

Resources & additional PD

GTCWNY





The GeoTech Consortium of Western New York was funded through the U.S. National Science Foundation (NSF) Office of Advanced Technological Education under Grants Award # 1501076 to Monroe Community College.

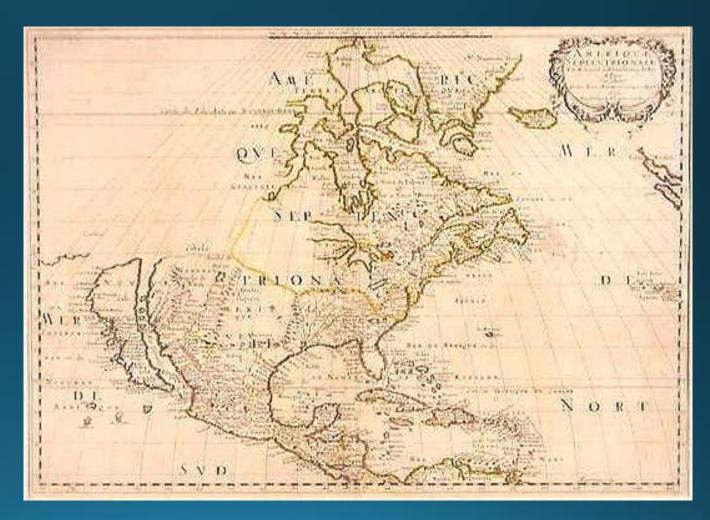


Individual Meeting | Fall PD | Email List

- Individual Meeting
 - We will meet with you in Sept or Oct at least once before you implement your activity. This will be at your school site.
- Fall PD (2-3 hours)
 - What date can you NOT attend the Fall GIS workshop at MCC?
 Wed, Oct 7 || Thur, Oct 8 || Wed, Oct 28 || Th, Oct 29
- Spring PD (2-3 hours)
 - Sometime between April 11-15
- Summer share thoughts with cohort 2
- Email group

Fall date to implement GIST Activity

- GIST Activity
 Implementation Date =
 Thur, Dec 10
- Let us know when you plan to do it.
- We will informally observe/help. This is part of the NSF grant.



GEG 130 – Dual Credit

- Offered this fall
 - Online
 - F2f M/W 1-2:50
- SUNY Gen Ed Natural Science Lab credit (3 credits)
- Course Flyer
- Take a class or two handout

Digitize Earth!

Course Title: Digital Earth Course Number: GEG 130

High Job Demand!

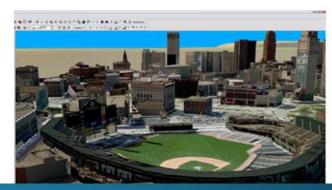
According to the U.S. Department of Labor, the geospatial sector is one of 12 that is projected to have far-reaching impact on the U.S. economy.





Description:

The course themes include GIS basics, geography, sustainability, energy, business, your interests, and the ability of Geographical Information Systems (GIS) to solve real world problems.

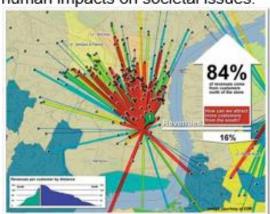


Business GIS (GEG 135)

- ArcGIS Online used
- Still has seats
- Available in the evening Tue/Th this fall
- Could develop as dual credit if interested...let me know.
- 3 credit SUNY Gen Ed Social Science

GEG 135 (Business GIS)

- 3 SUNY Gen Ed Social Science credits
- No prerequisites!
- Demonstrate the basic competence in the use of GIS software, data and services.
- Apply Business Geographic methods to a real world organizational situation such as site selection.
- Explore visualization tools, such as images, charts, graphs, maps, and geopresentations to analyze human impacts on societal issues.



