGS and NYS web sites to read about topographic maps and map scale.

- USGS Topo Maps: http://nationalmap.gov/ustopo/history.html
- Latitude & Longitude: http://nationalatlas.gov/articles/mapping/a_latlong.html
- NYSGIS Maps: http://www.nysgis.state.ny.us/gisdata/quads
- Free download: http://nationalmap.gov/ustopo/index.html (click on Map Store)

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**QUESTION III-A. TOPOGRAPHIC MAPS.**

Go to http://www.nysgis.state.ny.us/gisdata/quads. Print a portion of a 1:24,000 scale map and a 1:250,000 scale map from one of your counties. Be sure to label each map with its name, scale and county. Use the maps to answer the following questions. Please number your answers.

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QIII-A1. Comparison of Scales (1:24,000 vs. 1:250,000). These two scales present information differently. Consider the amount of detail shown by each series (scale). How is each series useful to the map reader? Describe the benefit (level of information) provided by each scale.

QIII-A2. Meaning of colors and symbols on topographic maps. Using the USGS key for colors and symbols, briefly describe the area on each map.


QIII-A3. Spatial Interaction. Consult your maps to answer the following 4 questions:

a) Where is this place? Indicate both the political and physical sites.

b) What is there? What are the physical and cultural landscapes present?

c) How is it linked with other places? Describe the road network.

d) Which scale (1:24,000 or 1:250,000) was more helpful to you when answering each question (A3a, A3b and A3c above)? Why?

QIII-A4. Coordinate systems (UTM vs. Latitude/Longitude)

a) What is the Universal Transverse Mercator (UTM) zone for your maps?

b) What is the range of latitude and longitude covered by each map? Check the four corners. (Careful: This is not the UTM number.)

QIII-A5. How current are the topographic maps for your area? What is the date of each?

QIII-A6. Scale: What is an advantage of having a scale bar instead of another representation of scale, as words or a ratio?

QIII-A7. Compass Arrows: What do the three different arrowheads (M, *, G) mean?

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### Scale Bar

<table>
<thead>
<tr>
<th>0</th>
<th>0.1</th>
<th>0.2</th>
<th>0.3</th>
<th>0.4</th>
<th>0.5 km</th>
</tr>
</thead>
<tbody>
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<td>0</td>
<td>0.09</td>
<td>0.18</td>
<td>0.27</td>
<td>0.36</td>
<td>0.45 mi</td>
</tr>
</tbody>
</table>

### Compass Arrows

- **M**: Micro, typically used for city or town maps
- **G**: General, used for regional or larger scale maps
- ***:** Urban, used for urban areas

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**B: MICROSOFT RESEARCH (MSR) MAPS SITE (formerly Terraserver):** Matching a topographic map with an aerial photograph.


2. **TO FIND A SITE:** Enter a place name from your one of your counties in the **upper left part of window using the City and State (NY) boxes.** Then click on “GO.”

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3. SEARCH RESULTS: You will be given a list of all the images that match your “place” query. Select the place that is located in your county. In the example above, I typed Tottenville in the “City” box and NY in the “State” box to get the list (below) of Aerial Photo and Topo Map of southern Staten Island, a neighborhood of NYC.

<table>
<thead>
<tr>
<th>Place Name</th>
<th>Available Image</th>
</tr>
</thead>
</table>
| 1 Tottenville, New York, United States | Aerial Photo 3/29/1995  
Topo Map 7/1/1986 |

4. Choose the TOPO MAP option first. Pan the map using the arrows so the map is centered over an interesting area. Zoom in and out to find an interesting area. PRINT THE MAP using the print button on the map border.

5. Now click on AERIAL PHOTO tab for this same area. PRINT THE AIR PHOTO.

6. Click on the BING MAP link at the top right corner of the page to bring up a current (2009-2011) GPS image of the area. PRINT THE IMAGE using the print button.

QUESTION III-B1. What is the date of your Topo Map? Of your Aerial Photograph? Be sure to write the name of the city or town next to the date.

QUESTION III-B2 Topographic Map vs. Aerial Photograph:
   a) Describe the information you get from each.
   b) What is an advantage of each representation?
   c) What is a disadvantage of each representation?

QUESTION III-B3.
   a) Describe any changes in land use when comparing the topographic map and aerial photograph with the Bing GPS image of the area you selected.
   b) What advantage does a GPS image have over the standard aerial photograph?