

Quickstart Guide to ArcGIS Online

THE MCGRAW CENTER FOR TEACHING AND LEARNING



[ArcGIS Online](#) is an online version of the popular ArcGIS software. A Geographic Information System (GIS) is software designed to store, manipulate, and analyze spatial data. Through [Princeton's ArcGIS Online portal](#), maps can be shared with other Princeton users or made public on the web. ArcGIS Online contains a wide array of basemaps and datasets with which to design and populate your map.

Getting Started

The ArcGIS Online portal can be accessed with a valid Princeton netid and password at the following address: <https://pumagic.maps.arcgis.com/>

After logging into the portal, you will find a menu in the upper-left portion of the screen:

Gallery: A gallery of all maps that have been made available within the Princeton University organization.

Map: The interface for creating maps.

Scene: A 3D Map viewer

Groups: Create user groups so that editing right to maps may be shared with several people.

Content: A listing of ArcGIS Online content belonging to you, to groups with which you are associated, the entire organization, and content that you have marked as 'Favorite'. The Content page also gives you access to 'Living Atlas', a collection of geographic information from around the globe, including maps, apps, and data layers.

Organization: Information about your organization, Princeton University GIS

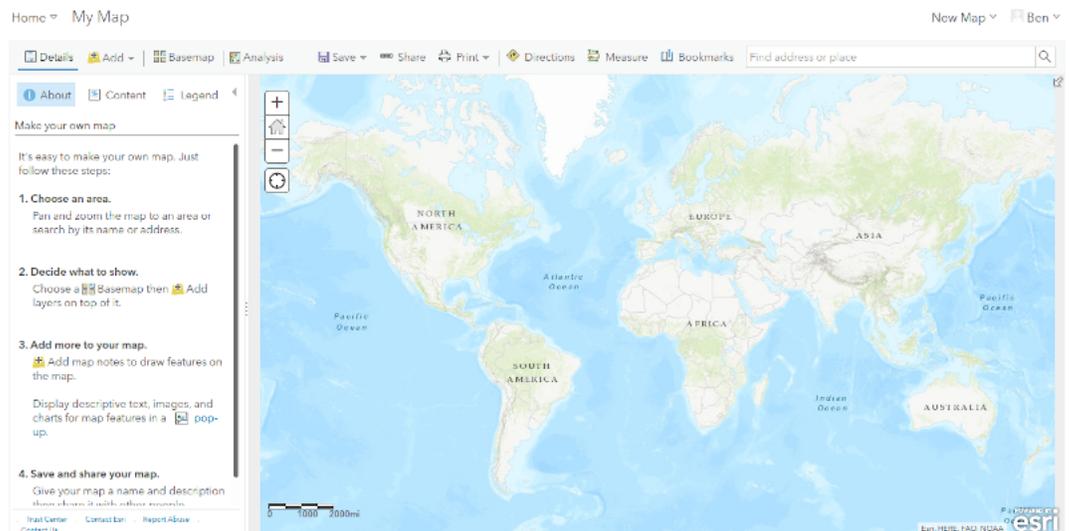
Creating a Map

Select Map from the main menu to open the map editing screen.

On this default screen, notice the instructions in the left-hand sidebar.

These instructions introduce you to:

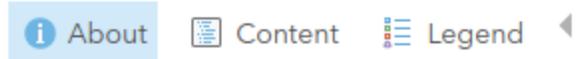
- Panning and zooming the map, searching for locations with the search bar in the upper right corner of the map. Notice that in addition



to the plus and minus buttons on the map, you can zoom in and out using the plus and minus keys on your keyboard or hold down the Shift key and draw a box around the area you are interested in.

