The GLOBE Program

Global Learning and Observations to Benefit the Environment

An International Environmental Science and Education Program

i technologies

Web 2.0 and beyond....

Instructions for Downloading and using Google Earth

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WEB 2.0 AND BEYOND....

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Web 2.0 exploratory group

- ***Mr. Todd Ensign (West Virginia) - chair***
- ***Mr. Tony Berthelote (Montana)***
- ***David Bydlowski (Southern Michigan)***
- ***Ms. Peggy Foletta (California)***
- ***Dr. Scott M. Graves (Connecticut)***
- ***Dr. Mitchell D. Klett (Northern Michigan)***

The GLOBE Program

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- ***GLOBE will be exploring web2.0 technology and the evolution with more functionality, sharing, and apps, etc.***
- ***Retooling of classic globe material - updates and newer look/feel - connections to "common core standards".***
- ***Rethinking analog v. digital data collection protocols.***

~ why does it take up to 4 years for teachers to get started entering GLOBE data into the GLOBE web/dbase?

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- ***We need for there to be a more consistent way of entering the teacher data because we are getting duplication of records and we should have a clear method on data entry. They would love to be able and upload an excel data spreadsheet with the school information.***

~ why does it take up to 4 years for teachers to get started entering GLOBE data into the GLOBE web/dbase?

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huh?

GLOBE Visualizations for web 2.0

Google Visualization Gallery:
http://code.google.com/apis/visualization/documentation/gallery.html

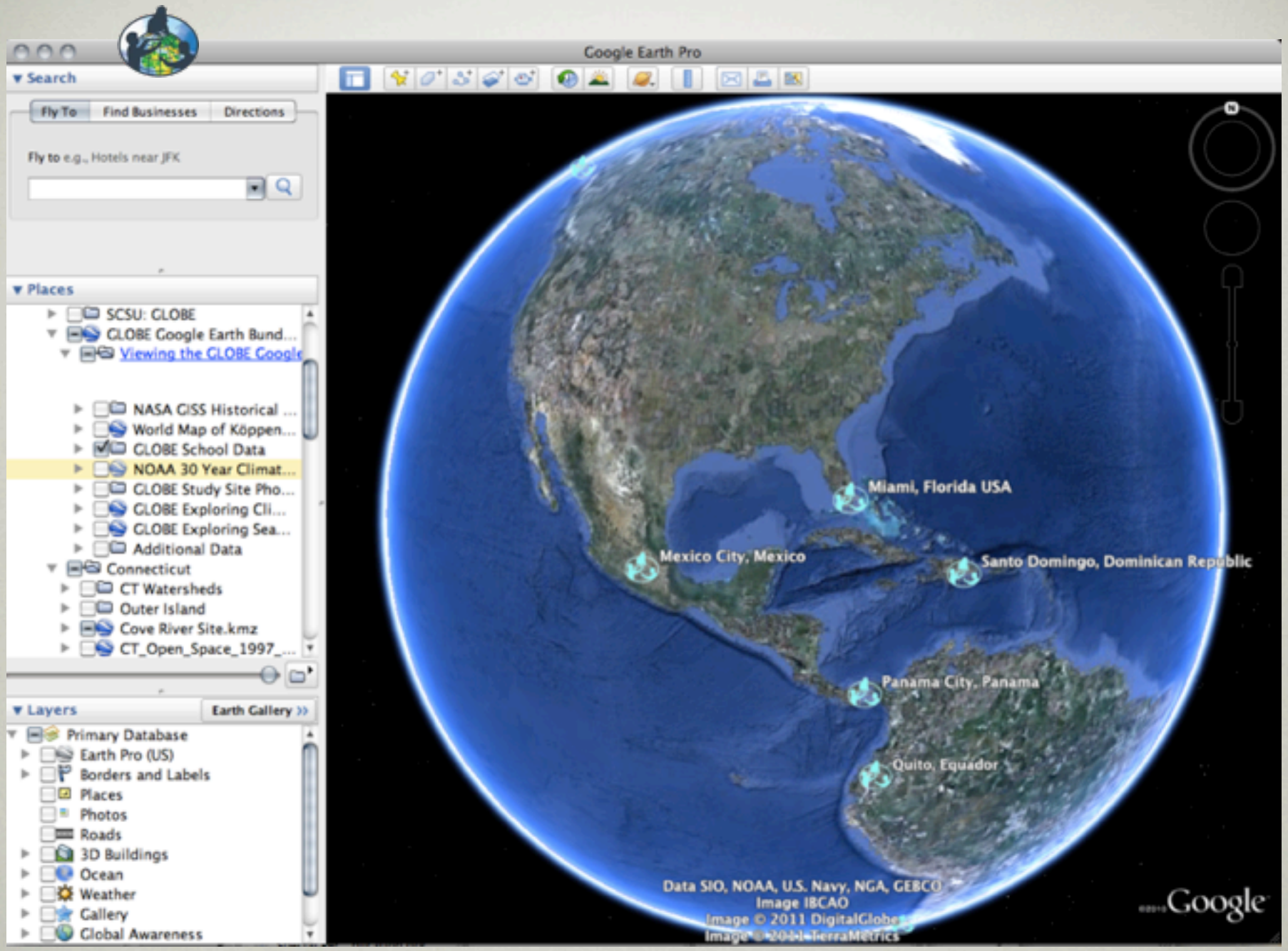
Thematic Mapping:
http://thematicmapping.org/playground/openlayers_choropleth_geojson.php

Interactive timeline graphs:
http://dygraphs.com/

Annotated Timeline:
http://code.google.com/apis/visualization/documentation/gallery/annotatedtimeline.html

CEC North American Atlas (embedded Google Earth):
http://www.cec.org/atlas/terrestrial/

CEC: map/resources (multiple format downloads):
http://www.cec.org/Page.asp?PageID=924&ContentID=2336


Google Earth Pro
Search
Fly To
Find Businesses
Directions
Fly to e.g., Hotels near JFK
Places
SCSU: GLOBE
GLOBE Google Earth Bund...
Viewing the GLOBE Google
NASA GISS Historical ...
World Map of Köppen...
GLOBE School Data
NOAA 30 Year Climat...
GLOBE Study Site Pho...
GLOBE Exploring Cli...
GLOBE Exploring Sea...
Additional Data
Connecticut
CT Watersheds
Outer Island
Cove River Site.kmz
CT_Open_Space_1997_...
Layers
Earth Gallery
Primary Database
Earth Pro (US)
Borders and Labels
Places
Photos
Roads
3D Buildings
Ocean
Weather
Gallery
Global Awareness
Miami, Florida USA
Mexico City, Mexico
Santo Domingo, Dominican Republic
Panama City, Panama
Quito, Equador
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Image IBCAO
Image © 2011 DigitalGlobe
Google

