# Fight Child Poverty with Demographic Analysis

The poverty-fighting charity you work for wants to alleviate suffering among impoverished children in Little Rock, Arkansas. In this lesson, you'll combine census-tract data with ArcGIS Living Atlas of the World demographic information to identify the most poverty-stricken neighborhoods. With that newly discovered knowledge, you'll configure an app which will help you articulate a report to top donors.

| 1. Create a map | Create a map showing median household income in Little Rock. | 20 minutes |
|---|---|---|
| 2. Change layer style and configure pop-ups | Style the layer based on two attributes and configure pop-ups to reveal patterns in the data. | 25 minutes |
| 3. Find patterns in the map | Interact with the map to discover patterns and answer questions. | 15 minutes |
| 4. Share analysis results | Configure a web app to share the findings of your analysis. | 20 minutes |

This activity is adapted from the Esri Learn ArcGIS Lesson: Fight Child Poverty with Demographic Analysis (http://learn.arcgis.com/en/projects/fight-child-poverty-with-demographic-analysis/).

# 1. Create a map

In this lesson, you'll create a map that shows areas of high and low median household income in Little Rock, Arkansas. You'll start by finding your area of interest on a new map and changing the basemap. Next, you'll add a layer of census tract boundaries from ArcGIS Living Atlas of the World, a collection of ready-to-use geographic information on thousands of topics. Then, you'll add population and income data to the layer by enriching it and view the enriched layer's attribute table to see the data it contains. Finally, you'll style your layer to show median household income by census tract area.

## 1.1   Locate the study area

First, you'll locate Little Rock, Arkansas, on a map in ArcGIS. Then, you'll choose a basemap to provide a neutral background for your map.

**1.** At the top of your organization home page, click Map.
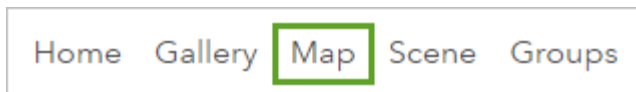


A new map opens. The map extent for a new map is set to the default extent of your organization.

**Note:** If you're in a new session, clicking Map opens a new map. Otherwise, it opens an existing map (the last map you were using). If an existing map opens, click New Map in the upper right corner of the page, and choose Create New Map.

**2.** In the search box to the upper right of the map, type Little Rock. In the list of suggested locations, click Little Rock, AR, USA.
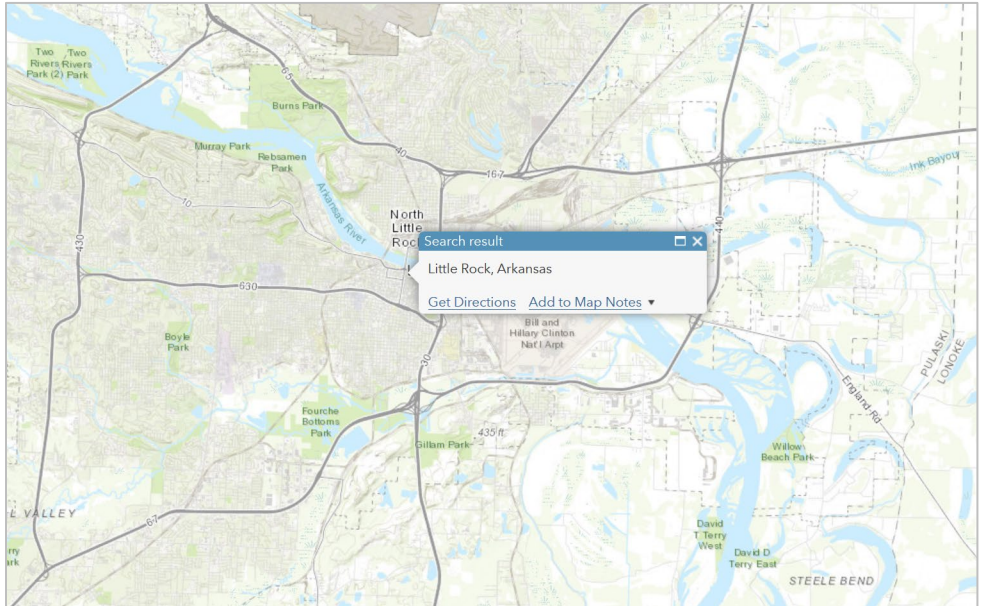


Every new map starts with a basemap, which provides geographic context for the data you want to display on the map. This lesson assumes that the default basemap is Topographic, but your organization may use a different default. The colors, labels, and features of the Topographic basemap may hide some of your data, so you'll choose a more neutral basemap.

**3.** On the ribbon above the map, click the Basemap button and click Light Gray Canvas.
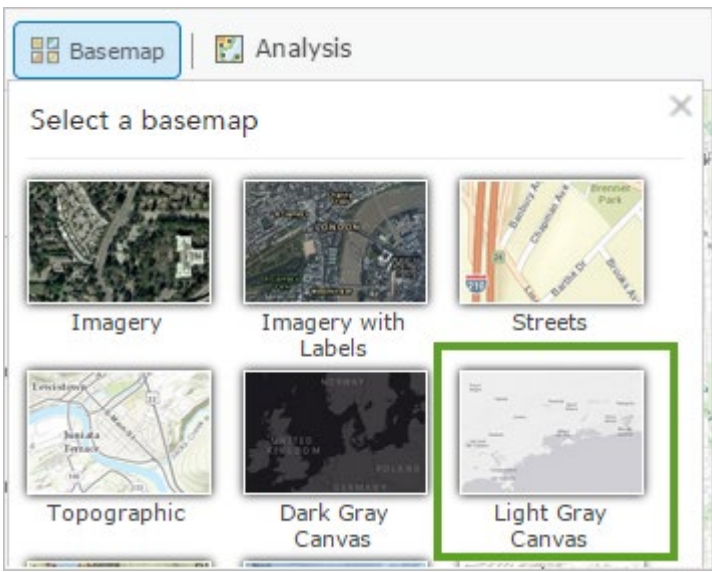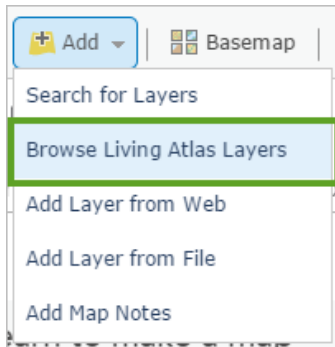


The map updates with the new basemap.

## 1.2   Add a Living Atlas layer

Next, you'll add a Living Atlas layer that shows census tract boundaries. United States census tracts divide state counties into smaller geographic areas, which are useful for revealing local spatial patterns.

1.  On the ribbon, click the Add button and click Browse Living Atlas Layers.



The Living Atlas pane opens. You can filter the list by specific categories to more easily find the layer you want.

2.  In the search box, click the Filter button. In the Filter pane, click the drop-down arrow for Categories. Expand Boundaries and click Administrative.
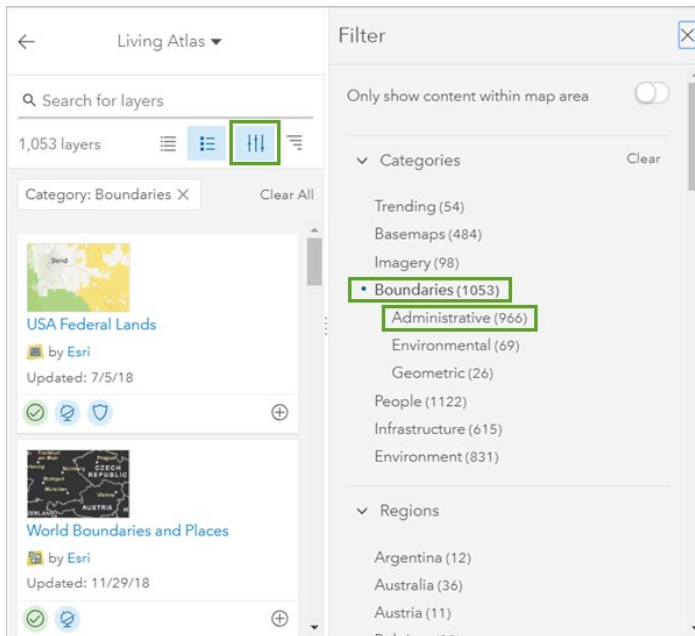


The filtered list on the left updates to display results for the administrative boundaries filter. The list is narrowed down, but still quite large. Next, you refine your search within this category by searching for Census layers within the category.