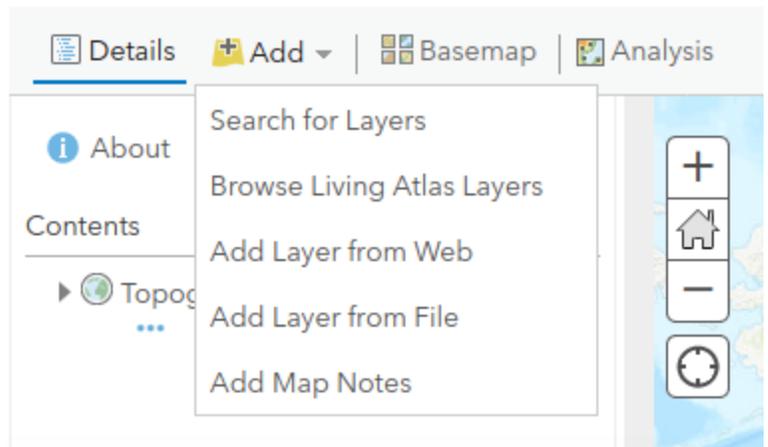
- Selecting a basemap with the Basemap button in the map menu. GIS software, including ArcGIS Online exists as a base layer with some depiction of the Earth and additional data layers on top of that base map.
- Adding notes and existing dataset layers from ArcGIS, as well as uploading your own data to the map.
- Saving and sharing your map

These instructions are always available by selecting **About** in the sidebar menu.



Select the **Content** tab in this menu to view the layers that have been placed on your map. Most likely your list consists of one entry:

Topographic. This refers to the default base-map (or the base-map that you selected earlier).

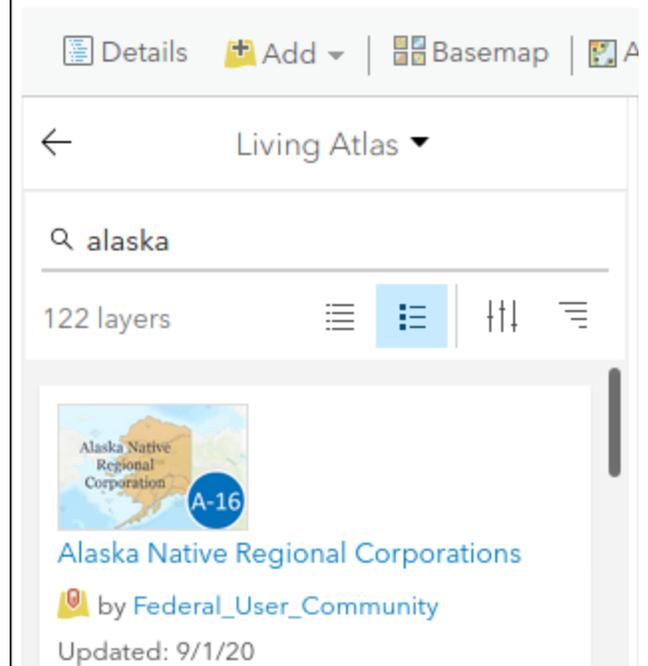


Adding Data Layers

Data can be added to your map either by importing existing data from your collection, from other Princeton University users, or from datasets made available by ArcGIS, or the global collection of data (Living Atlas).

To begin adding data to your map, click the **Add** button in the map menu and then select **Search for Layers**.

Select a **data source**. By default the dropdown from which you can select a data source will be set to **My Content**. Since it is unlikely that you have any existing content, change this dropdown menu to one of the other options, such as **ArcGIS Online** or **Living Atlas** to search for an existing dataset that might be of interest to you. Follow the prompts to import the datasets.



Adding Markers and Regions

It is also possible to add a layer containing your own markers or region (polygons) to which you can attach names and descriptions. In ArcGIS Online, these are called **Map Notes**. Open the **Add** menu and select Map Notes.

ArcGIS Online will prompt you to indicate a name for this new layer. Add a name and then click the **Create** button.

The sidebar will now be populated with a wide range of elements that you can add to your map including markers (stickpin, pushpin, or cross), text, lines and regions, and a variety of different shapes.