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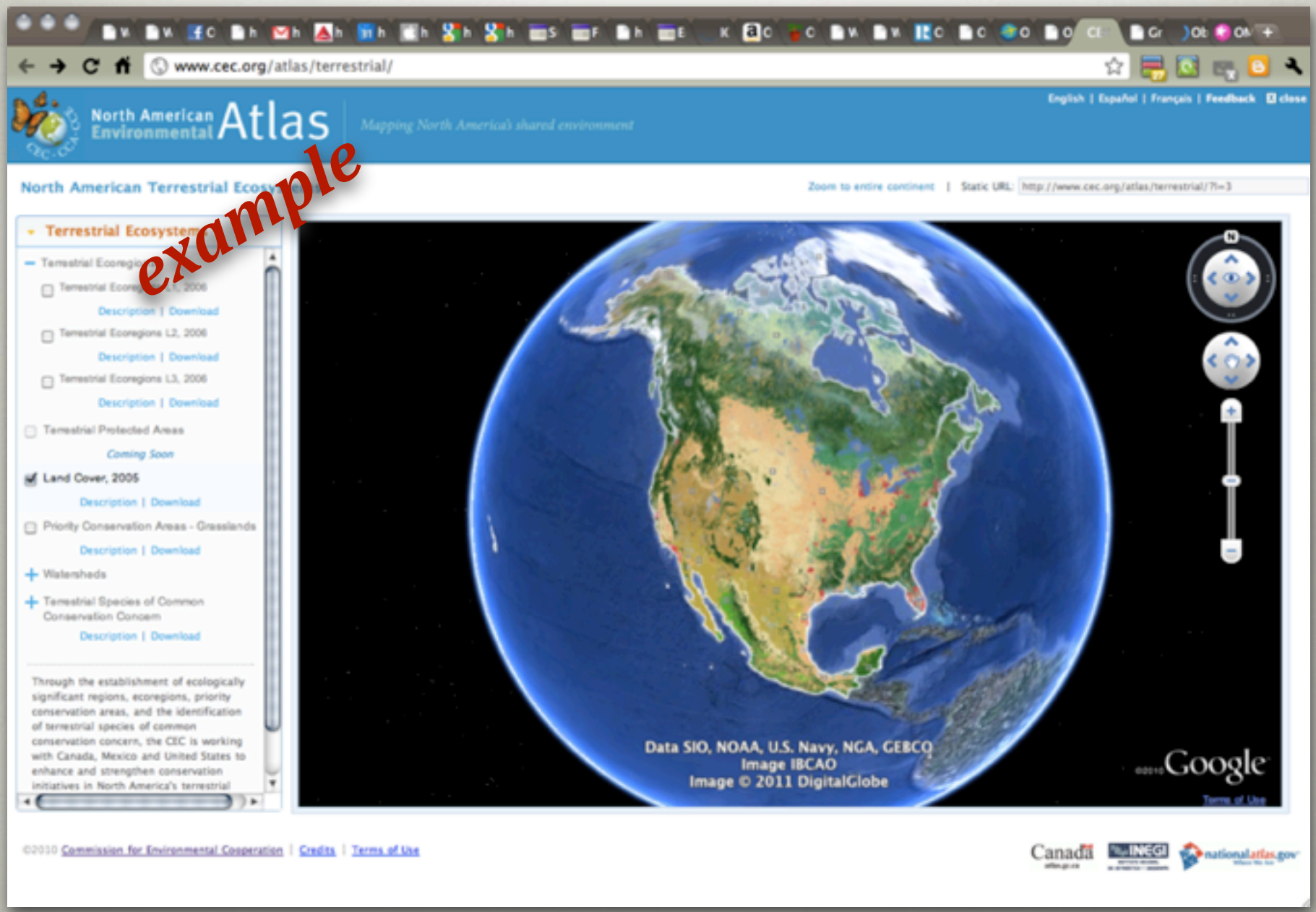
Google Earth (embedded)