3.  In the search box, type census and press Enter.

**4.** Click USA Census Tract Areas and click Add to Map.
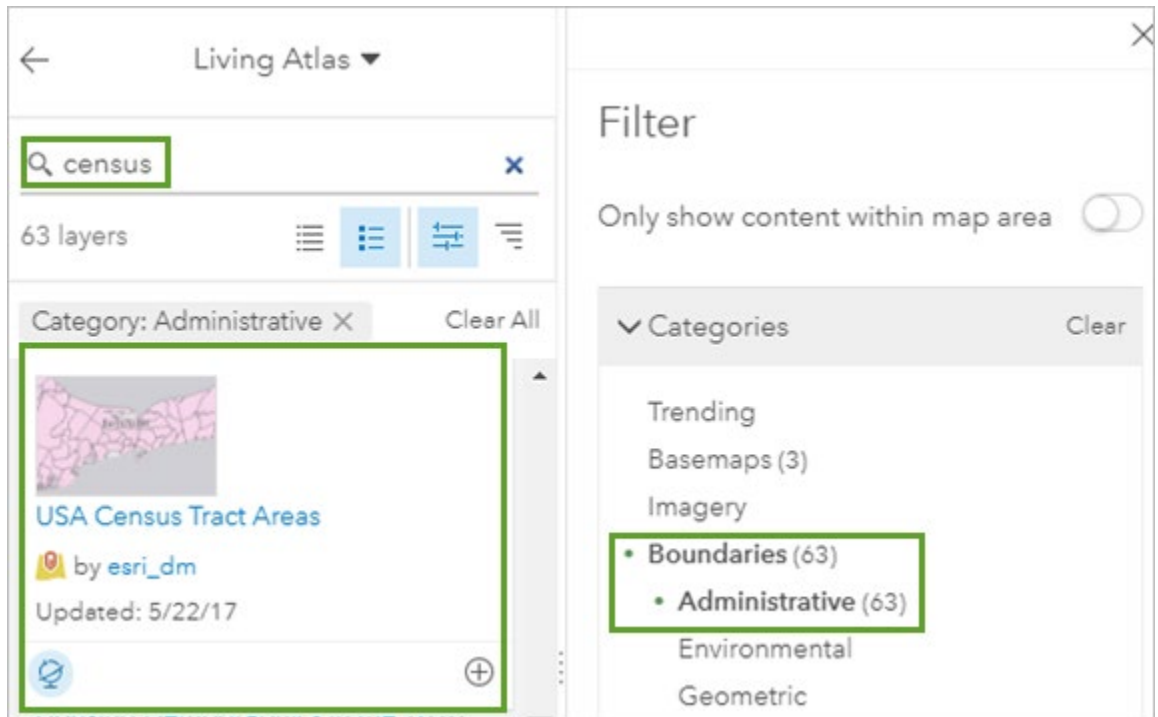


The layer is added to the map.

**5.** In the Filter pane, top right corner, click X to dismiss the filter.
**6.** In the Search pane, click the Back arrow to return to the Contents pane.

The name of the layer appears in the Contents pane.

7. Pan the map so that Little Rock is in the middle of the map. Then zoom out, if necessary, until you can see at least Maumelle in the upper left corner and Jacksonville in the upper right corner. (Use the image below as a guide.)

   **Note:** If your map has a different extent, some of your results may be slightly different than what is shown in the lessons. For meaningful analysis results, make sure that your map shows several census tract areas surrounding Little Rock.
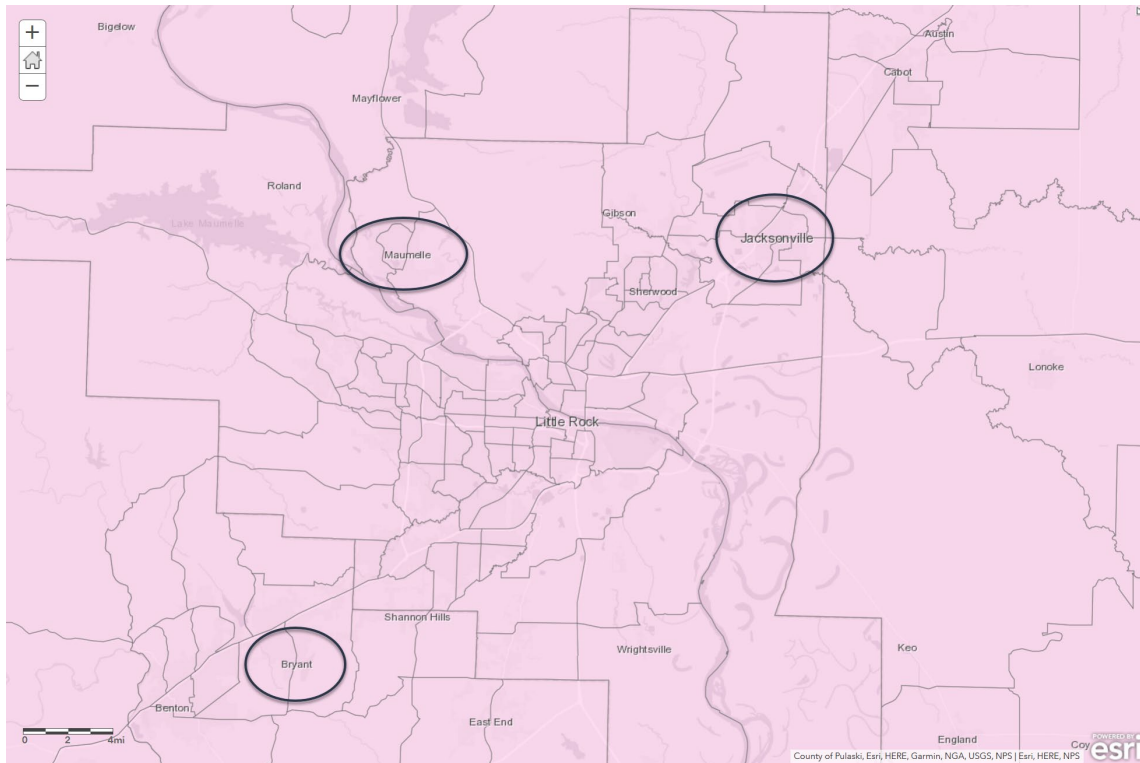


The census tracts layer is displayed in pink, showing boundaries for census tract areas of various sizes and shapes in the Little Rock region.

## 1.3   Enrich the layer

Next, you'll enrich your census tracts layer with population and income data using the Enrich Layer spatial analysis tool. Analysis tools help you answer questions and make important decisions using more than simple visual analysis.

1. On the ribbon, click the Analysis button.
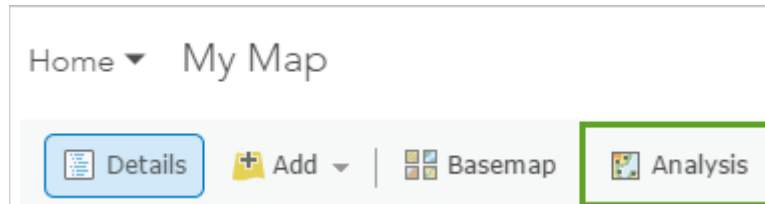


2. In the Perform Analysis pane, click Data Enrichment and click Enrich Layer.
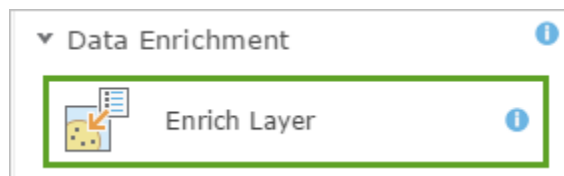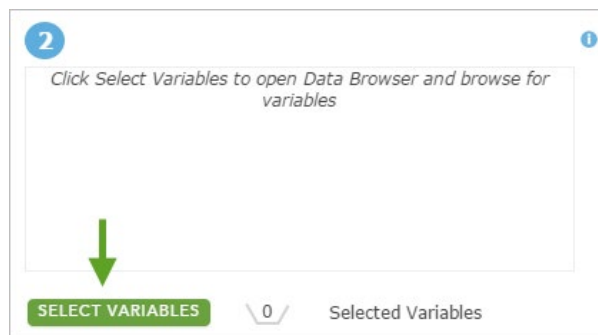


The Enrich Layer tool opens. This tool enriches data by getting facts about the people, places, and businesses that surround data locations.

3. For Choose layer to enrich with new data, choose USA Census Tract Areas.



Next, you'll choose the variables with which to enrich this data.

4. Click Select Variables.

The Data Browser window opens. The Data Browser allows you to browse and search for detailed demographic information, or variables, about a specific country or category, including population, education, income, and health.

First, you'll choose population variables to help you find areas where children are most at risk in Little Rock.

5. Verify that the country is set to United States.
6. Locate and click the At Risk category. (If necessary, click the gray arrow on the right to scroll to the second page.)



7. At the bottom of the Data Browser pane, click Show all At Risk Variables.
8. Expand 2018 Key Demographic Indicators (Esri). Check the 2018 Children (Age <14) and 2018 Total Population (Esri) boxes.

   **Note:**

   Demographic data is updated periodically, so the available variables and values may differ from those specified in the lesson. If necessary, use the most recent data.

   Next, you'll choose a variable for household income to locate areas of poverty.

9. At the upper left of the Data Browser window, click the menu button to return to the main menu of categories.
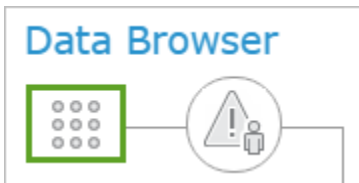


10. Locate and click the Income category. In the list of popular variables, check the 2018 Median Household Income (Esri) box.

**11.** At the upper right of the window, confirm that the number indicates that three variables are selected. Click Apply.
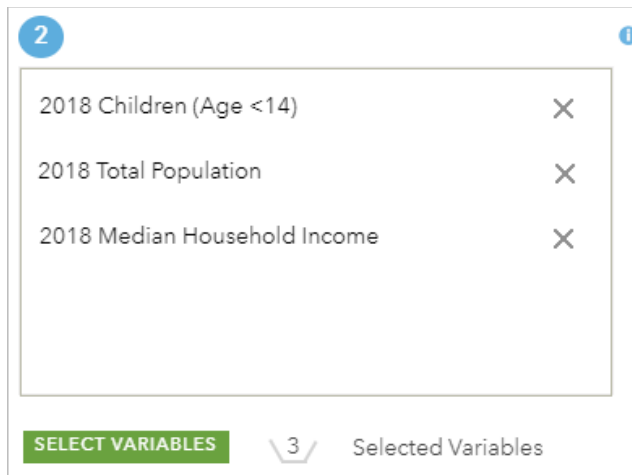


The Data Browser window closes. The three variables that you chose are listed under the second parameter of the Enrich Layer tool. The third tool parameter defines areas around point and line features to enrich. You're enriching a polygon layer, so you don't need to define an area.

