

## Tutorial Overview

In this tutorial, you will be introduced to the basics of the **ArcGIS Online** web-based Geographic Information System (GIS) software tool. You will begin by exploring spatial data in the form of map layers that are available online as well as data in Web applications (apps). You will then use the ArcGIS Online Map Viewer to search for content, add features to a map and save and share your completed map with others.

### Skills:

- Create web maps
- Save and share maps
- Content page to organize work
- Search and add data
- Create new map features
- Change symbology.

**Time Required:** 60 – 75 minutes

### Materials Required:

- An ArcGIS Online organization account. If you have not been given an account, speak with your teacher. Teachers - for information on joining an ArcGIS Online Organization, please visit [www.esri.ca/agolaccess](http://www.esri.ca/agolaccess). For more information on ArcGIS Online, visit: [www.arcgis.com](http://www.arcgis.com).
- Internet browser (e.g., Mozilla Firefox, Google Chrome, Safari, Internet Explorer).
- An electronic version of this tutorial is available at: <http://bit.ly/2qhR7HL>.

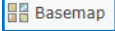
## Part A: The Map Viewer


You will begin by opening the **ArcGIS Online Map Viewer** to create your first Web map and explore some of the features of the ArcGIS Online software tool.

1. Ensure you are still **Signed in** to your ArcGIS Online account from [www.arcgis.com](http://www.arcgis.com).
2. Click the **Map** button at the top of the ArcGIS Online home page. This will launch the **ArcGIS Online Map Viewer**. The Map Viewer is the default location for creating new or viewing existing Web maps and data within ArcGIS Online.



Home Gallery **Map** Scene Groups Content Organization

3. Click on the **Basemap** button  Basemap. You will see there is a good variety of available basemaps to choose from. The default map layer is the world Topographic basemap. Select a basemap by clicking on it and the map content will change. Keep in mind that you can change the basemap at any time during your use of ArcGIS Online.

4. Locate the **search box**  in the upper-right corner of the **Map Viewer**. Use the search box to zoom to a location of interest. The search box can be used to locate countries, cities, specific addresses, institutions such as universities and even certain named monuments. For accurate search results, include as much information as possible, such as *Address, City, Province* and *Postal Code*.

**Note:** It is important to note here that the search box in the Map Viewer is used to search for geographic locations on the map, NOT content on ArcGIS Online.

5. You can also **zoom** in to an area of interest. There are two ways you can do this:

- a. Zoom by either using the scroll wheel on your mouse, or the + button that appears on the



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left side of the map.

- b. Hold down the *Shift* key and at the same time, left-click on your mouse and drag the cursor to draw a rectangle on your map to zoom into a specific area of interest

**Note:** If you zoom in too far, you may receive a message saying 'Map Data Not Available'. Zoom out until the map is properly visible.

6. If you need to reposition the map, you can **pan** by left-clicking on the mouse, hold and drag the map to a new position, or use the arrow keys on your keyboard.



## Part B: Search and Add Data Layers to your Map


In the map viewer, you can also search for data layers to add to your map. In this part of the tutorial, you will search and add different data layers to your map.

1. In the map viewer, click **Add > Search for Layers > click My Content** and select **ArcGIS Online**. Type in the keyword (see examples below) in the search window.

Some keywords you can use to find content include:

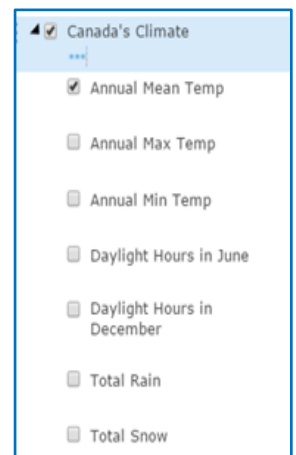
- **"ArcCanada"** (data include: Canada's Climate, Earth's tectonic plates, natural events, Canada's population density, and much more).
- **"Livedfeed"** (data include: Wind speed, Earthquakes, Hurricanes).
- **"World Bank"** (data include: economic and social indicators like GDP, education levels, and age and population).

2. When the results appear, click on the layer name of choice to view information about the layer, and then click on **Add to map** if you want to include it on your map. Or you can click  to quickly add the layer to the map.
3. When you have added all the layer(s) to your map, click on the  to return to the *Content* section.

You can turn a layer off by unchecking it in the *Content* section. If you would like to remove a layer from your map, hover over the layer name, select the **More Options**  icon and click on **Remove**.