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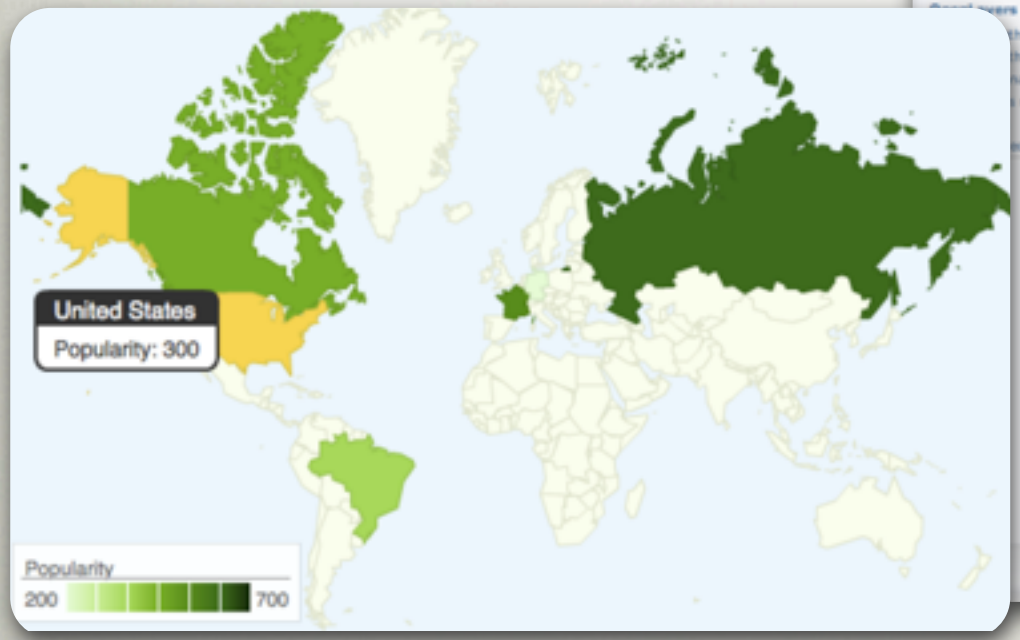
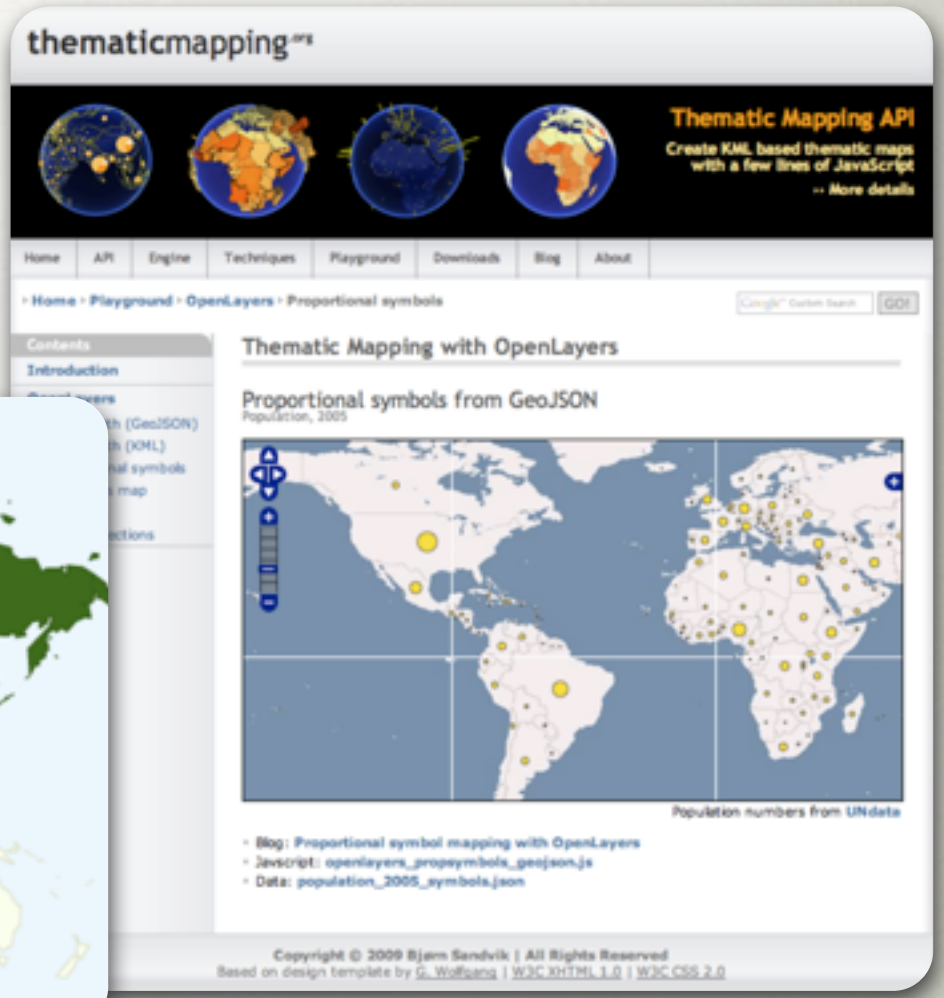
Google Visualization Gallery:

http://code.google.com/apis/visualization/documentation/gallery.html

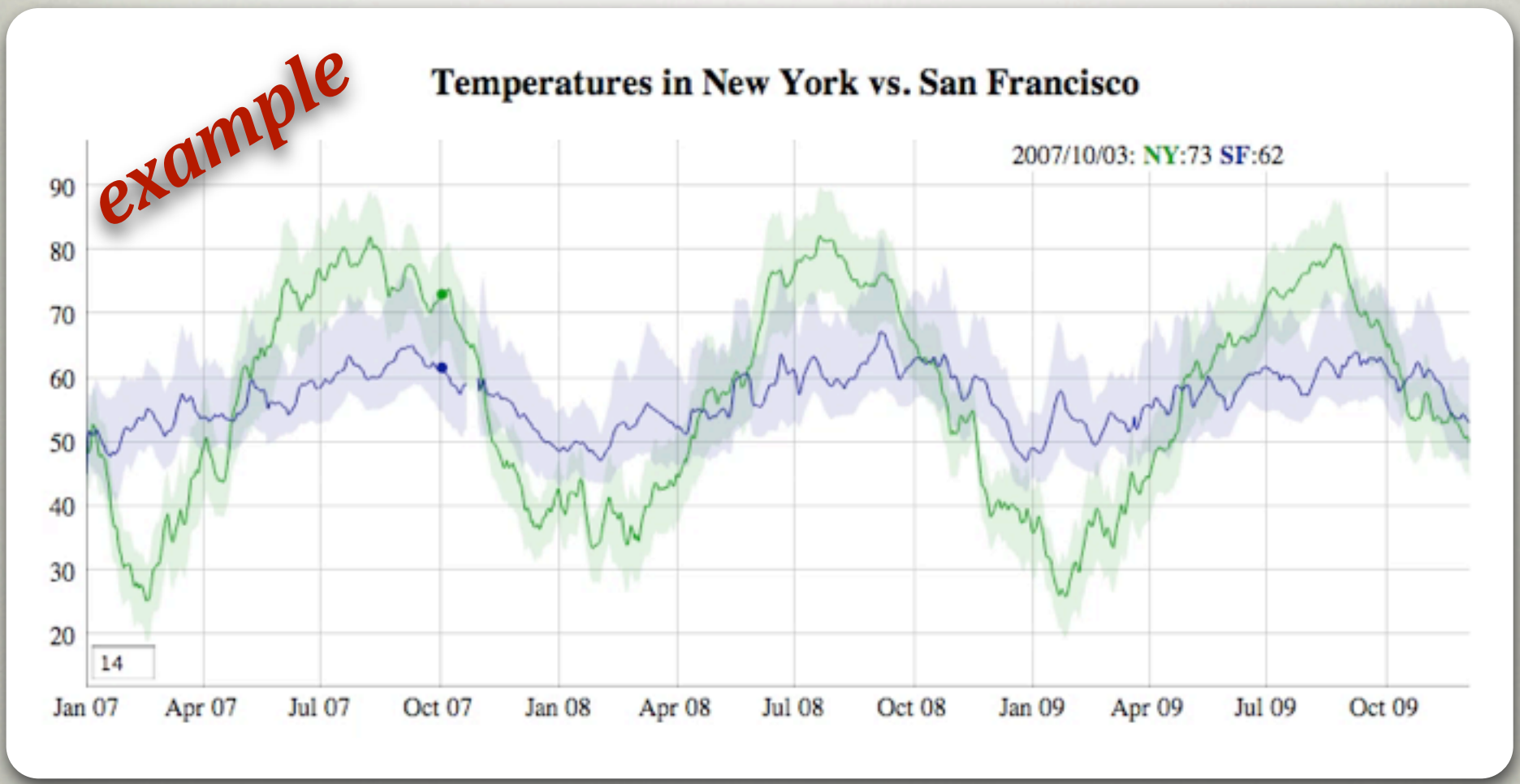
example





Thematic Mapping:

http://thematicmapping.org/playground/openlayers_choropleth_geojson.php



Interactive timeline graphs:
http://dygraphs.com/

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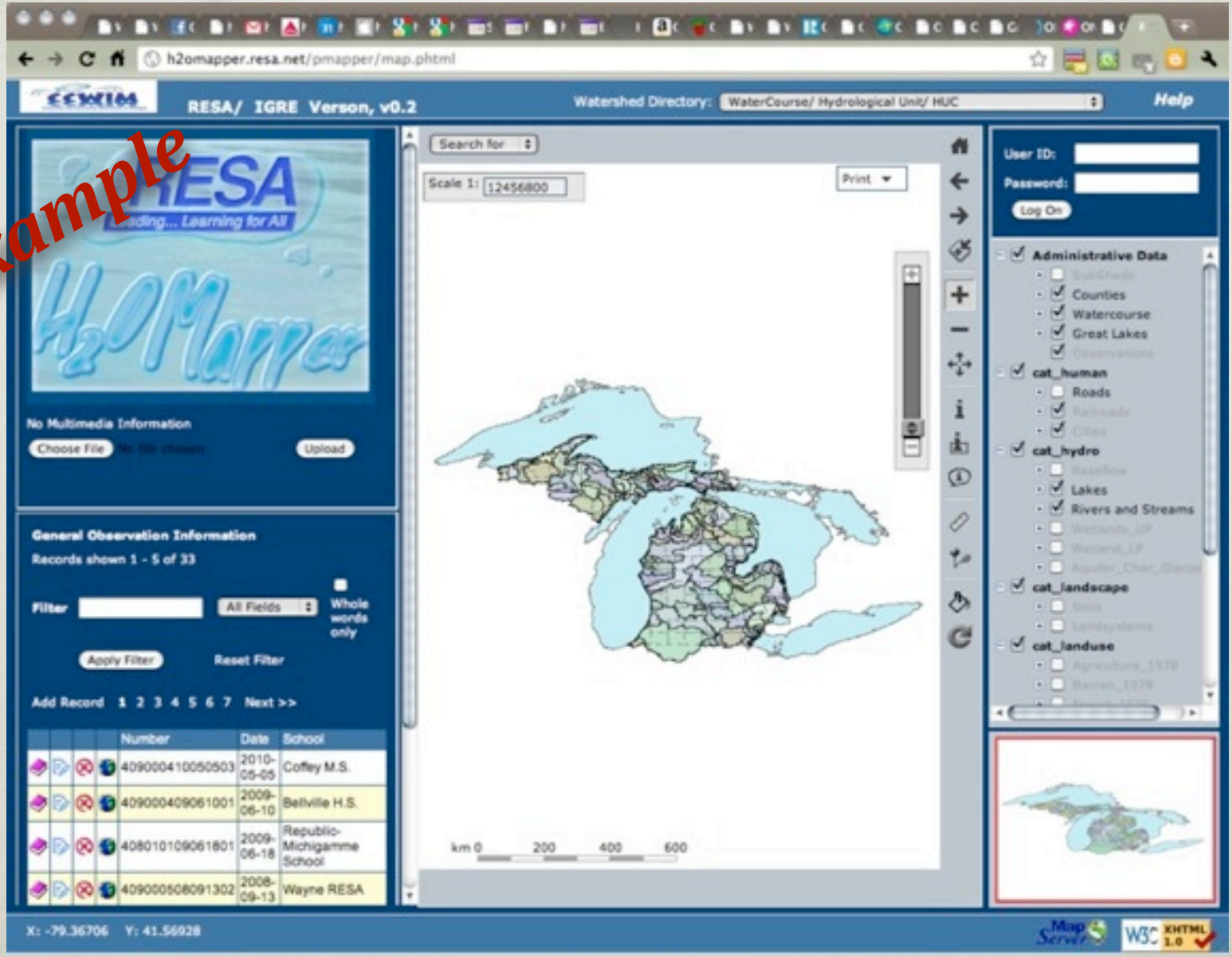

H2O Mapper

http://h2omapper.resa.net/pmapper/map.phtml

current technologies

- ***data collection kits, devices, interfaces, apps…***

~ to-date, these products exist, and manufacturers are working on updates, app development, etc.