**12.** Change the result layer name to Little Rock Demographics (your name), adding your name or initials to make sure the name is unique within your organization.

**Note:** New items created by analysis operations must have unique names within your ArcGIS organization. Once the layer has been created, you can rename it in your map.

**13.** Confirm that Use current map extent is checked.



If this box is checked, only the census tract features that are visible in the current map extent will be enriched. The census tracts layer encompasses the entire United States, so if you unchecked this box, the analysis would take a long time. Analyzing the entire layer would also use a large number of credits. Credits are the currency for ArcGIS organizations and are consumed when using certain functions, including spatial analysis.

**Tip:** To view how many credits are required to perform this analysis, click Show Credits.

**14.** Click Run Analysis.

When the operation finishes, the enriched census tracts layer is added to the map.
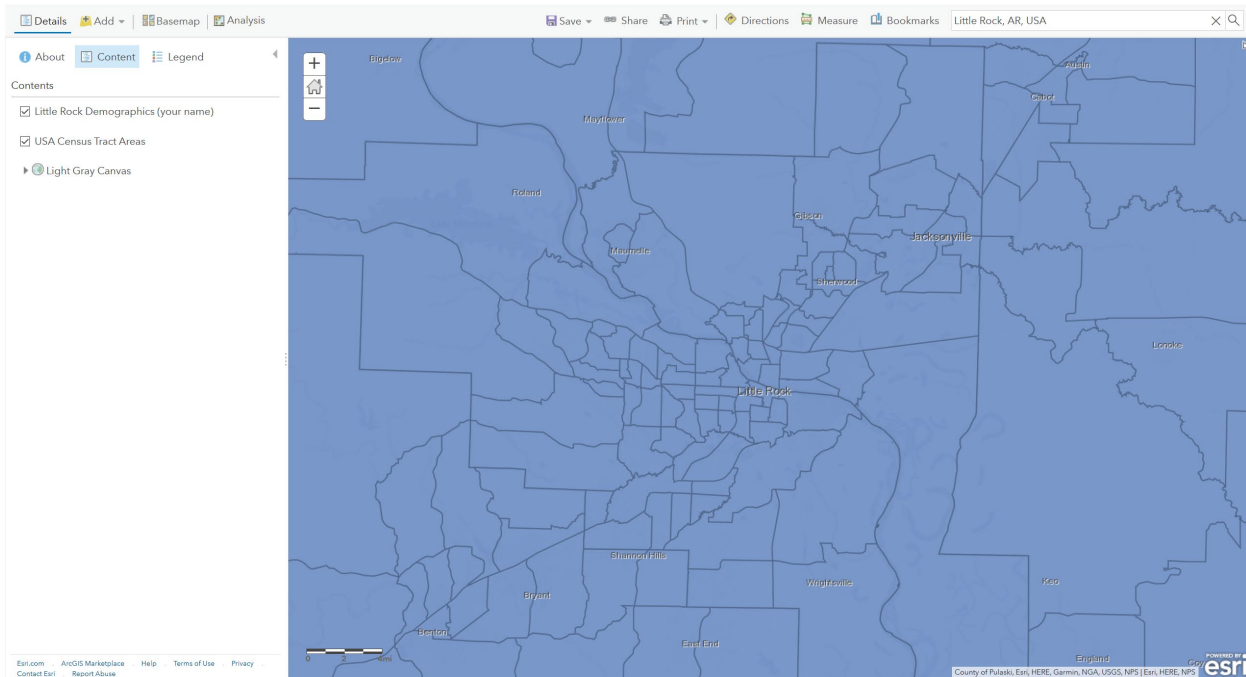


You'll rename the Little Rock Demographics layer so it doesn't show your name or initials.

**15.** In the Contents pane, point to the Little Rock Demographics layer, click the More Options button, and choose Rename.
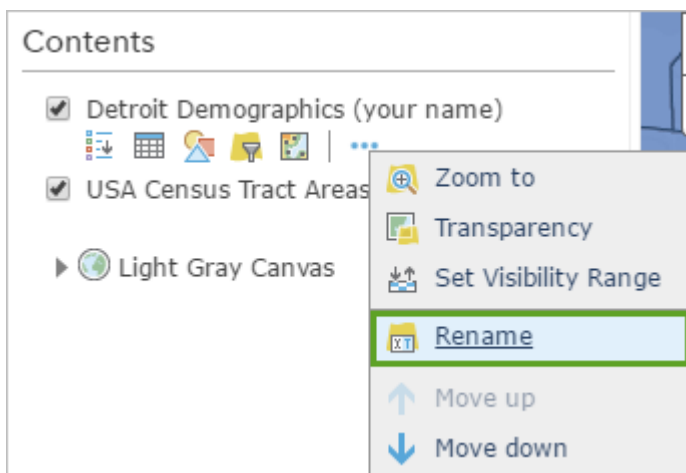
**16.** Remove your name or initials and click OK.

The new layer looks similar to the original layer, but its features have new demographic data that you can use to change the layer's style and properties. You can see this new attribute information in the layer's table or default pop-up.

First, you'll remove the original USA Census Tract Areas layer, which is no longer needed.

**17.** In the Contents pane, point to the USA Census Tract Areas layer, click the More Options button, and choose Remove.
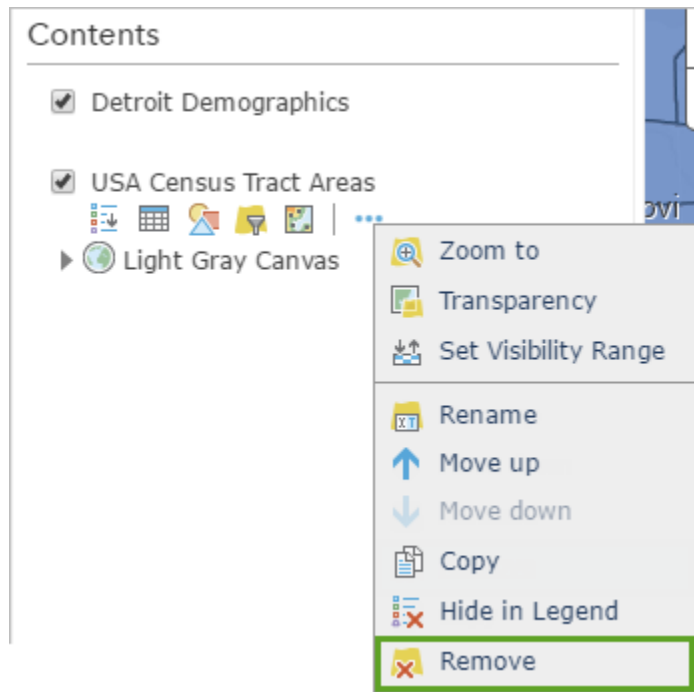


The layer is removed from both the map and the Contents pane.

# 1.4   View the attribute table

Every layer in a map has an associated attribute table that contains information about the geographic features in the layer. You'll view the attribute table for the Little Rock Demographics layer to better understand the data it contains.

1.  In the Contents pane, point to the Little Rock Demographics layer and click the Show Table button.
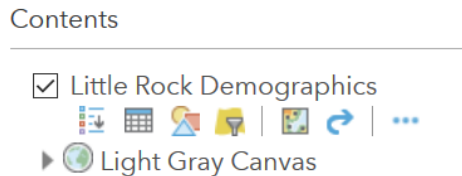


**Note:** You may have used more current demographic data in your data enrichment, and as a result, column names and attribute values may differ from those published in this lesson.

The layer's attribute table opens below the map. Each row in the table represents a feature (in this case, a census tract area). The columns, or fields, in the table provide different types of information about the census tract features. For example, the FIPS field contains a code that represents the state, county, and census tract identifier for each census tract feature, and the SQMI field provides the square mileage value for the census tract area.

**Tip:** Selecting a row in the table will select the corresponding feature on the map. You can use the Options menu to zoom to the selected feature and clear the selection.

2.  If necessary, use the scroll bar at the bottom of the table to scroll all the way to the right.

| 2018 Total Population — | 2018 Children (Age <14) | 2018 Median Household Income |
|---|---|---|
| 3,201.00 | 706.00 | 87,117.00 |
| 3,788.00 | 472.00 | 42,325.00 |
| 2,112.00 | 574.00 | 18,174.00 |
| 1,467.00 | 160.00 | 20,826.00 |
| 1,800.00 | 297.00 | 32,816.00 |

The demographic attributes that you added when you enriched the layer are listed as fields in the table. You'll apply a style to the layer using the values of the 2018 Median Household Income field.

3. In the Contents pane, point to the Little Rock Demographics layer and click the Hide Table button.
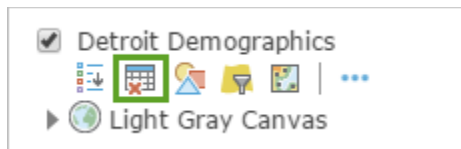


## 1.5 Style the layer

The Little Rock Demographics layer is currently styled by location, showing all census tract boundaries in blue. You'll change the style of the layer to show and compare median household income.

1. In the Contents pane, point to the Little Rock Demographics layer and click the Change Style button.
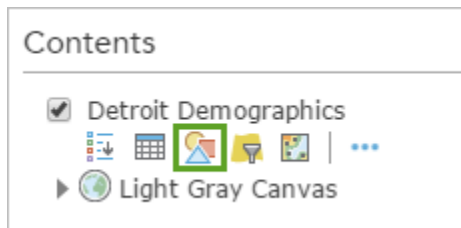


The Change Style pane opens.