4. Click **Legend** to view the map details.

The data used in this screenshot shows additional layers below the layer Canada's Climate created by EsriCanadaEd. Note that some layers require you to click below the title layer when it appears in the *Content* section because there may be multiple layers to choose from. Change the data displayed on your map by unchecking the data layer you want to turn off, and checking the box next to the data layer you want to turn on.




## Part C: Adding Features to your Map

In this part of the tutorial, you will create a new map and add your own features to it. Think of something you would like to map. For example: favourite places, cities you would like to visit, or your route from home to school.


1. In the top right-hand corner of the map viewer, click on **New Map**  and select **Create New Map** to clear the layers that you added.
2. Click on the **Add** button  and select **Add Map Notes**.
3. When the *Map Notes* window appears, ensure the *Template* is **Map Notes**, and update the *Name* field to represent the data you will be creating, for example, type in *My Community*. Click on **Create**.
4. A list of features (*Add Features* window) has appeared to the left of your screen.

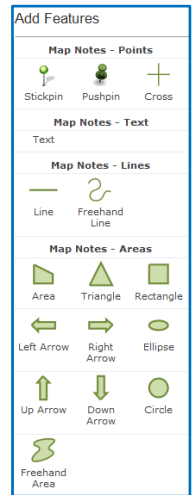


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5. A new **Edit**  button has also appeared at the top of the page. When this button is selected, the *Add Features* window will be displayed on the left side of the page.


The **Map Notes** template allows you to add your own content in the form of *notes* attached to features on the map. A feature can be a point, line, or area (polygon) displayed on the map that you add descriptive popup information to including text, images, or links to Web sites. You can also add text, shapes, and other features directly to your map without a popup note.



6. In the *Add Features* window, choose the **Area**  icon.
  - a. Single click with the left mouse button on the map to start drawing the outline of a feature of interest. Make an additional left click for every change of direction and when you have entered the last change of direction double-click to close the area (polygon).
    - i. Examples of areas that you could draw include:
      - i. A study area, water bodies, battlefields, building footprint, and disaster zones.
    - b. You can also add **line** and **point** features to your map using the appropriate icons in the *Add Features* window. Lines can represent roads, rivers, or routes and are entered in the same way as areas with a double click to end the line. Points can represent the location of something (schools, trees, robberies) and are entered with a single mouse click.

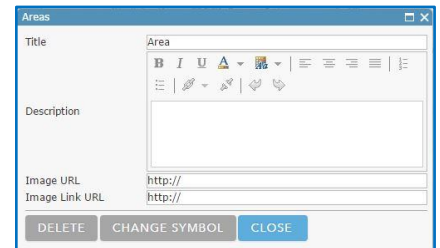


To give additional meaning to the feature(s) you have created, you will now **add attribute data to your features** by writing about the feature. Additional information for map notes is displayed in the form of popups that appear when a feature is selected by clicking on your map outside of an edit session.

7. When you have finished drawing each of your feature(s), you will be presented with the attribute window. Use this window to add descriptive information, such as a *title*, *description*, an *image*, or *URL* for a relevant Web site. You can also configure the popup display by formatting the text or altering the colours used. If you are not satisfied with the feature that you added, you may remove it using the **Delete** button.



**Note:** If you accidentally close this window, you can get back to it at any time by clicking on your feature while the **Edit**  is active.

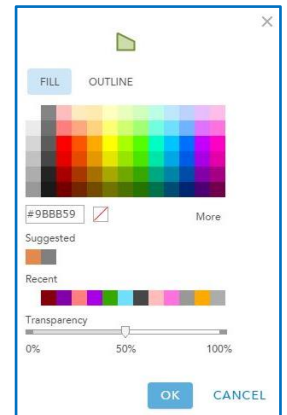
8. Add a title and description to your pop-up. You can add hyperlinks to your description by using the **Create Link**  button.
9. You can also add images to your pop-up. Images must come from the Internet (i.e. from a Web site or image repository such as Flickr) and be in JPEG, GIF, or PNG format. Find your image online, copy the image location, and paste it in the *Image URL* space.
10. You can also add an image link, so that your image will be hyperlinked to a Web site. To do this, add the Website URL to the *Image Link URL* space.
11. **Close** the features attribute window when you are finished and it is automatically saved.
12. Click on **Edit**  to leave your editing session. Click on the feature you just updated, and you should see the information and image you added in a popup. If you included an URL to link to, click on the image and see if it worked.