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examples

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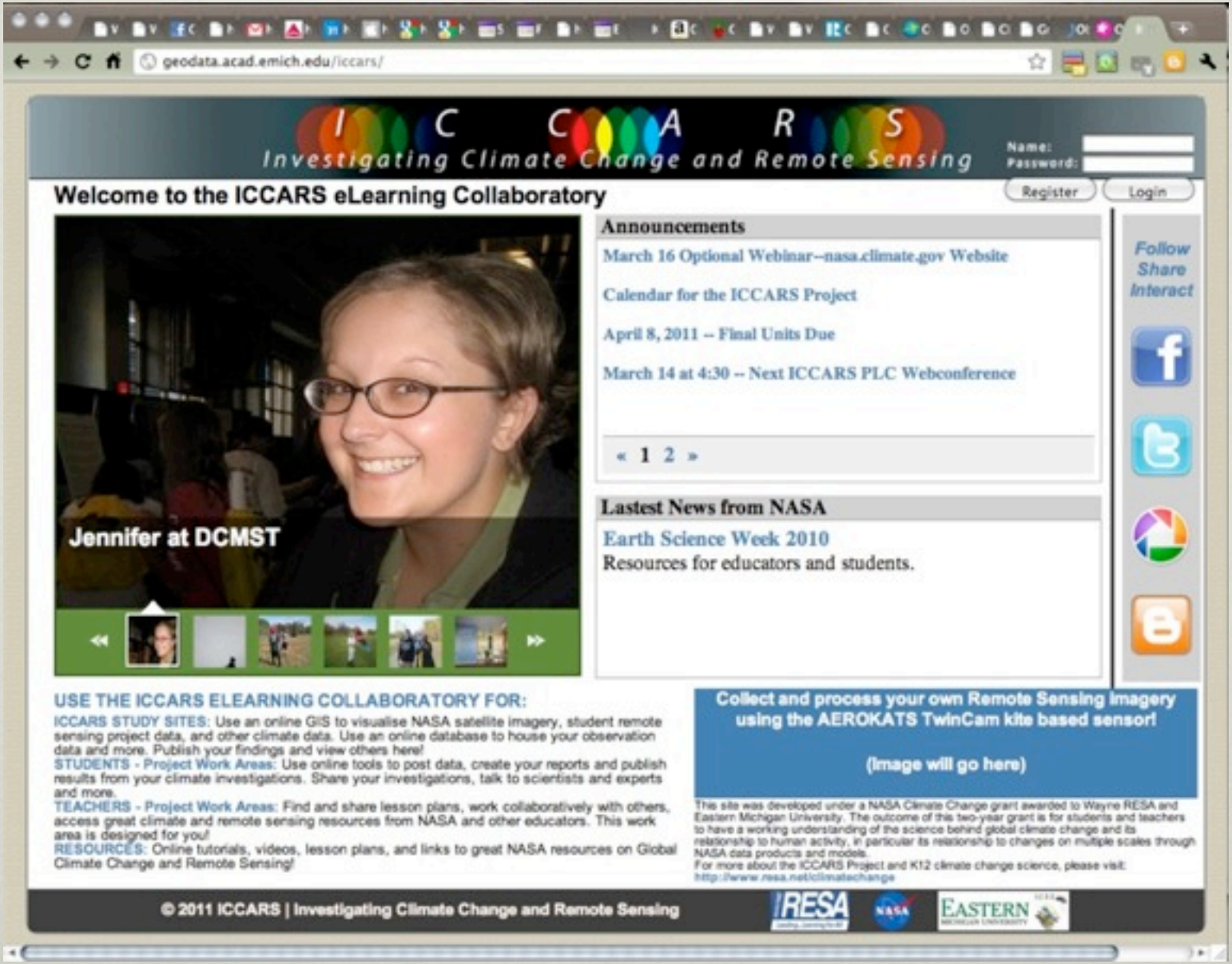
- ***IPad serves many purposes:***

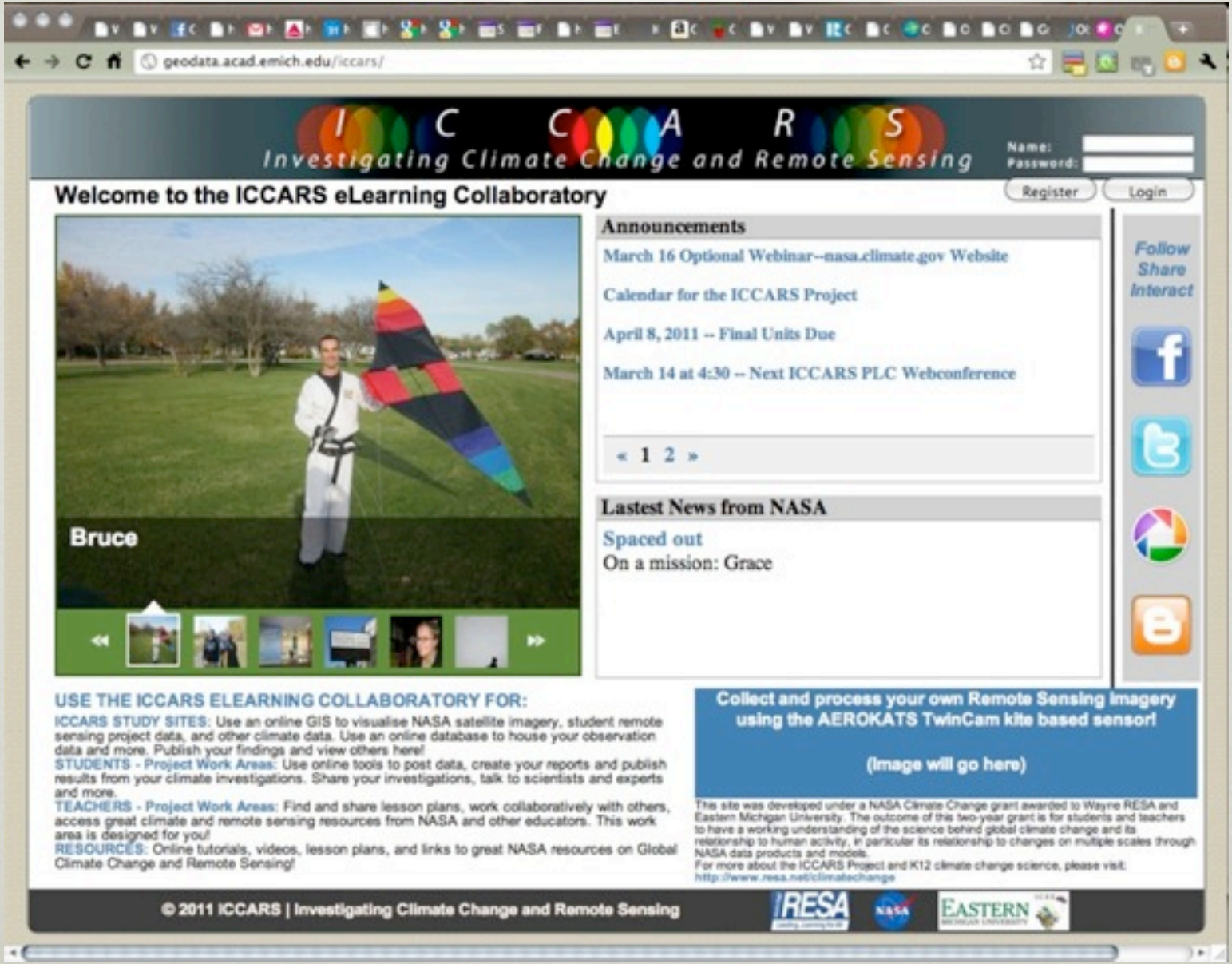
1. Field Data Collector
2. Anytime/Anyplace Interface to the multiverse of the websites
3. Reference Library
4. Toolkit