2. For Choose an attribute to show, choose 2018 Median Household Income.

Based on the attribute you chose to map, several styles are offered. The nature of your data determines the default style suggestions. This is known as smart mapping. The recommended smart mapping style—in this case, Counts and Amounts (Color)—is marked with a blue check mark. The layer automatically updates on the map with a default color ramp that represents low to high median household income. Areas with the lowest median household income are drawn with a light color, while those with the highest values are drawn with a dark color. For now, you'll accept the default style.

3. At the bottom of the Change Style pane, **click Done**.
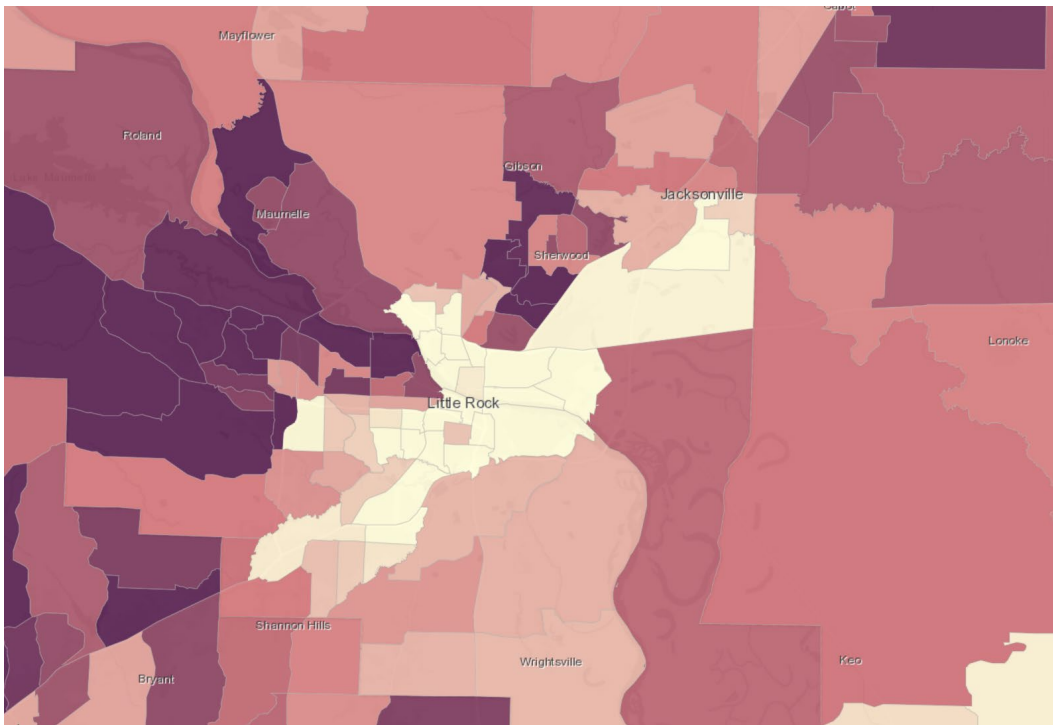
By applying the recommended Counts and Amounts (Color) style to show median household income by census tract area on the map, you can see a clear pattern of low median household income in areas surrounding the Little Rock city center. Later, you'll make adjustments to this style to help you identify areas in Little Rock with high numbers of children under the age of 14.

## 1.6 Save the map

Now you'll save your map and assign it a title, tags, and a summary to make it easy to find and identify later.

1. On the ribbon, click the Save button and click Save As.



2. In the Title box, type Little Rock Demographic Analysis.
3. In the Tags box, type each of the following tags, pressing Enter after each one:
   o Little Rock
   o child poverty
   o demographic data
   o income data
   o census tracts

   **Tip:** If you're signed in with an organizational account and your organization has set up content categories, you can assign your map to one or more categories to make it easier for others to find. To do so, click Assign Category and choose categories from the list. You can also use the Filter categories box to narrow the list of categories.

4. In the Summary box, type This map shows demographic data in Little Rock.
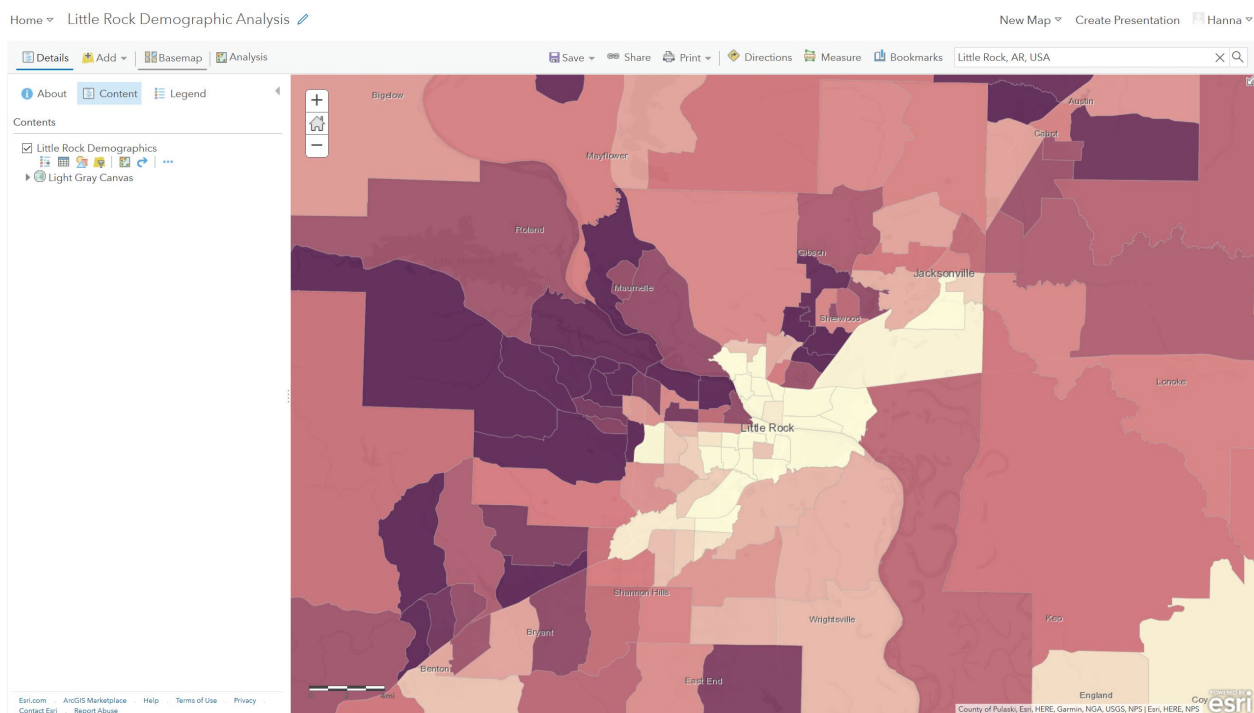


5. Click Save Map.

   The map is saved with the specified title, tags, and summary. (Once you've saved your map, it appears in your content, which you can access from the Home menu.)

In this lesson, you located the city of Little Rock on a map and changed the basemap. You then added a layer of census tract areas from Living Atlas and enriched it with population and income data. Finally, you styled the layer to show median household income by census tract area and discovered a pattern of low median household income areas surrounding the Little Rock city center. In the next lesson, you'll change the style of the Little Rock Demographics layer to show both median household income and child population on the map. You'll also configure pop-ups to emphasize patterns in the data.

# 2. Change layer style and configure popups

In this lesson, you'll apply style changes to the map that you made in the previous lesson, and you'll configure pop-ups to display useful information. These updates will identify areas of high child population and low household income in Little Rock, helping your charity decide where to allocate funding this year.

## 2.1   Change the style

The Little Rock Demographics layer is currently styled based on one attribute: median household income. You'll change the style of the layer to highlight both of the demographic attributes that you want to display: median household income and child population.

1. In the Contents pane, point to the Little Rock Demographics layer and click the Change Style button.
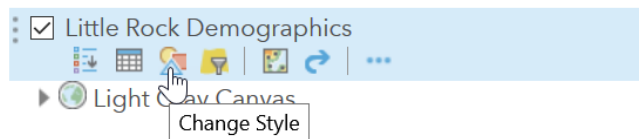


The Change Style pane opens. Currently, the map has a layer styled based on one attribute—median household income. You'll add a second attribute—child population—so that both attributes can be represented in the same map layer.

2. For Choose an attribute to show, click Add attribute.
3. For the second attribute, choose 2018 Children (Age <14).
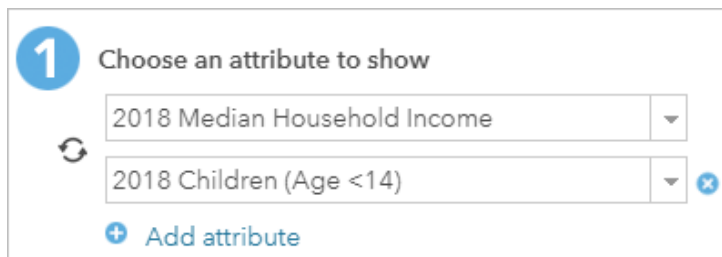


Based on the two attributes you chose to map, several drawing styles are offered. The Color and Size style is recommended, as indicated with a blue check mark. This style uses colors and different-sized symbols to show two attributes in a single layer on the map. The layer automatically updates on the map with a new default style, with circles for each census tract. The size of the circle indicates the number of children, while the color of the circle indicates median household income.