Click and drag on the map to place one of these elements. Once you have placed the element, you will be prompted to add a title, description, and , if you wish, the url of of an image to include.

You can return to the list of layers by clicking **Details** and then **Content**. You should now see each element you added as a Map Note as an individual layer.

Add Data from a File

Layers of data can also be added by uploading a data file. The following files can be uploaded for use:

- **Shapefile**: a file format often used with ArcGIS
- **CSV** or **TXT** files with optional address, place or coordinate locations (comma, semicolon or tab delimited): CSV files can be created by using any spreadsheet program or created by-hand in a text file.
- **GPX** (GPS Exchange Format): an XML-based format for geographic data
- **GeoJSON**: a relatively new, open, standard format for geographic data. Many online archives currently make their data available in GeoJSON format.

Importing one of the pre-made geographic data formats (Shapefile, GPX, GeoJSON) is straightforward. Importing your own data file can be a little tricky.

Adding Data from a Spreadsheet File (CSV)

CSV stands for “comma separated file”. It is a very common and popular format for spreadsheet data that stores data in plain text files. You can create your own CSV files using any spreadsheet program or with a plain text editor. A CSV file to be imported into ArcGIS Online should of course include information about locations.

The import process will allow you to select what type of location data is stored in various columns in your spreadsheet and can plot those locations accordingly. ArcGIS Online can even plot locations based simply on a street address.

Begin by creating a file in a spreadsheet program such as Excel that has location data. (The picture to the right shows an example of a list of addresses of state capitol buildings.) Make sure the first row contains column headings and save that file as a ‘csv’ file.

	A	B	C	D	E
1	ID	STATE	ST	ADDR	CITY
2	1	Albany	NY	110 State St	Albany
3	2	Annapolis	MD	100 State Cir	Annapolis
4	3	Atlanta	GA	206 Washington St SW	Atlanta
5	4	Augusta	ME	210 State St	Augusta
6	5	Austin	TX	1100 Congress Ave	Austin
7	6	Baton Rouge	LA	900 N 3rd St B170	Baton Rouge
8	7	Bismarck	ND	600 E Boulevard Ave	Bismarck
9	8	Boise	ID	700 W Jefferson St	Boise
10	9	Boston	MA	24 Beacon St	Boston
11	10	Carson City	NV	101 N Carson St	Carson City
12	11	Charleston	WV	1900 Kanawha Blvd. East	Charleston
13	12	Cheyenne	WY	200 W 24th St	Cheyenne
14	13	Columbia	SC	1100 Gervais St	Columbia
15	14	Columbus	OH	1 Capitol Square	Columbus
16	15	Concord	NH	107 North main St.	Concord
17	16	Denver	CO	200 E Colfax Ave	Denver

In ArcGIS Online, select the Add button from the ribbon menu and then select **Add Layer from File**. A popup window will appear allowing you select the .csv file from your computer. Select the file and click **Import Layer**. This will open the Add CSV Layer popup window. This window begins the process of converting street addresses (as we have in the spreadsheet above) to map coordinates that can be added as a layer on your map. At the top, select **Locate Feature By: Addresses or Places** (unless of course you have actual latitudes and longitudes in your .csv file, in which case, you would select Coordinates).

In the subsequent list, click on the fields on the right-hand side, labeled **Location Fields**, to indicate the type of data contained in the various columns in your spreadsheet. When complete, click **Add Layer** to begin the process of importing the data. **Note** that if you are importing street addresses, this process and take a while.

Once complete, the map sidebar will give you the option of color coding this new data based on a value contained within the data (Types, unique symbols) or to simply plot the locations (Location, single symbol).

Save and Share

Use the **Save** button in the toolbar to save the map. The map will be available in **My Content** (the default list displayed after selecting Content from the main menu). To make this map available to the entire Princeton organization, use the **Share** button.