@ ICCARS



http://geodata.acad.emich.edu/iccars/

@ ICCARS



http://geodata.acad.emich.edu/iccars/

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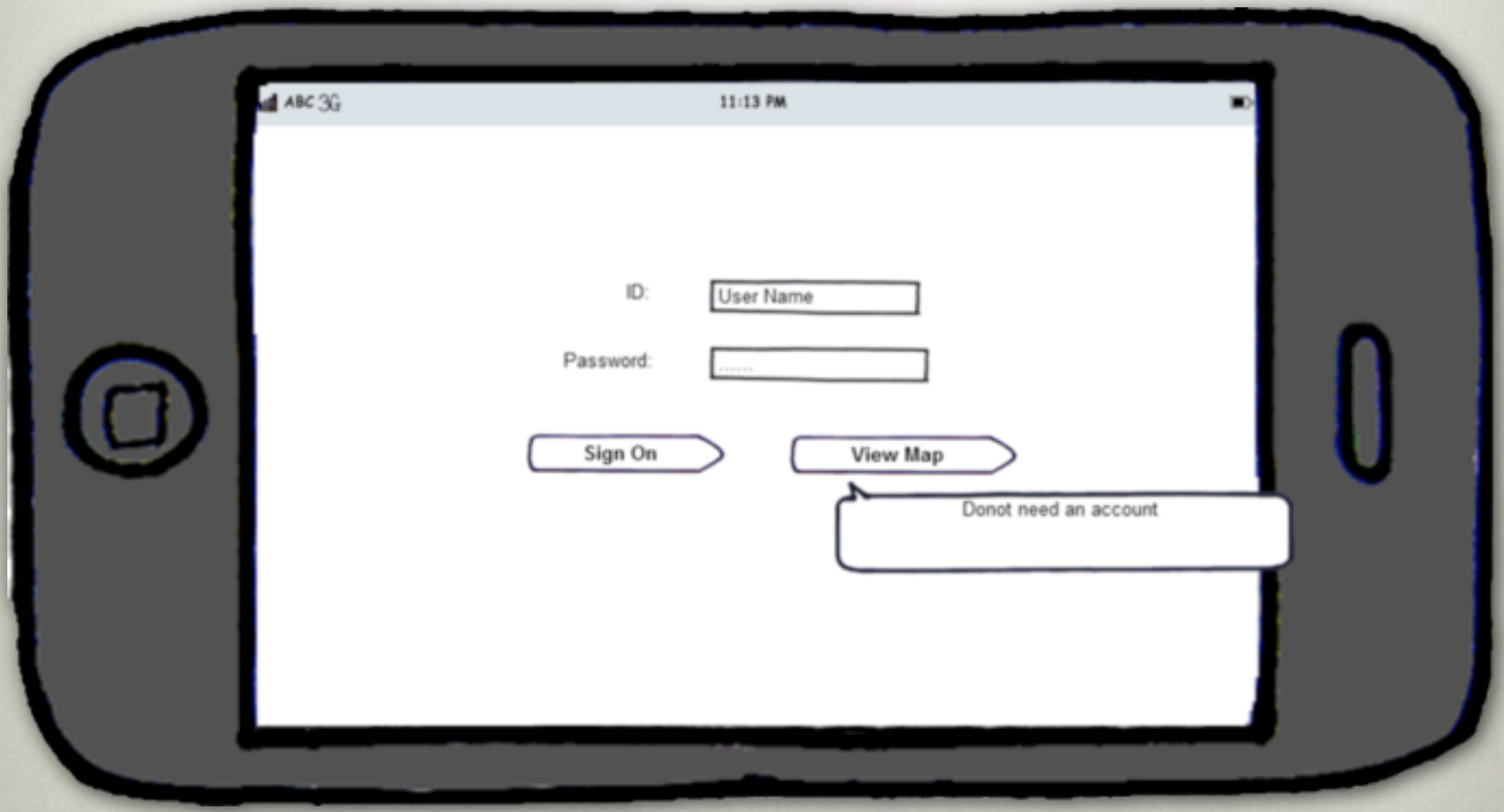
data collection app @ ICCARS