Before you accept the default settings, you'll make a few small changes to refine the style.

4. Under Color and Size, click Options.
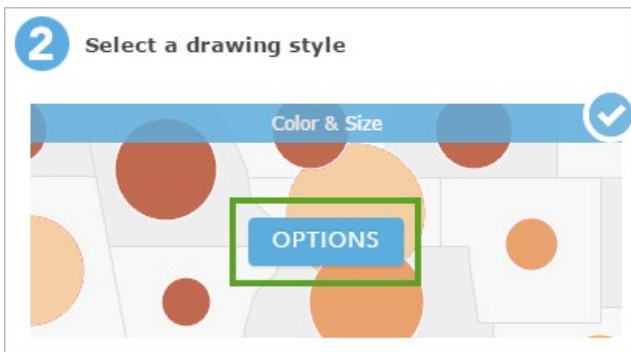
The Color and Size style is using color to show 2018 Median Household Income and size to show 2018 Children (Age <14). You'll change the theme and color to reflect median household incomes that are above and below the average.

**5.** Under Counts and Amounts (Color), click Options.
**6.** For Theme, choose Above and Below.
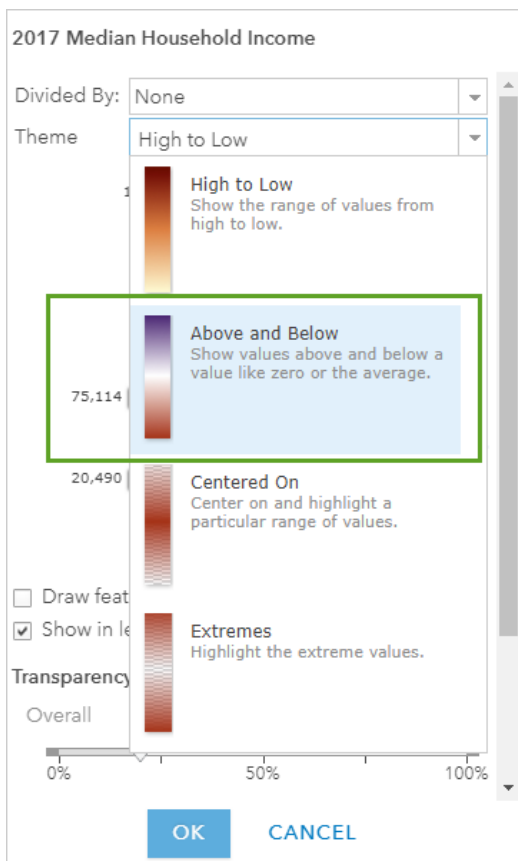


Unlike the default single-color ramp, Above and Below uses two color ramps to emphasize values that are either above the average value or below it. With this style, it will be easy to see at a glance which areas have below-average income levels. Next, you'll change the colors used.
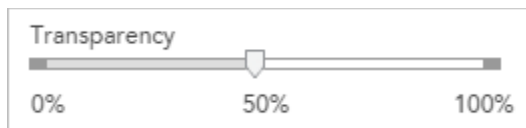
**7.** Click Symbols.
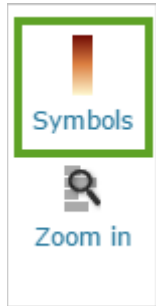


A window opens with options to change the shape, color, and outline of the symbols on the map.

**8.** Click Fill and click the blue-to-orange color ramp.
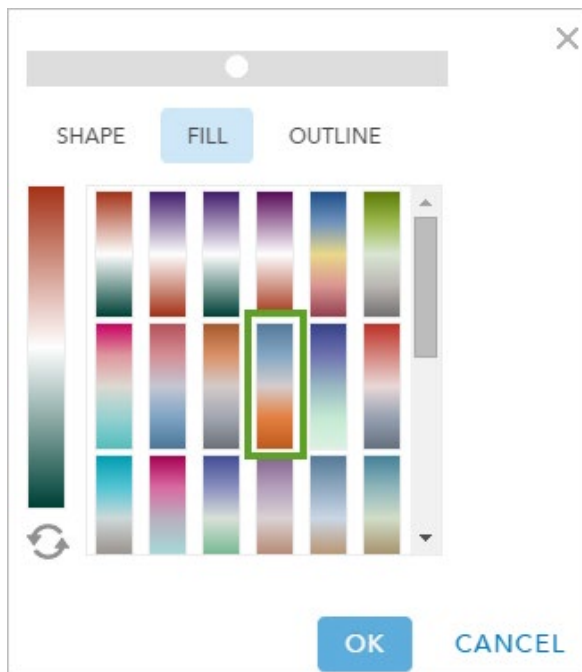


**9.** Click Outline and change the transparency to 50%, if necessary.



**10.** Click OK and then click OK in the Change Style pane.

Many symbols overlap, so you'll reduce their size to help highlight the overall pattern of high and low values.

**11.** Under Counts and Amounts (Size), click Options.

12. For Size, choose Specify size range. Confirm that the Min size is 8 px (pixels) and change the Max size to 40 px.
13. At the bottom of the Change Style pane, click OK. **Click Done twice.**
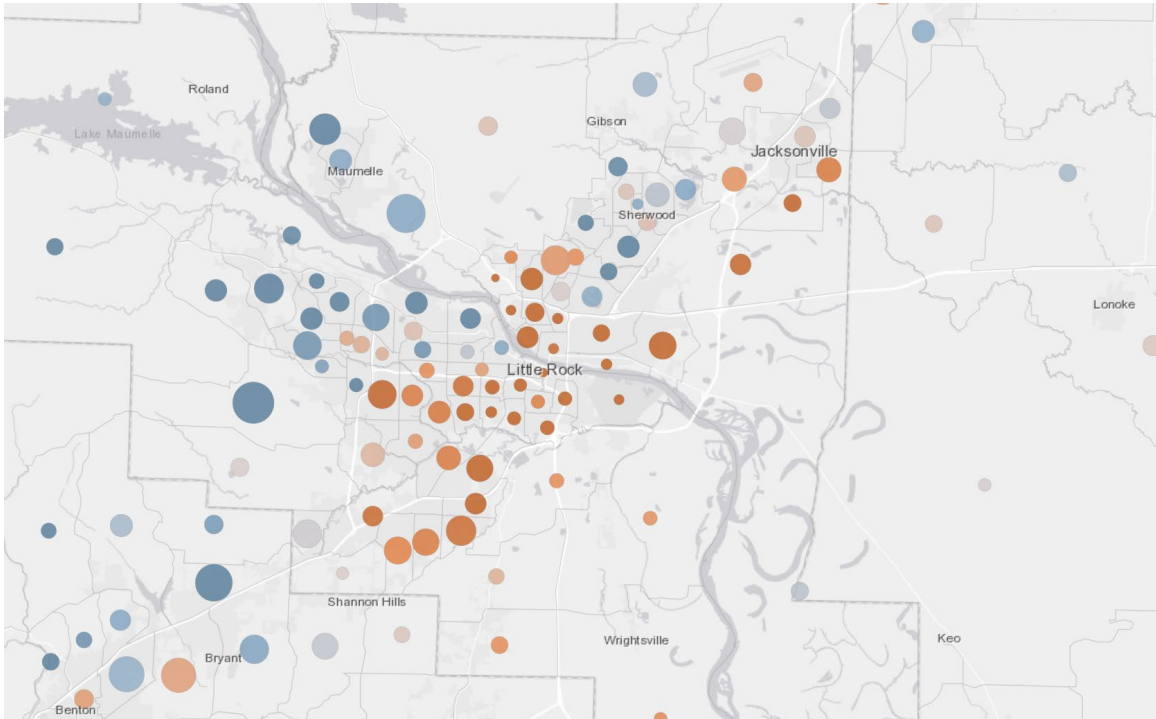


The Little Rock Demographics layer now shows both key attributes on the map: median household income and child population. New patterns in the data may be evident to you already. You'll explore the map in more detail later. First, you'll configure pop-ups for the layer to more easily display the attribute data of each census tract area.

## 2.2  Configure pop-ups

Pop-ups provide descriptive information about the features in a layer, often based on attributes in the data. Pop-ups appear when you click a feature on the map. You can specify what information is displayed in pop-ups and how that information is presented.

1.  Click a census tract area on the map to display its pop-up.
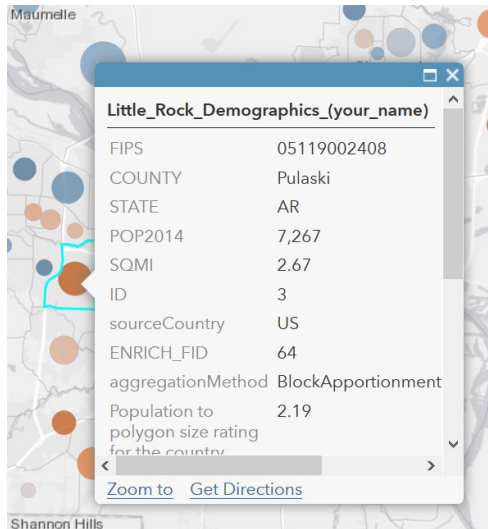


> The basic configuration of a pop-up is just what you see: a list of fields and values. Most pop-ups are stylized views of the attribute table associated with a layer. In this case, the default configuration has a few problems. For example, too many fields are listed, making the pop-up difficult to read, and many of the attributes are not needed for your analysis.