Time:

GEG 135 Tue/Th 6-7:50 CRN 21177

Faculty:

Razy Kased

rkased@monroecc.edu

Phone 585-292-2396

Sample Student GIS Posters • M:\Courses\GEO\GTCWNY\PD workshop

files\GEG130_Poster_Examples



Western New York Climbing

Rock Climb New York



Using Geographical Information Systems To Map New York Climbing Locations

By: Chris Katz





Map indoor and outdoor climbing locations in New York state and make easily accessible.

Future Goals

The future goal of this project is to create an interactive map available to the public which will provide climbers and non-climbers a chance to easily find indoor and outdoor climbing locations in New York State. My vision is for the web (Geographic Information System) program, along with a site to incorporate a map in which users will be able to use zoom and pan features to browse sites as well as a text based database. The map will have removable layers such as satellite view, topographic map and geologic map. The user will also be able to click on a location and have a popup appear with that locations details such as the name, type of climbing, grade ranges, and a link to the locations personal website and directions. I also hope to add a form users can fill out and enter to help add additional sites that may have been missed or have been newly climbed. This also has the potential to be integrated into a mobile app to be used on

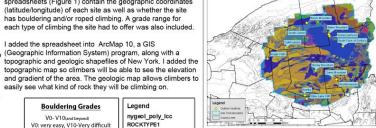
I compiled data from many different websites such as topout.com, which were each specific to bouldering or roped climbing, and combined the data into one spreadsheet. The spreadsheets (Figure 1) contain the geographic coordinates (latitude/longitude) of each site as well as whether the site has bouldering and/or roped climbing. A grade range for

Methods

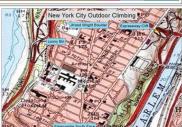
I added the spreadsheet into ArcMap 10, a GIS topographic and geologic shapefiles of New York. I added the topographic map so climbers will be able to see the elevation and gradient of the area. The geologic map allows climbers to easily see what kind of rock they will be climbing on.

V0- V10(and beyond)















Pelitic schist is a foliated metamorphic rock.

Alluvium in loose unconsolidated rock, not well suited for climbing, it's commonly formed by lake or glacial deposits.

Dolostone is a sedimentary carbonate rock which is resistant to erosion and contains a nigh percentage of dolomine.



