

GIS Skill-Builders

Maps are the primary way that GIS users share their work with others in their organizations and beyond. Maps provide a critical context because they are both analytical and artistic. They carry a universal appeal and offer a clarity and shape to the world. Maps enable you to explore your data and to discover and interpret patterns.

The role of GIS maps

Web maps are online maps created with ArcGIS that provide a way to work and interact with geographic content organized as layers. They are shared across your organization and beyond on the web and across smartphones and tablets. At their heart, GIS maps

are simple. Start with a basemap and mash it up with your own data layers or those from other ArcGIS users. Then add tools that support what you want your users to do with your map: tell stories, perform analytical studies, collect data in the field, or monitor and manage operations.

Maps are how you deploy your GIS

Virtually anything you do with GIS can be shared using maps. And they can go anywhere. GIS maps work online and on any smartphone, and along with your supporting GIS work, they are accessible anytime. Online web maps have forever transformed computing and the web.

Skill-BUILDER 1: Explore a Web Map

Web GIS revolves around the map. It's the framework for your data and the primary geographic container that gets shared and embedded in your apps. In ArcGIS it is called a web map.

In this Skill Builder you will learn how to:

- Open an existing web map
 - Change basemaps
 - Style map layers

Each map contains a reference basemap along with a set of additional data layers, plus tools that work on these layers. The tools can do simple things, such as open a pop-up window when you click on the map, or more complex things, such as performing spatial analysis. This exercise will help you get acquainted with the basics of the ArcGIS Online interface.

1. Open an existing web map

The first part of this Skill-builder is to open an existing web map to see how it's constructed.

- Click the link to open a map called [Web Mapping in ArcGIS Online](#).

In order to see what's included in the map, look at its list of contents.

- Next to the map, click on the Show Contents of Map button



There are 4 layers in the list of contents: State Capitals, U.S. Major Rivers, U.S. State Boundaries, and Topographic. The first three are data layers and Topographic is the basemap.

2. Turn layers on and off

The capitals, rivers, and boundaries layers have a check box in front of the layer name.

- Click in the checkbox to see what happens. Checking a layer box turns it on and makes it visible.
- Click the checkbox again to turn the layer off.

3. Change the Basemap

Basemaps provide locational context (the "stage") for the content that is to be overlaid on them. When constructing your map, there are many basemaps to choose from.

- Click the Basemap tab on the map's menu ribbon.
- Select a new basemap to see the differences from the topographic basemap. Turn the layers on above the new basemap.
- Experiment with other basemaps to see how they change your impressions.
- Select the Imagery basemap, and turn on the **U.S. States Boundaries layer**.

4. Change the appearance of the State Boundaries layer

The state boundaries on your new map are a little hard to see. They might be easier to discern in a different color.

- Click Modify Map in the upper right corner above the map.
- Click the U.S. States Boundaries layer name to display an array of icons. Click on the Change Style icon.

The style of your data includes its symbols, transparency, and visibility range. The Change Style pane provides style choices based on the nature of your data. It uses the type of data you are using (for example, points or lines), the attributes used to describe your data, and your basemap to provide options that can help you better represent your data. In the current example, we'll just change the color to make the boundaries easier to see.

- For Select a Drawing Style, click OPTIONS.
- Click Symbols.
- What you want to change is the layer's outline, so click Outline.
- Choose a color that is lighter than the current gray boundary line. Notice that you can also change the line width and the line's transparency.
- Experiment with different possibilities.
- Click OK when you've decided on the color you want to use.
- Once you've made a final selection, click OK again, and then DONE to make the style change in your map.

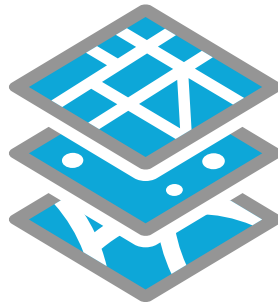
So far, you've been working with ArcGIS Online without the need to sign in. Additional lessons to increase your skill without signing in to an ArcGIS account can be found by using the [Curriculum Builder](#). Search for Software Access: Account not required.

Anyone can make, share, and use web maps

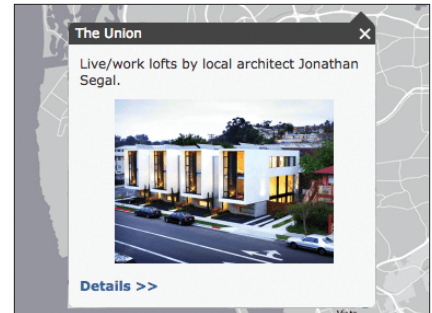
This map creation a pattern is something you can follow every time you start a new project:



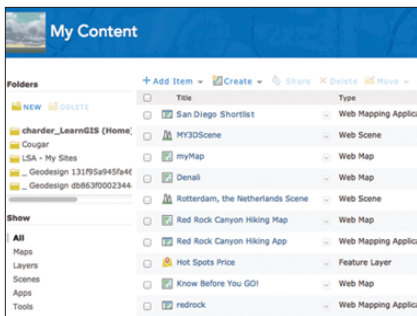
Select a basemap and zoom into your area of interest.



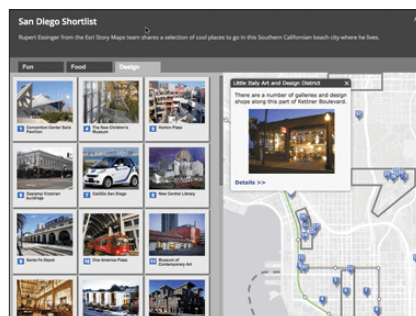
Add your data layers and specify how each will be symbolized and portrayed.



Create pop-ups that enable users to explore features by clicking on them.



Save your map into your My Content folder with a good description and a thoughtful name.



Share your map as a story map or other configurable web app.