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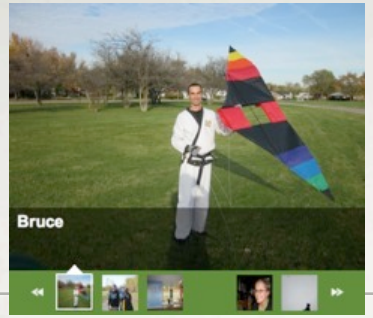
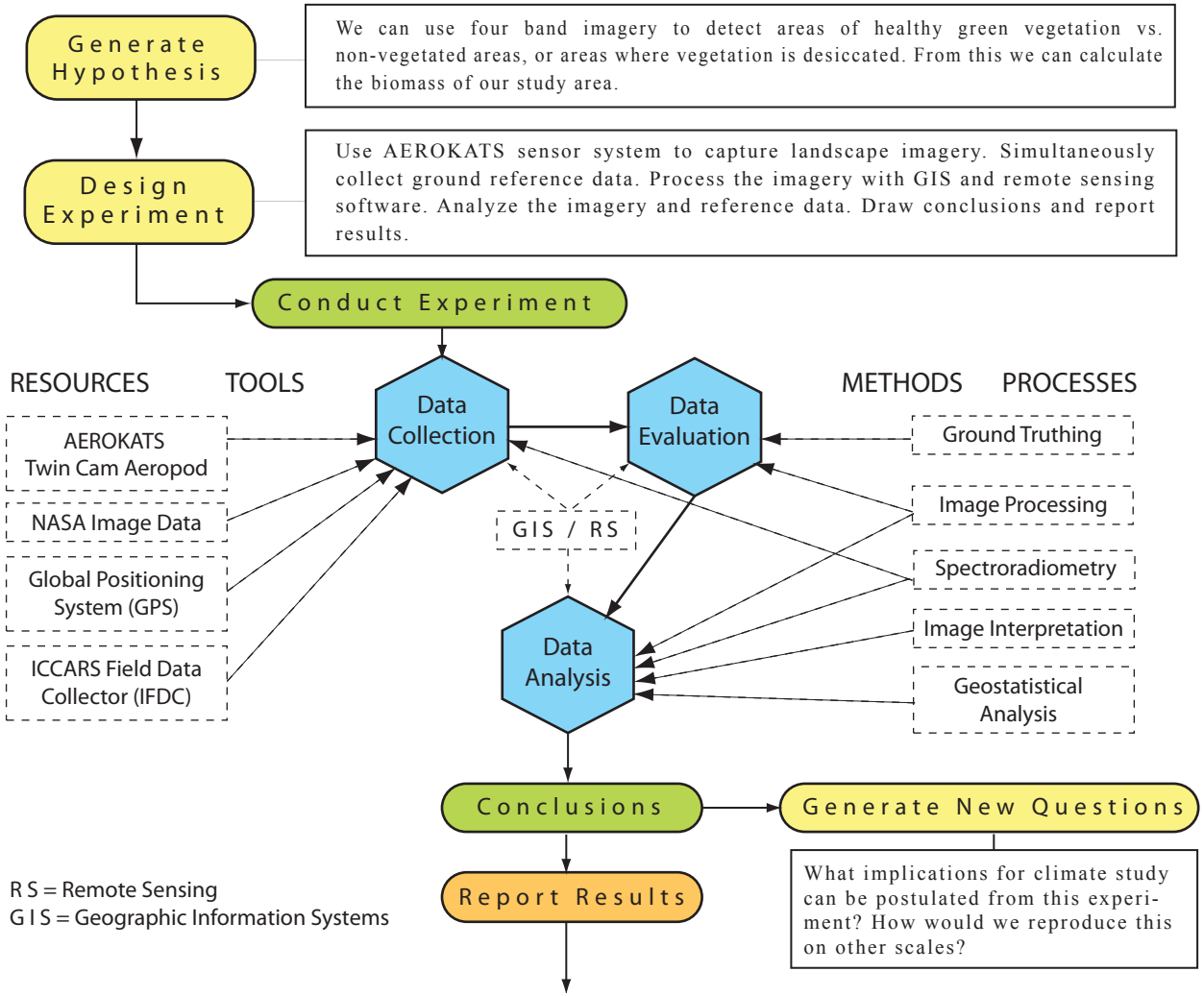


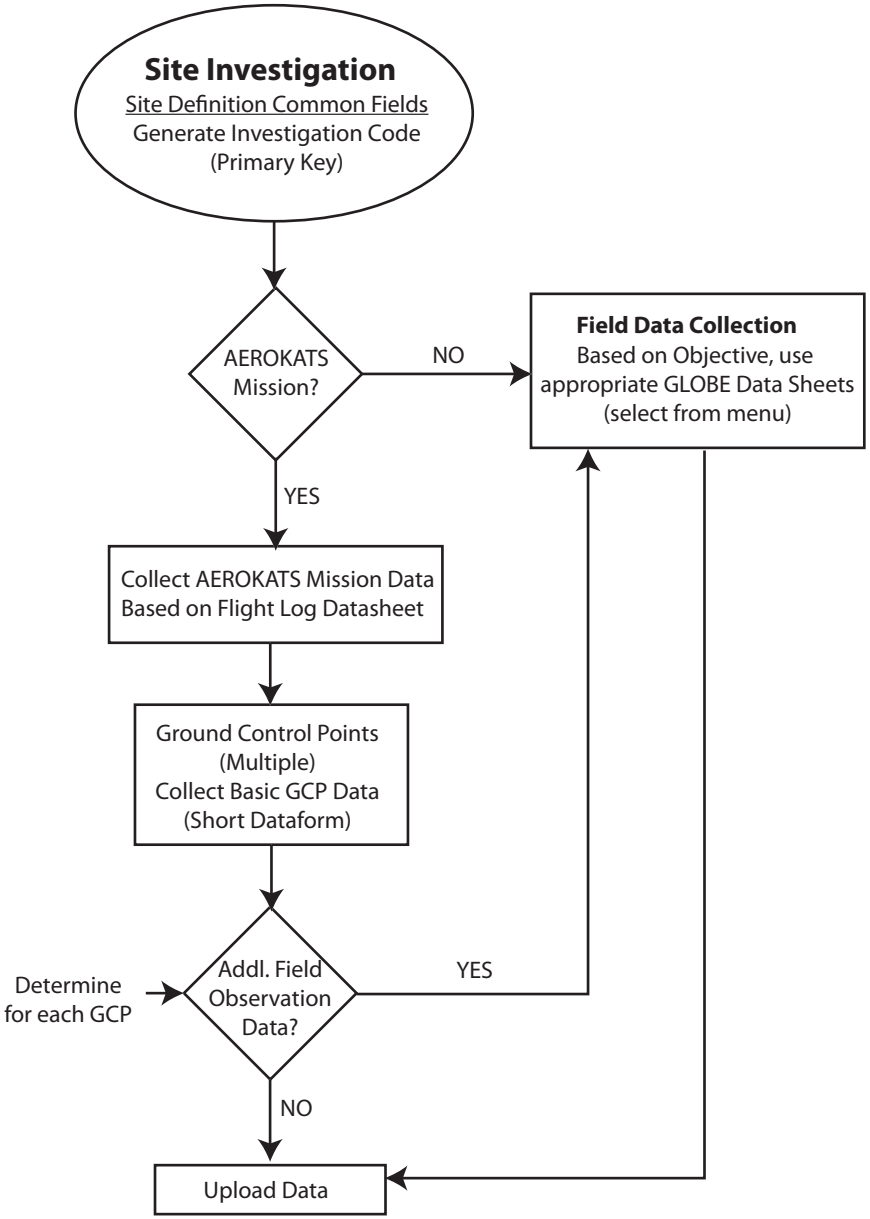
I C C A R S

Investigating Climate Change and Remote Sensing

Example: Spongy and palisade mesophyll in healthy green leafy vegetation allows most light in the blue and red areas of the EM spectrum to be absorbed for food production. Most green light and nearly all energy in the near infrared portion of EM spectrum are reflected .



iPad Site Investigation Field Data Collection Model



SITE DEFINITION COMMON FIELDS

School/Organization Name: _____

Class/Group Name: _____

Student/Participant Name(s): _____

_____

Date: yyyy/mm/dd Time: hh:mm (UTC)

Site Name (Unique name): _____ (lookup list of existing sites)