em	Location Name	Latitude	Longitude	Gym	Outdoor	Bouldering	Roped	Bouldering Grade	Roped Grade Item	LocationName	Latitude	Longitude	Gym	Outdoor	Boulderin	Roped .	Bouldering Grade	Rope Grade
	1 Red Barn Climbing Gym	43.084328*	·77.684739*	Y	N	γ	Y	V9-V10	NR	1 NYC Outward Bound	40,749770"	-73.935805°	N	Y	N	Y	N/A	5.4-5.8
	2 Niagra Climbing Center	43.057656*	·78.836965*	Y	N	Y	Y	V0-V10	5.6-5.12	2 Fort Tyron Park	40.861508*	-73.933604*	N	Y	Y	N	V0-V6	N/A
	3 RockVentures	43.154425"	-77.573418°	Y	N	Y.	Y	NR	5.3-5.9	3 Snowy Mountain	43.6936418	-74,3415687	T NO	Y	Y	N	V0-V10	N/A
	4 The Edge Halfmoon	42.842155*	-73.352061°	Y	N	Y	Y	V0-V10	5.6-5.13	4 Boulderwoods	43.5377927	-73.9677594	N	Y	Y	N	V0-V8	N/A
	5 The Inner Wall	41.743131*	-74.073565*	Y	N	Y	Y	A0-A10	5.6-5.12	5 McKenziePond	44.3046945	-74.0938423	N	Y	Y	N	V0-V4	N/A
	6 Albany Indoor Rockgym	42.688263*	-73.796133*	Y	N	Y	N	V0-V10	N/A	6 South Face of Gothics	44.1258	-73.8586	N	Y	N	Y	N/A	5.5-5.10
	7 Electric City Rock Gym	42.813376*	-73.941673°	Y	N	Y	Y	V0-V10	5.6-5.12	7 Arietta	43.2554	-74.5308	N	Y	N	Υ.	N/A	5.10-5.12
	8 Rock Sport	43.331513*	·73.661332*	Y	N	Y	Υ	V0-V10	5.6-5.12	8 Azure Mountain	44.5412	-74,5008	N	Y	N	Y	N/A	5.8-5.12
	9 The Wall	43.460239*	·76.512932*	Υ :	N	Y	N	1/0-1/8	N/A	9 Baker Mountain	44.3343	-74.1043	N	Y	N	Y	N/A	5.7-5.10
	10 The Cliffs	41.068142"	-73.787310*	Y	N	Y	Y	V0-V10	5.6-5.13	10 Cat Mountain	44.1002	-74.8640	N	Y	N	Υ	N/A	5.7-5.8
	11 The Rock Club	40.917696°	-73.776317°	Y	N	Y	Y	V0-V10	5.6-5.13	11 Crane Mountain	43.5378	-73.9677	N	Y	N	Y	N/A	5.6-5.11
	12 Brooklyn Boulders	40.679765*	-73.583918°	Y	N	Y	Y	V0-V10	5.6-5.13	22 Eagle Falls	43.9051	-75.1955	N	Y	N	Y	N/A	5.10-5.11
	13 Island Rock	40.787319*	-73.466019"	Y	N	Y	Y	V0-V10	5.6-5.13	13 Otter Lake Cliff	43.1916	-74.4966	N	Y	Y	Y	V7	5.9-5.11
	14 Marihattan Plaza Health Center	40.759975*	-73.994492*	Y	N	Y	y	V0-V10	5.6-5.13	54 South Colton	44.4873	-74.8517	N	Y	N	Y	N/A	5.8
	15 Sports Center at Chelsea Piers	40,745783*	-74.007857*	Y	N .	Y	Y	V0-V10	5.6-5.13	15 Edgecombe South Face	40.834572	-73.938088	N	Y	Y	N	V2-V7	N/A
	16 The Sports Club LA	40.761400*	-73.562724*	Y	N	N	Y	N/A	5.6-5.12	16 Expressway Cliff	40.846012	-73.931961	N	Y	N	Y	N/A	5.9-5.11
	17 City Climbers Club	40.771182	-73.568900°	Y	N	Y	Y	NR	5.1-5.12	17 Harlem River Areas	40.833984	-73.937802	N	Y	Y	N	V3-V8	N/A
_										18 Loony Bin	40.844308	-73.944170	N	Y	Y	N	V3-V6	N/A

To Drill or Not To Drill?

A look at the effects Hydraulic-Fracturing has on the Earth

By Roberts Robison GEG 130 Project



Figure 1. Machine starting The billions and Figure the Lane 12 season CUSTA and And/12

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Tapping the Gas

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Introduction

Hydraulic Fracturing or hydra-fracking is a widely used industry practice to stimulate production of all and gas from deep wells. It involves the guaraging at high persuane of large quantities of water mixed with sand and chemicals to fracture underground rock formations and relicate oil and gas. The oil and gas industry, along with some promisent federal officials, have long claimed that because fracking occurs as for below groundwater equifies that migration of the chemicals used in fracking into draking water supplies was not per suble and had never occurred. In recent years reports of contaminated drinking water supplies, surface pollution and even science activity have been straibuted to Hydra-Franking.

Ouestions and Goals

For sustainability numbers an exploration of the current agas in the world where hydraulic fractuating has been used over the last 10 years as a drilling process for natural gas within a GIS overcommers. This will be compared to areas nation wide where, as a result of hydro-facking, controvenental lacrands have occurred either to the land, water air or natural wildlife within a GIS environment. Data will be attempted from government information or private companies involved in the dalling process and from testimonials of those inguited positively and negatively. Industrial gas development has been delling the Marcellus Stale region up to the New York bonder but is now arranging to cross into New York. Sam officials are considering allowing a genetic permit for hydro-fracking operations. Governor Cuomo las tie final say on if and how loudo-fracking will occur in New York. State and while it is currently basined, it is on the verte of becoming legal. For this mason my project will show the locations of the shale firmations and plays in the United States, the locations that permits have been issued to drill, and the areas when the environment has been impacted by diffing It will make an argument in visual form why hydro-fracking is not yet safe for our environment, that the costs outweigh the benefits, and most importantly to educate New Yorkess on its dangers before drilling begins in our state

Methodology

Data was gathered from government resources like usgages or private companies like natitateleonomy research orgothat are involved in the drilling process and from transmission of those impacted positively and negatively.