> **Tip:** Sometimes field names are unfamiliar abbreviations or are unclear in other ways. For example, it may not be obvious that SQMI means square mileage. You can resolve this problem in the pop-up by changing the field alias to something more informative or familiar without changing the data itself. An alias is a display name that replaces the field name in the pop-up. To change an alias, point to the layer, click the More Options button, and click Configure Pop-up. Then, click Configure Attributes, click the field alias value that you want to change, and type a new alias.

2.  Close the pop-up.

> To make the data in the Little Rock Demographics layer easier to read and to provide more useful information, you'll customize how the attributes are displayed.

3.  Point to the Little Rock Demographics layer, click the More Options button, and click Configure Pop-up.

> The Configure Pop-up pane opens.

4.  For Pop-up Title, edit the text by removing your name or initials from the title.

**5.** For Pop-up Contents, change Display to A custom attribute display.
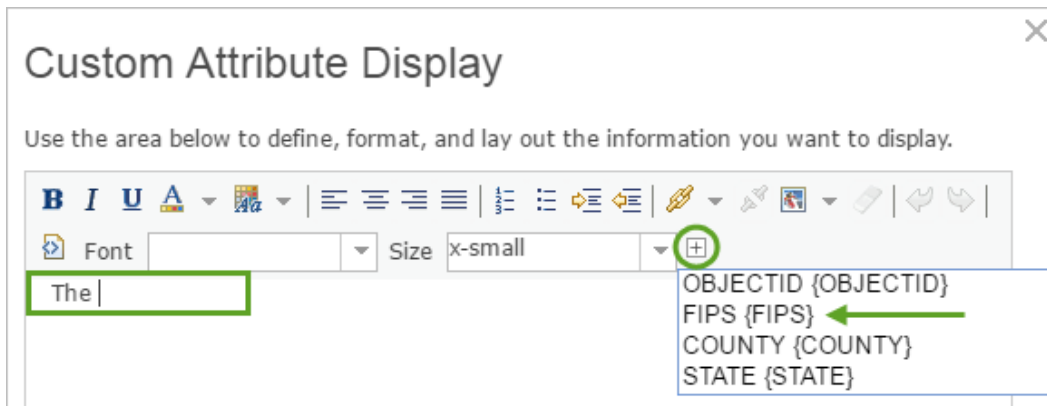
Pop-up Title

Little Rock Demographics

Pop-up Contents

Display: A custom attribute display ▼

CONFIGURE

**6.** Click Configure.

The Custom Attribute Display window opens. You can write your own content for the pop-ups, using variables for each field value that you want to describe. (You can also format the text and include hyperlinks and images.) Your custom display will use the following attribute fields:

- o  FIPS {FIPS}
- o  2018 Median Household Income {MEDHINC_CY}
- o  2018 Children (Age <14) {CHILD_CY}
- o  2018 Total Population {TOTPOP_CY}

**7.** In the Custom Attribute Display window, type The followed by a space. Then, click the Add field name button and choose FIPS {FIPS}.

Custom Attribute Display ✕

Use the area below to define, format, and lay out the information you want to display.

B *I* U A ▾ 🏿 ▾ | ≡ ≡ ≡ ≡ | ☰ ☰ ⬧☰ ⬦☰ | 🖌 ▾ ✍ 🖼 ▾ ✎ | ↺ ↻ |

🔲 Font [          ] ▾  Size x-small  ▾  ⊞

The |

OBJECTID {OBJECTID}
FIPS {FIPS} ←
COUNTY {COUNTY}
STATE {STATE}

Field names in braces { } work like variables. For instance, when you click a census tract area in your map, the pop-up will display the code for that feature.

**8.** Continue typing to complete the content that will display in your custom pop-ups. As needed, use the Add field name button to insert the three other field names in braces.

The {FIPS} census tract area has a median household income of ${MEDHINC_CY}.

There are {CHILD_CY} children under the age of 14 out of {TOTPOP_CY} total residents.

9. Use the Bold button to bold the fields and the dollar sign ($) to the left of {MEDHINC_CY}.

   **Note:** Some Internet browsers may not have the capability to format pop-ups. If you encounter difficulties, you can continue with the unformatted text.
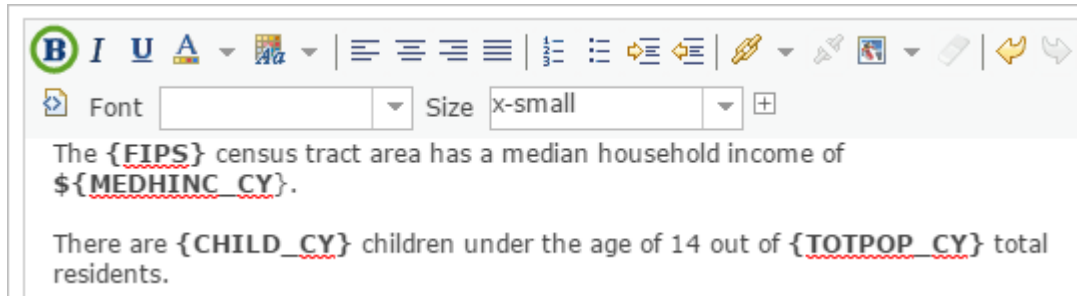


10. Click OK. In the Configure Pop-up pane, click OK.
11. Click a census tract area on the map to confirm that your pop-up was configured correctly.
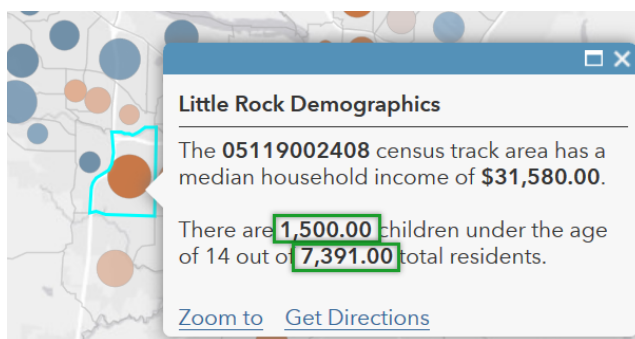


The pop-up displays with the new configuration. By default, numeric attributes such as population and income are displayed with two decimal places. This makes sense for median household income but not for child population and total population.

Next, you'll change how the pop-ups display these population attribute values.

**12.** Open the Configure Pop-up pane again.
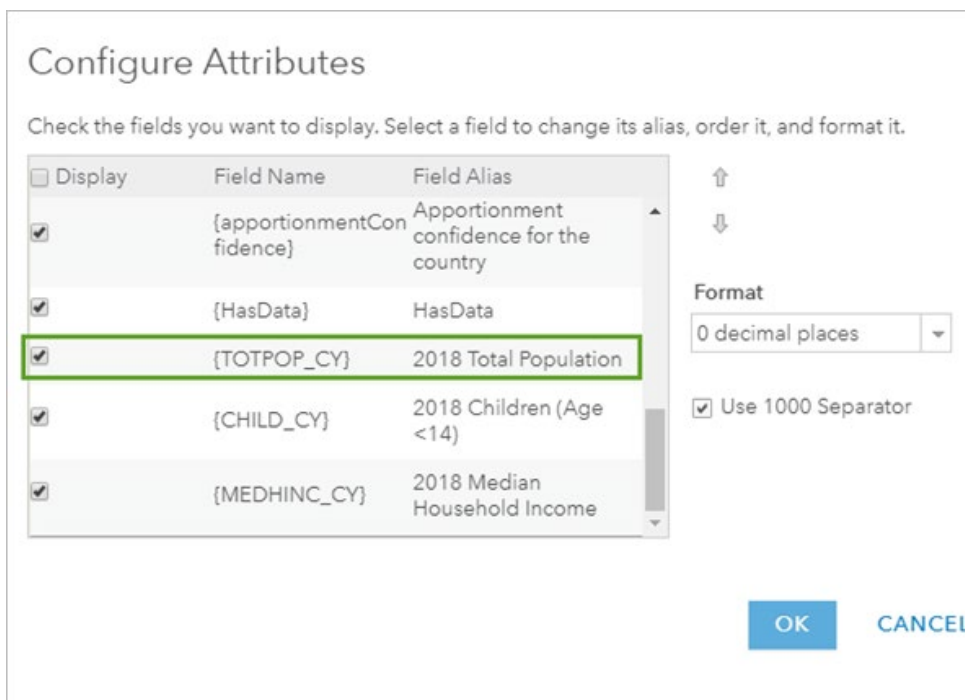**13.** Under Pop-up Contents, click Configure Attributes.
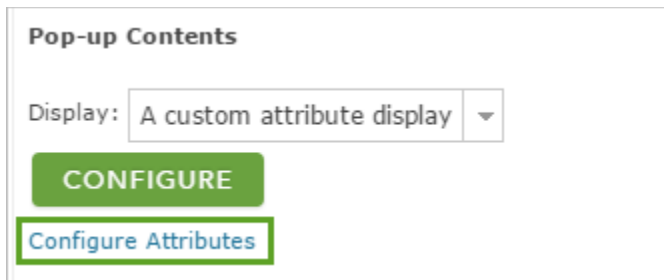


The Configure Attributes window opens, listing the layer's attributes.

**14.** Scroll down to the end of the list and click the {TOTPOP_CY} field to select it.

A few options appear to the right of the fields.