Site PLSS ID (T,R,S) : _____

New Site ☐ Existing Site ☐ (Metadata Update)

Latitude: (DecDegree - 5 decimal places) : _____ N ☐ S ☐

Longitude: (DecDegree - 5 decimal places) : _____ E ☐ W ☐

Elevation (M) (display converted to Feet as well) _____ m _____ft

Source of Location Data : GPS ☐ Other_____

Purpose:

☐ AEROKATS Mission

☐ Atmosphere Investigation

☐ Earth as a System

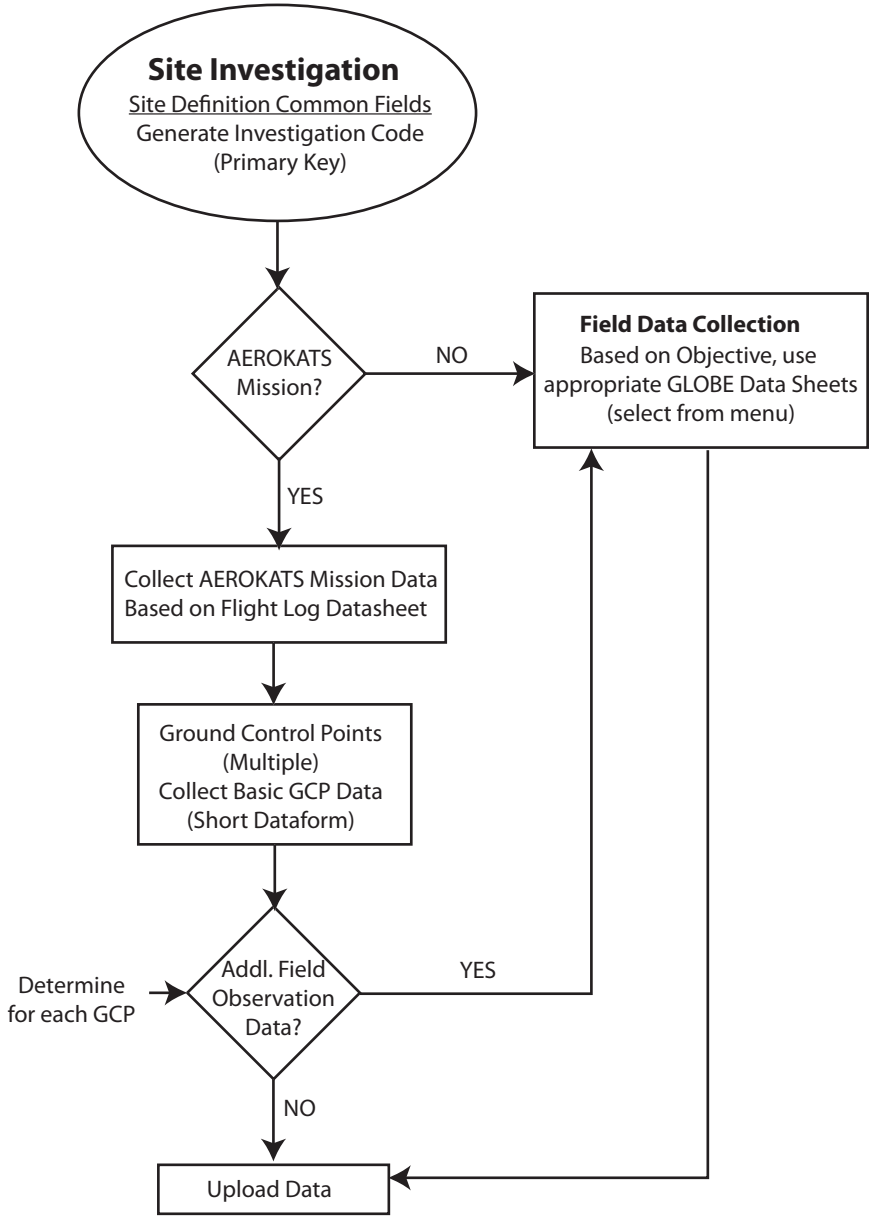
☐ Hydrology Investigation

☐ LandCover Investigation

☐ Soil Investigation

(Check boxes can be replaced with iPad spinning wheel selector thingy)

iPad Site Investigation Field Data Collection Model



GLOBE DATA SHEETS

Atmosphere Investigation
http://classic.globe.gov/tctg/sectionAndChildren.jsp?sectionId=285
- Site Definition Sheet
- Integrated 1-Day Data Sheet
- Aerosols Data Sheet
- Water Vapor Data Sheet
- Surface Temperature Data Sheet
- Ozone Data Sheet
- (Need a table with Observing Cloud Type descriptions and images)

Soil Investigation
http://classic.globe.gov/tctg/sectionAndChildren.jsp?sectionId=409
- Soil Moisture Site Definition Sheet
- Soil Temperature Data Sheet
- Soil Moisture Data Sheet: Star Pattern
- Daily Soil Moisture Sensor Data Sheet

LandCover Investigation
http://classic.globe.gov/tctg/sectionAndChildren.jsp?sectionId=462
- Land Cover Sample Site Data Sheet
- Tree Canopy and Ground Cover Data Sheet
- Shrub Canopy and Ground Cover Data Sheet
- Graminoid, Tree and Shrub Height Data Sheet
- Tree Circumference Data Sheet
- Graminoid Biomass Data Sheet
- Accuracy Assessment Work Sheet
- Fire Fuel Protocol: Center Plot Data Sheet
- Fire Fuel Protocol: Transect Measurements Data Sheet

GPS Protocol
http://classic.globe.gov/tctg/sectionAndChildren.jsp?sectionId=496
- Site Location Data Sheet
- GPS Investigation Data Sheet

Earth as a System
http://classic.globe.gov/tctg/sectionAndChildren.jsp?sectionId=504
- Budburst Site Definition Sheet
- Green-Up and Green-Down Site Definition Sheet
- Budburst Data Sheet
- Tree and Shrub Green-Up Data Sheet
- Grass Green-Up Data Sheet
- Tree, Shrub, and Grass Green-Down Data Sheet
- Ruby-throated Hummingbird (RTHU) Site Definition Data Sheet
- RTHU Hummingbird Sighting Protocol Data Sheet
- RTHU Feeder Visit Protocol Data Sheet
- Phenological Gardens Site Definition Data Sheet
- Phenological Gardens Data Sheet

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