A comparison and investigation of potential natural gas resources, hazards around harvest and impacts on sustainability will in shown. The object being to describe visually the validity that hydraulic facturing in a sustainable way to obtain needed power for the United States. Showing areas in the US where hydraulic facturing can be successful without environmental harm on Land, Natural wildlife, Water resources, Economic resources of pareas inhabitants, Geological stability.

Worldwide governments and oil companies have initiated hydraulic fracturing processes to have extensional gas resources that lay within the earth's exast. I have a shown the areas where hydro-fracking has already had effects on the above histed areas, where better options may lay for fracturing to occur with limited impact. I enducted GIS investigations into science activity, water pollution, land damage, and connemic less as a result of hydro-fracking.

Definitions

Statle gas is natural gas formed from being trapped within shall: formations. Shall gas has become an increasingly important source of natural gas in the United Status over the gase decade, and internet has spread to potential gas shall him the ran of the world. One analyse corpor shall gas to apply a much as half the natural gas production in North America by One.

Flags is an area targeted for exploration due to favorable geo-science survey results. An are connectino "play" when it is accognized that there is an economic quantity of oil or gas to be harvested.

Results

The results of the research shows in visual context the damage Hydro-Fracking has done to our land, water, within and actimite safety. I was unable to bests good areas where dailing would not impact one of these areas. Therefore I would recommend that faither station are done pilor to drilling to identify safe disposal of contaminated water, and has more eversight is needed for the entire drilling movement. As our dipendence entities to grew hydro-fracking and similar drilling techniques will be practiced, but with cooperation and strictly enforced laws environmental damages can be minimized. Also, a stronger national gusts away from our dependence on oil and natural gas will help in showing the fracking field.

Discussion

Discussions should begin at home and should occur in our schools at our youth hat a better understanding on humanity in impact on the casts. Incooperating observation programs to elementary schools and required courses in high school will lead to an informed steeley and keptully a generation of problem solvers who can correct our mistakers.

Conclusion

I knew these were incidences of environmental damage caused by fincking but seeing it had out across the county was deeply disurbing. At the close of this peoplet and this course I have learned that the decisions I make today affect the future generations and will meet likely impact my generation. We can't fix some of the injuries we have enaued our planet, but we can learn form our mistakes and be better servereds of this beautiful place in the future.



Fig. 7 High of lance (I state that have had profyround, water or small profession from fundaments.

References

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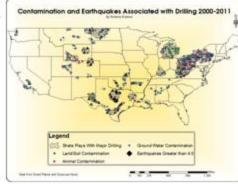


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Africanized Honey Bees: The "Killer" Bees

By Zone Haynes 5/10/2012 GEO 130 Project

Africanized Honeybee Presence | Collama | Col

Agure 1. Description payable on a septiment

Questions and Goals

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Introduction

Methodology

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Discussion

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Data from USDA Agroundered Rossanch Service, CONSES, ESRI

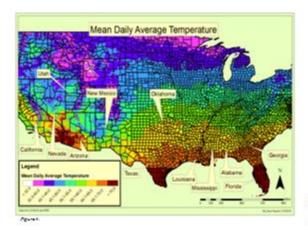
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Implications and Conclusion

The series with contribe temperatures for the form (prompt regions, Fig. 2) should have four matters advanted, for these regions are at each for possible factors or present advanted by Advantaged Honey Date, Excellent should be sufficient and properly granular to make a dealer to advant and properly promote the contribution and to the four property promote the contribution and to the four property and the contribution of the contribution of the four property and the contribution of the contribution of