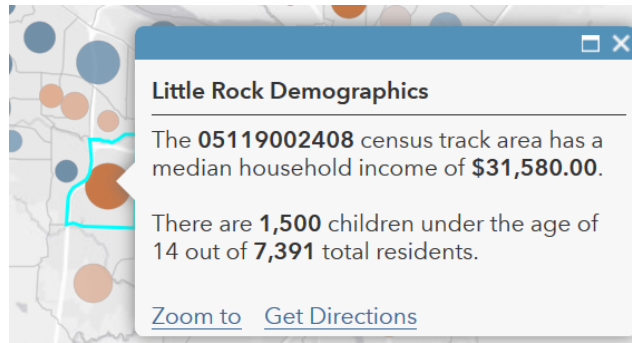**15.** Change Format from 2 decimal places to 0 decimal places.



Now when your pop-up displays the population values, they will not include any decimal places.

**16.** Click the {CHILD_CY} field and change its format to 0 decimal places.
**17.** Click OK.

At the bottom of the Configure Pop-up pane, click OK.

**18.** Click a census tract area to open its pop-up.



The pop-up that you configured gives you key demographic information for each census tract area.

**Tip:** If you want to use this layer in another map with the same style and pop-ups, you can save the layer. Doing so saves the style and pop-ups as properties of the layer that will be present in any other map in which the layer is used. Otherwise, when you add the layer to a different map, it will have a default style and pop-up. To save the layer, point to the layer, click the More Options button, and click Save Layer.

**19. Save the map.**

In this lesson, you changed the style of the Little Rock Demographics layer to show household income and child population using color and size. You also configured pop-ups to highlight key demographic information. In the next lesson, you'll explore the map that you've created to see what patterns have been revealed.

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# 3. Find patterns in the map

In the previous lesson, you changed the style of your Little Rock Demographics layer and configured pop-ups to highlight areas of high child population and low household income.

In this lesson, you'll use the map legend and the pop-ups that you configured to determine areas in Little Rock where your charity might want to target programs for children in poverty. Then, you'll edit your map's item details to include a description of the map and its purpose.
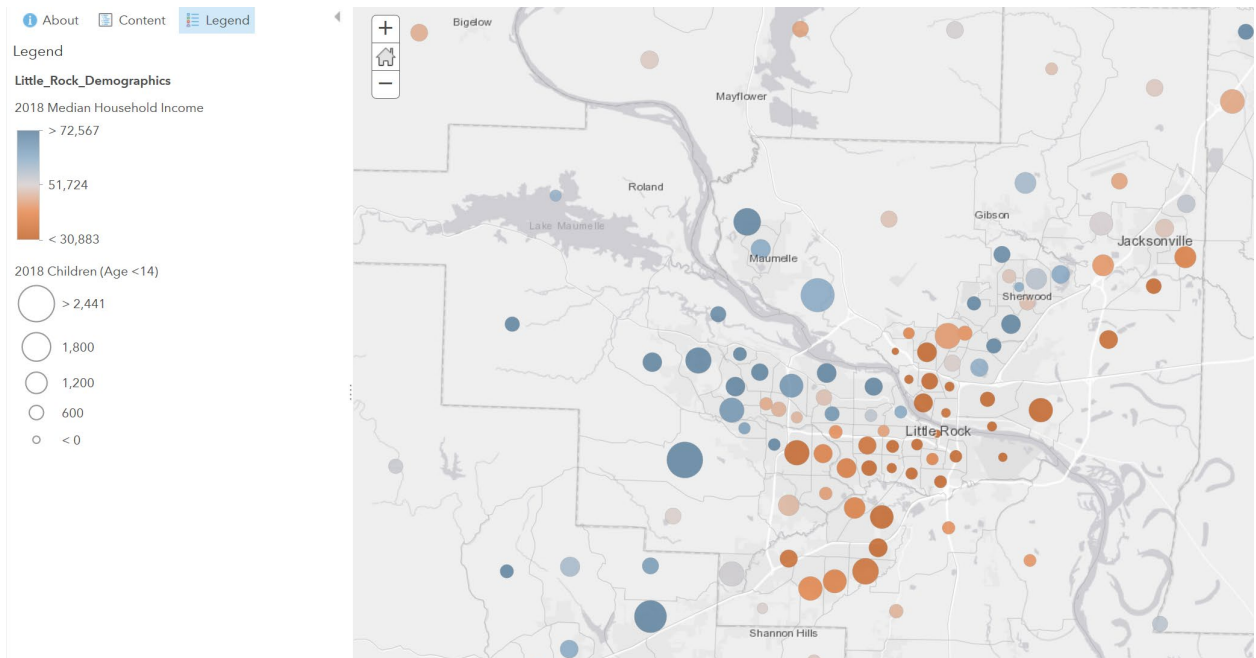
## 3.1   Use the legend

First, you'll use the map's legend to help you understand patterns in the demographic data shown on the map.

1.  If necessary, open your Little Rock Demographic Analysis map.
2.  In the Contents pane, click the Legend button.
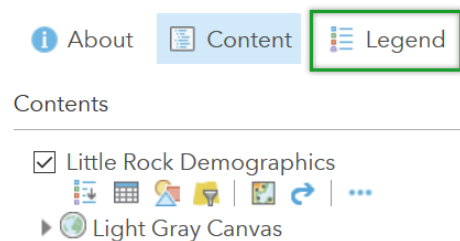


The Legend pane opens.

According to the legend, the Little Rock region has an average median household income of approximately $51,725, which is lower than the national average median household income in 2018. Census tract areas with orange circles have below-average median household income, with darker shades indicating households with income close to the poverty level. Most of the dark orange census tract areas are located close to the city center and east.

**Note:** Your results may be slightly different than this example if you had a different map extent when you enriched the layer.

Circles are used to represent the number of children under the age of 14 in each census tract area. Larger circles indicate greater numbers of children, while smaller circles indicate fewer children. On the map, there are several large darker orange circles in south Little Rock, near Shannon Hills, indicating high child populations and very low income. Census tract areas in this area, such as the 05119002002 tract, might be a good place for your charity to offer programs to help children living in poverty.

## 3.2  Use pop-ups

Next, you'll use the pop-ups that you configured to get more detailed household income and population information for individual census tract areas.

1.  Click the largest orange symbol for a census tract in south Little Rock to see its pop-up. Your results may differ due to updated demographic data.
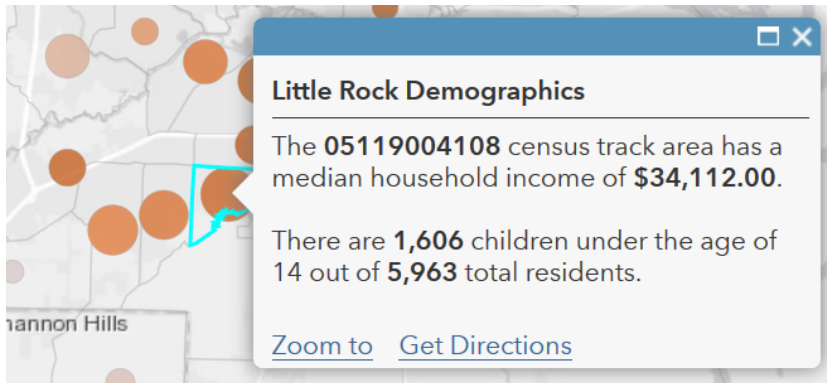


The pop-up shows that the median household income of this census tract area is approximately $34,112 and that 1,606 children under the age of 14 live there. This information confirms that this area in south Little Rock would greatly benefit from the programs (free after-school care, breakfast programs, and more) that your charity wants to fund this year.

2.  Close the pop-up.
3.  Click the largest orange symbol for the census tract area east of Little Rock to see its pop-up.
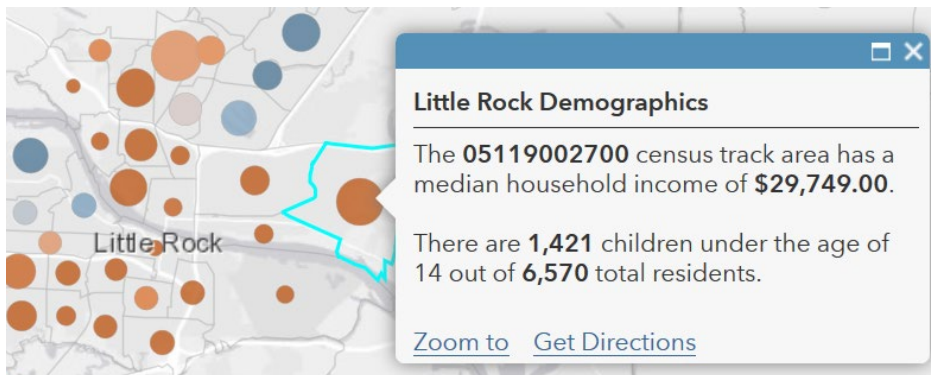


The median household income in the 05119002700 census tract area is approximately $29,749 and 1,421 children under the age of 14 live there. This makes it another appropriate candidate for your charity's programs.

4.  Click other orange census tract areas to see details about income and population displayed in the pop-up.

## 3.3 Edit the item details

Now that you've used the legend and pop-ups to help you better understand the demographic patterns and data in the map, you can provide a clear description of the map and its purpose. When you first saved the web map, you provided a title, summary, and tags. The title and summary appear in the map's About pane. You can also review and edit this information on its item page, where you can add more information, such as a description, and set additional properties.