## Part D: Symbolizing your Features

In this part of the tutorial, you will alter the way your features are displayed on the map by changing the symbol, colour, outline, or transparency. Use these tools also to show similarities or differences between features.


1. With the **Edit** button  still active, select an **area** feature that you created.
  - a. In the attribute window, select the **Change Symbol** button .
  - b. From here, you can select from a number of predefined colours. Choose a colour for your feature and set the *Transparency* to **70%**. This will allow you to see any features that are hidden underneath your area feature. This is particularly useful if your area feature is large and obscures part of the underlying basemap or data layer.
  - c. When you are finished, click **OK**. Click **Close** in the attribute window to return to your map.



2. Select a **line** feature from your map and select **Change Symbol**.
  - a. Choose a template that is appropriate for your line feature. For instance, you may represent a walking path by using a dashed line, while a river will be represented by a solid blue line.
  - b. When you are finished, click **OK**. Click **Close** in the attribute window to return to your map.
3. Finally, select a **point** feature from your map and select **Change Symbol**.
  - a. With point features, you can choose from a number of predefined templates from the drop-down menu , alter the size of the point, or even add your own image or icon to use for the point.
  - b. To add your own image: Find the URL for an image that is hosted online. Copy the image location. Make sure the image is in JPEG, GIF, or PNG format.
  - c. Click on *Use an Image* and then paste the selected link in the *Use an Image space*. 
  - d. Click **Done** when you have added the URL then click **OK** in the *Change Symbol* window and return to your map.

## Part E: Adding Text to your Map

In this part of the tutorial, you will add text directly to your map. This is useful if you are creating a map that you will be printing. Use the text to label features, add a title, or annotate your map.

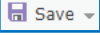
1. With the **Edit** button  still active, select the **Text** feature from the *Map Notes* window.
2. Single click with the left mouse button anywhere on the map to add a text box. When you are done typing your text, click **Enter**.
3. To adjust the size and orientation of your text, click on the text. Squares will appear around your text. The top-middle box can be used to change the orientation of your text and the corner boxes can be used to change the size. You can also change the alignment, colour, or add a halo using the *Change Symbol menu* that appears on the left-hand side of the screen.
4. When you are finished adding text, unselect the **Edit** button and explore the features on your map.




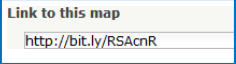


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## Part F: Saving and Sharing your Map



In this part of the tutorial, you will save and share your map. You will also learn how to find, organize, and edit your maps through the *Content* page.

1. It is now time to save your map. Click the **Save** button  located above your map, and select **Save As**.
2. In the *Save Map* window, enter an appropriate *title*, *summary*, and a set of *tags* that will make your map easy for others to find if they search for it on the Internet. When you are finished, click the **Save Map** button. Your map is now saved to your ArcGIS Online account.

**Note:** You can access your map by locating it within the **Content** section of ArcGIS Online.

3. Click the **Share** button  located above your map. From the *Share* window that appears, you can do any of the following or you can keep your map private:
  - Select whom to share your map with. You can share it publicly and/or to a group (if you have one set up already).
  - Share your map using a unique Web URL:  `http://bit.ly/RSAcnR`
  - Embed your Web map in a Web site: 
  - Create your own customized Web app that uses your Web map: 
4. Click **Done** to exit the *Share* window.

The **Content** page allows you to view and organize your content. This is everything you have created and saved in your account. You can also create folders to help organize your data and Web maps.

1. Go to **Home** located at the top left-hand corner of the page and select **Content**.
2. In the *Folders* section, click the  **New** icon to create a new folder and type '**Tutorial Maps**' as the folder name.
3. Under **All My Content** in the *Folders* section, click the check box  beside your recently created map to select it. A few options will appear at the top of the page, click the **Move** button  and select the **Tutorial Maps** folder as the folder to move this map to.

## Next Steps

Want to learn how to measure distance and area in ArcGIS Online? Check out the “**Measuring Features in ArcGIS Online**” tutorial: <http://bit.ly/2uBq8ZT>

Want to learn more about creating filters (queries) so you can see a subset of your data and conduct analysis on your map? Check out the “**Using Tables and Filters**” tutorial: <http://bit.ly/2uBqZdb>

Want to learn more about creating custom Web applications? Check out the “**Creating Web Applications**” tutorial: <http://bit.ly/2prBWYv> .

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