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Results

Using the temperature date, I was able to compare the many daily or assessment distribution of daily or organization to the communication of the Library Compared Manny Date. Observing

that the best come not be agreed to be secretar with more distly average languages

under 20 degrees I was able to wrate a may abstract regime with soluble

Africanized Bee (left) European Honey Bee (right)



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References

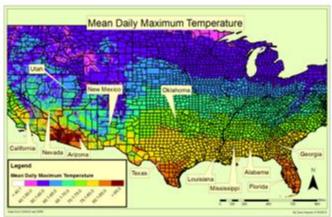
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Same?

Get the GIST Certificate!



MCC's 24 Credit GIST (Geospatial Information Science Technology) Certificate - Get the GIST!

Fall semester

Course Title	Credits
Physical Geography I Lab	1
Physical Geography I	3
Digital Earth	3
Cartography	3
Options include: Business GIS,	3
Technical Writing, Intro to Stats, &	
Intro to Python	
Total	13
	Physical Geography I Lab Physical Geography I Digital Earth Cartography Options include: Business GIS, Technical Writing, Intro to Stats, &

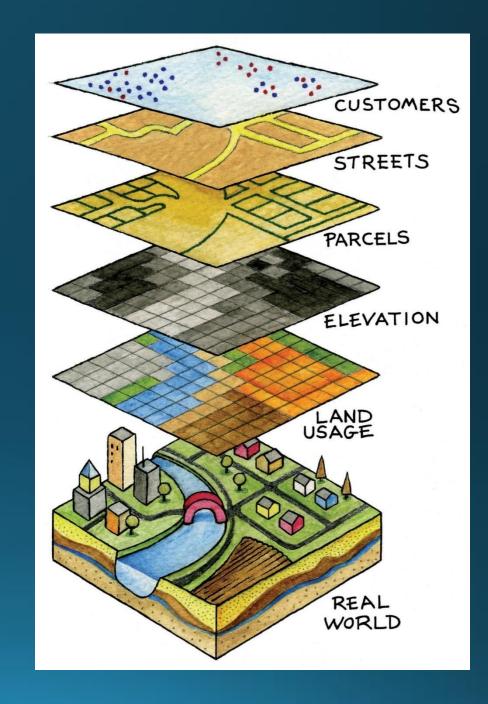
Spring semester

Course Number	Course Title	Credits
GEG 102	Human Geography	3
GEG 133	Introduction to Remote	3
	Sensing	
GEG 230	Advanced GIS	3
GEG 239*	Capstone Course	2
	Total	11

*Late Start Spring/Summer session I

GIST Student Opportunities

- Intern with local GIS company/GIS jobs
- Scholar's Day poster or presentation in April could win \$1000!
- NY GIS list serve
- Conferences
- Local GIS networking at GIS-SIG
- Capstone Course
- More!



Former GEG 130 students (Digital Earth)

- I have been doing independent study with one of my professors involving some really cool things with Geospatially Enabled Business Intelligence (basically merging data warehousing/mining models and techniques with GIS). Last month I spoke with ESRI and hope to do an internship with them next spring or summer. I will be taking a few higher level GIS courses next year and am considering a minor (I spoke with Brian Tomaszewski about it). More recently I used my final project from your class to secure a job at the **Board of Governors of the Federal Reserve** in Washington D.C. this summer.
- Received a job with Agrinetix after just taking GEG 130! Now working with Esri.

