

Notes on Science uses in ArcGIS Online (AGO)

by Martin F. Schmidt Jr. <mschmidt@mcdonogh.org>

Delaware geology and more

DE statewide geology map is "DE Geology" (Feature layer), in DGA Organization.

Other layers added: Search in ArcGIS Online, uncheck "Within map area".

1. MD classes map (search = MD rock class).
2. US provinces map (search=US_provinces_only).
3. World mountain ranges layer (search = mountains tess, or worldmountainranges).
4. Add an Esri hillshade layer to see landforms. Found in "Browse Esri layers", in category Landscape/elevation. Best ones are "Hillshade" and "Terrain: Elevation Tinted Hillshade".
5. DE Geomap 13 genrlzed -- this one is in the DGA Organization.

GeoInquiry Lesson #10 - Watersheds

GeoInquiry & other lessons (choose any of the sources at left):

<http://edcommunity.esri.com/Resources/Collections/geoinquiries>

Earth science GeoInquiry lessons 1-2 & 5 mainly on topography; 3 & 4 on minerals & rocks; 6-9 & 11 aspects of plate tectonics; 10 is watersheds; 12 is air & water currents; 13-15 on weather and climate.

Use the link to open Lesson #10 within the DGA Organization.

-- Schools layer can be added from FirstMap DE if desired (instructions below).

-- Designate a point of interest: Add a Map Notes layer, click on the stickpin and place it on the map; click Edit button at the top to exit from the Map Notes layer.

-- Use down-arrow on Map Notes to choose Perform Analysis (must be in an AGO Organization account). Always good to check credits use. Examples:

--- Find Locations >> Create Watersheds - uncheck "Use current map extent". This will add a new "adjusted point" that is the nearest low spot from your stickpin, and then show the watershed above that point.

--- Find Locations >> Trace Downstream - Use the Adjusted Point for this, again uncheck "Use current map extent". Divide it into 1 mile segments, and about 25 miles will probably be enough.

FirstMap DE: Home page is <<https://firstmap.gis.delaware.gov/>>.

--- Easy way to add a layer from FirstMap to your own AGO map: type "firstmap" (no quotes) into the Search for layers box - this lists all layers available.

--- More complicated way if needed: Choose Data, then Geospatial Services, then Public Rest Services, then a folder in the list, an item in the Services list (better to take feature services if have a choice), then copy the URL for page that opens for the

service, and copy that URL into "Add a layer from web" in AGO as an ArcGIS Server map.

DE Geologic Survey viewer: <<http://maps.dgs.udel.edu/dgir/draft/>>. Viewer has watersheds (HUC), streams (NHD), geology, and elevations (DEM). To add a layer, click on a layer or right-click and choose "Add layer". If needed, place your cursor over the blue bar at right and use the up-down arrow to adjust the pane size until the Active Layers pane appears - this is where you turn layers on or off.

Plate Tectonics - Lesson #11

Layers to add:

1. EarthquakesGlob_57 (search= earthquakes tess)
2. Plates as polygons (search="tectonic plates" -first one will be Earth's Tectonic Plates by ESRI Canada (from a server- may be slow)).
3. If desired: Ocean floor age and plate motion (by zwartl) - adds 2 layers. For age, "grid code" is probably the age in millions of years.

Presentations:

Click "Open Presentation" at upper right to begin "slide show"; to exit, close the browser tab for the presentation.

To create or edit a presentation, you must first save the map in your Organization account; then it will say "Create Presentation" or "Edit Presentation" at the upper right. When editing, you will get a list of slides at left and can edit them (if not, check you're not still on a separate presentation tab) - menu of actions at top, individual slides down side. If edit a slide, set it for zoom desired and other properties, then when finished editing that slide click the blue "Slides List" button at bottom left. Use the Play Presentation button at the top to see what the users will see. When finished editing a presentation, click "Edit Map" at upper right to return to map.

Plate Tectonics story map:

<http://apl.maps.arcgis.com/apps/MapJournal/?appid=df5f94c0050b4075adfbba54fb13eaeb>

Ecological Tapestry of the World: <<http://ecoexplorer.arcgis.com/eco/maps.html>>. Click somewhere on the map at right to activate maps at left; then go to any place of interest.

More resources:

<mygeoworld.org>

<www.degeog.org>

<delawarewatersheds.org>

<esriurl.com/k12gis>