GIST – High Growth

- Geospatial is a high growth industry. Source: Department of Labor
- Geospatial careers are among the fastest-growing in the U.S. and world today, and geospatial jobs are currently available in every industry. Source: http://www.aag.org/galleries/jobs-careers-files/Geospatial_panel_notes_2012.pdf



Exploring GIST Careers (Middle/HS)

https://www.youtube.com/watch?v=M7tK9CjRmlo

Global Positioning and Geographic Information Systems

Local GIST Career Options & GTCWNY Partners*

• Pictometry* http://www.eagleview.com/



• GIS-SIG* http://www.gis-sig.org/



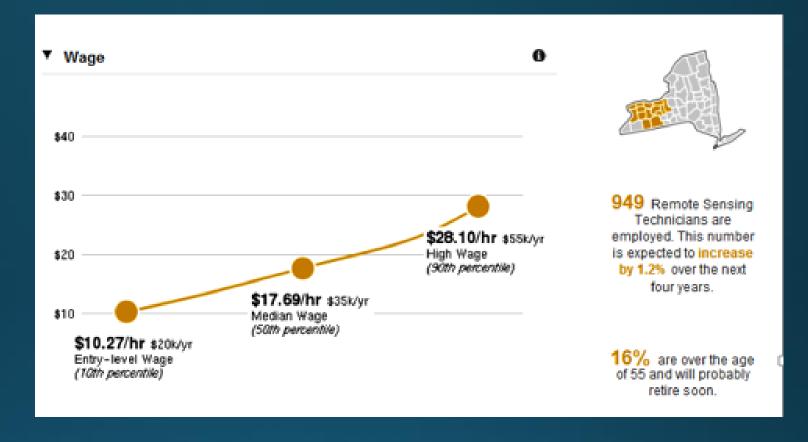
Fibertech Networks* http://www.lightower.com/



- Monroe County GIS* http://www.monroecounty.gov/gis
- Exelis http://www.exelisinc.com/
- Local Towns/cities
- Agrinetix
- More!



Geospatial Technician Data within 50 miles of MCC



MCC's Career Coach uses Economic Modeling Specialists, International (EMSI) and Equifax business data to provide current employment data for western New York. Data from EMSI is often cited in The New York Times and The Wall Street Journal.

National GIST Career Options

- Most decent size companies
- Government
- Physical: USGS, NOAA, NWS, park service...
- Human: banking, insurance, law enforcement, business, healthcare...
- Esri http://www.esri.com/
- National security industry
 - U.S. Geospatial Intelligence Foundation include: GeoEye, AGI, Harris, SAIC, Esri, ATT, NJVC, TASC, SI, Oracle, Microsoft, Digital Globe, Raytheon, Boeing, BAE Systems, Lockheed Martin, GDT, Ball Aerospace, Intergraph, Booz Allen Hamilton, Northrop Grumman, IBM, L-3, CACI

GIST Jobs

- GIS Jobs Clearinghouse http://www.gjc.org/
- NY GIS Members http://www.nysgis.net/member-area/jobs/
- ESRI Users Conference http://www.esri.com/careers/main/job-search
- AAG (Association of American Geographers)
 http://jobs.aag.org/home/index.cfm?site_id=15004
- It is who you have networked with!
- Employees are also looking for internships! What employers are looking for http://www.aag.org/galleries/jobs-careers-files/Geospatial_panel_notes_2012.pdf

Online Resources + More

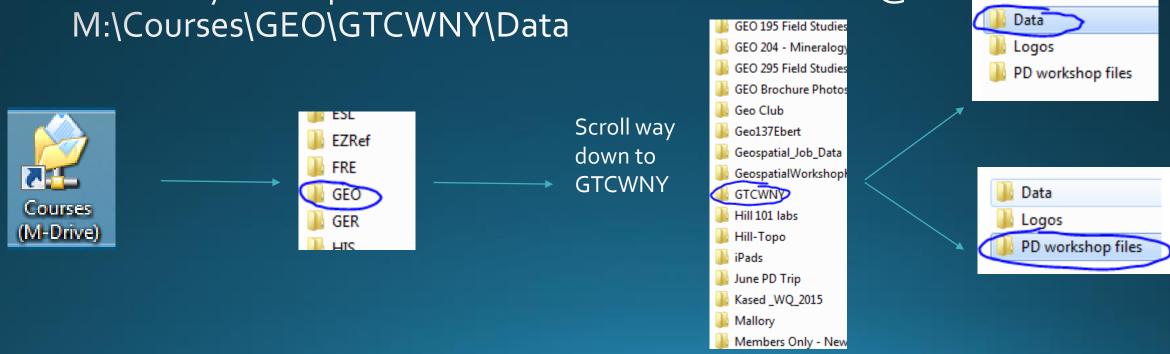
- Handout
- <u>*GTCWNY</u> http://www.nygeographicalliance.org/node/36
- *ArcGIS Online Gallery http://www.arcgis.com/home/gallery.html
- ArcGIS
 - Lessons <u>http://edcommunity.esri.com/Resources/ArcLessons</u>
- *Google Earth Engine https://earthengine.google.org/#intro
- *Esri Connect Ed Video http://www.esri.com/connected
- Data CUGIR http://cugir.mannlib.cornell.edu/



M-Drive (access from MCC only)

Online Resources M:\Courses\GEO\GTCWNY\PD workshop files

• Some of your requested data is available on M-drive @



Open Lab time

- Some of your requested data is available on M-drive @ M:\Courses\GEO\GTCWNY\Data
- Feel free to modify existing activities
- If you develop your own, please share so we can have a collection to share.
- Considering developing your own exercise?
 - Tips
- Break with snack food! ~ 11

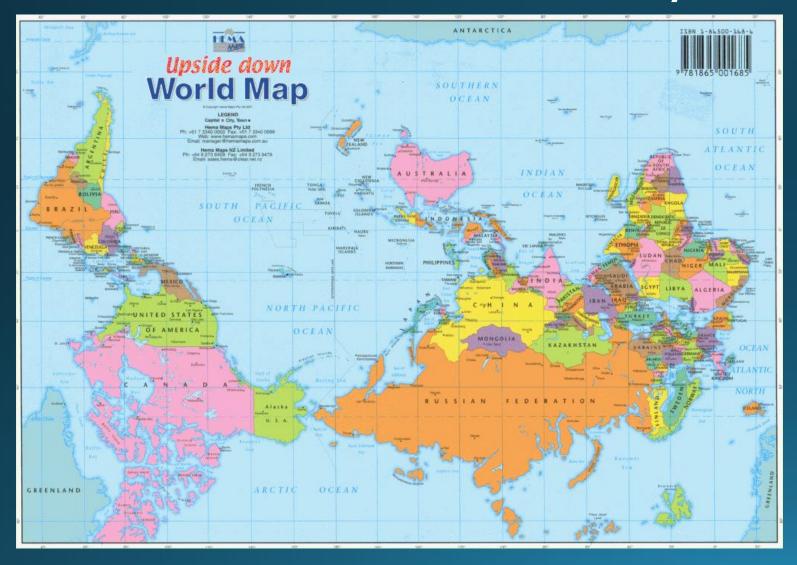
Management of ArcGIS Online

- We will discuss with your tech folks at each district
- What we need from you...who is a good person to reach out to at your district?
- Should be ready to go with
- We can come to your class and help you set it up.
- We will try and get this set by end of Sept.

Conferences + Other Resources

- Other Resources Handout
- Esri Connect Ed Video http://www.esri.com/connected
- Interested in presenting implementation of your GIST activity and/or dual credit?
 Grant will pay for 1 or 2.
 - GIS/SIG (local)
 - Student Lightning Talks (5 minutes)
 - Meet potential local employers
 - April 2016
 - http://www.gis-sig.org/conference.html
 - Pittsford, NY
 - NCGE (summer) http://www.ncge.org/
 - Esri http://video.esri.com/series/250/2015-esri-user-conference-plenary-_dash_-watch-the-entire-day
 - AAG (Late winter/spring)

Questions & Thank you!



- Heather and I have release time to visit and support you! We want you to be successful in implementing your GIST activity!
- Any Q after the workshop, please email!

Evaluation