1. In the Legend pane, click the About button. Click More Details.
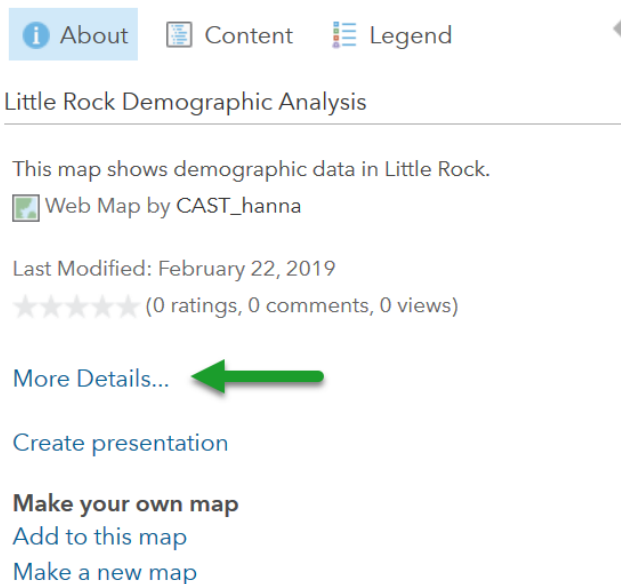


The map's item page opens in a new window. Each item in ArcGIS has an item page, which helps you manage your content and includes descriptive information about the item. By default, most item pages have no description, only the summary and tags that you provided when you saved the map.

You should include a description of your map to make it easy to identify later and to help others find it and understand its purpose if you decide to share it. The description can also appear in apps created with the map.

**2.** On the item page, next to Description, click Edit.



Little Rock Demographic Analysis ✎                                    Ov

✎ Edit Thumbnail

This map shows demographic data in Little Rock.            ✎ Edit

Web Map by CAST_hanna

Created: Feb 22, 2019    Updated: Feb 22, 2019    View Count: 0

☆ Add to Favorites

Description                                                    ✎ Edit

Add an in-depth description of the item.

**3.** In the Edit Description box, type a description for the map, for example:

This map shows demographic and income data in Little Rock. What stands out is a pattern of low-income households in the downtown area combined with areas of high child population. This pattern helps answer where in Little Rock our charity should focus its resources to help children living in poverty.

**4.** Click Save.

It's also good practice to give credit to the data providers.

**5.** For Credits (Attribution), click Edit and type Esri, US Census.
**6.** Click Save.
**7.** Close the item page.

In this lesson, you used the map legend and the demographic information provided in pop-ups to identify where in Little Rock your charity should focus its resources to help children in poverty. You then edited the map's item details to include a description of its purpose. In the next lesson, you'll share your findings with donors and other interested organizations by creating a simple web app.

# 4. Share analysis results

To present your findings to donors and other interested organizations, you'll create a web app from the map that you created in the previous lesson. A web app is a customized user interface that focuses your map for a specific purpose, message, and audience. For example, if you just want to showcase your map, your app only needs a few basic navigation tools. If, on the other hand, your map will be used to collect feedback from the public, it will need specialized data editing tools and instructions for how to enter the information.

In this lesson, you'll configure a Minimalist app and share it with others. You'll also edit the app's item details to make it easy to find in ArcGIS.
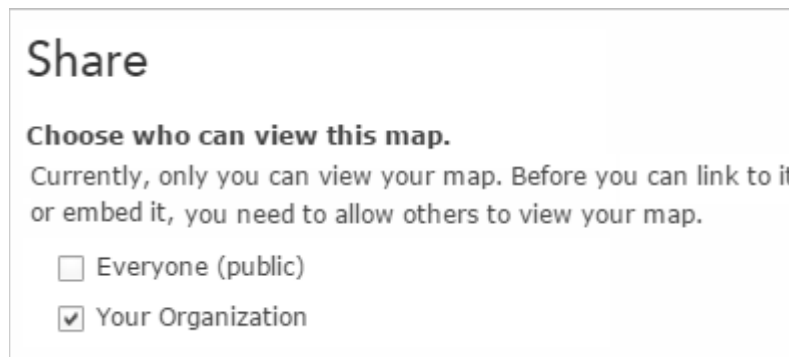
## 4.1 Create a web app

To create a web app, you must first share your map. Then, you can access the configurable app templates.

1. If necessary, open your Little Rock Demographic Analysis map.
2. On the ribbon above the map, click the Share button.
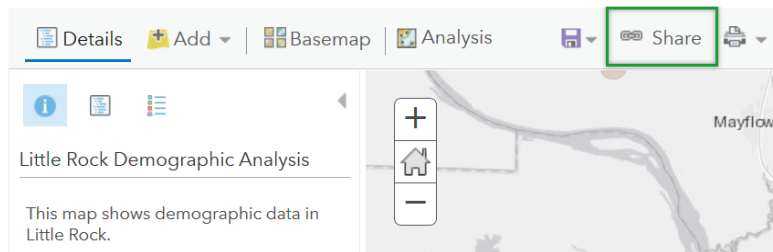


3. In the Share window, check the box to share the map with your organization (if you want, you can also share it with everyone).



When you share the map, the Update Sharing window opens, which indicates that the Little Rock Demographics layer may not be visible to others because it's not shared in the same way as the map. Layers, like maps, must be shared for others to access them.

4.  Click Update Sharing to share the layer the same way that you shared your map.
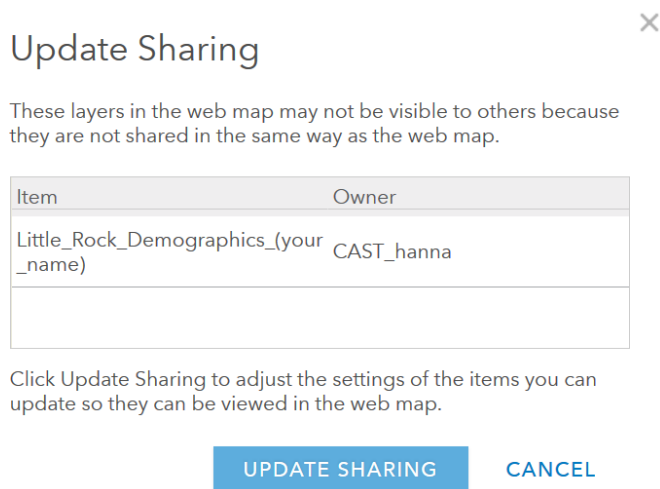


Now that the map is shared, you'll create the web app.

5.  In the Share window, click Create a Web App.
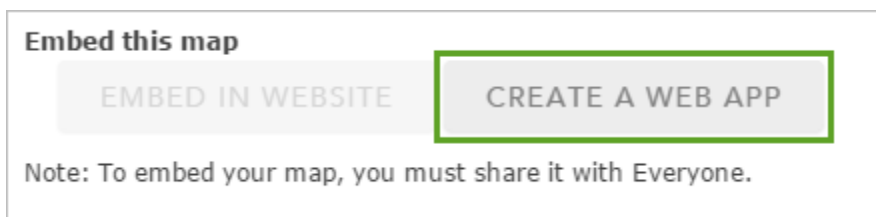


The Create a New Web App window opens. It includes a gallery of configurable apps, organized into categories based on purpose and functionality. You can use the scroll bar to review the full gallery, or you can filter the apps with the tabs on the left or the search box at the top.

You want your map to be the primary focus of your app. You do want to show the legend, pop-up information, and map description, but you want to maximize the amount of screen real estate dedicated to the map, which is your best point of evidence to show donors. The Minimalist app in the Showcase a Map category is a good choice.
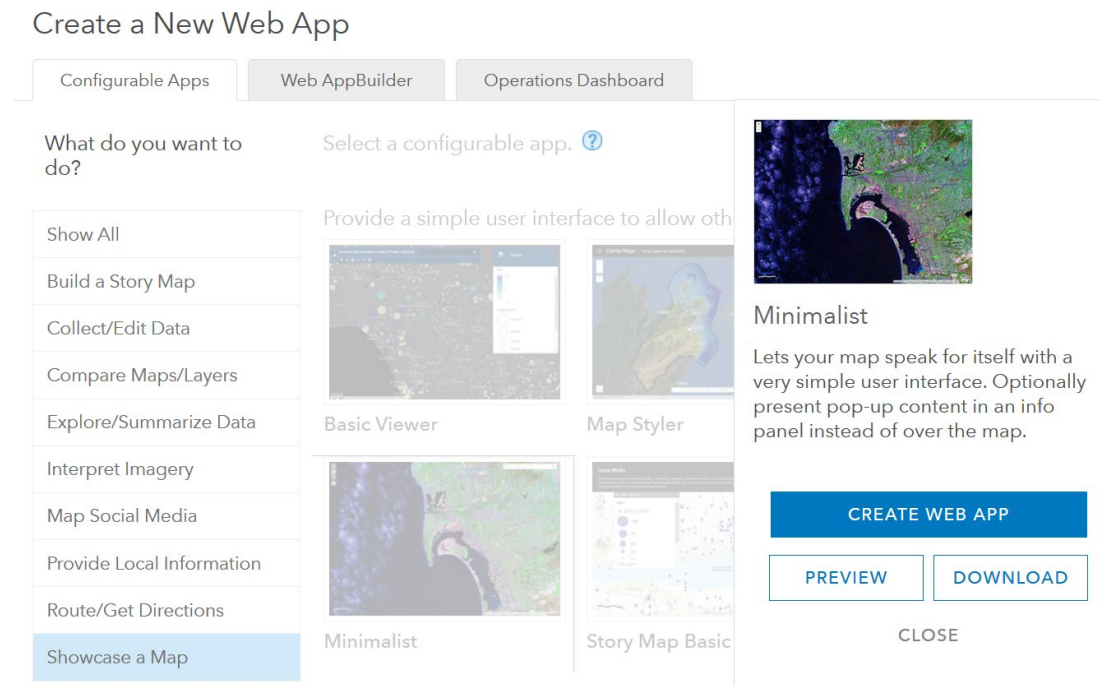
**6.** On the left, click the Showcase a Map tab.
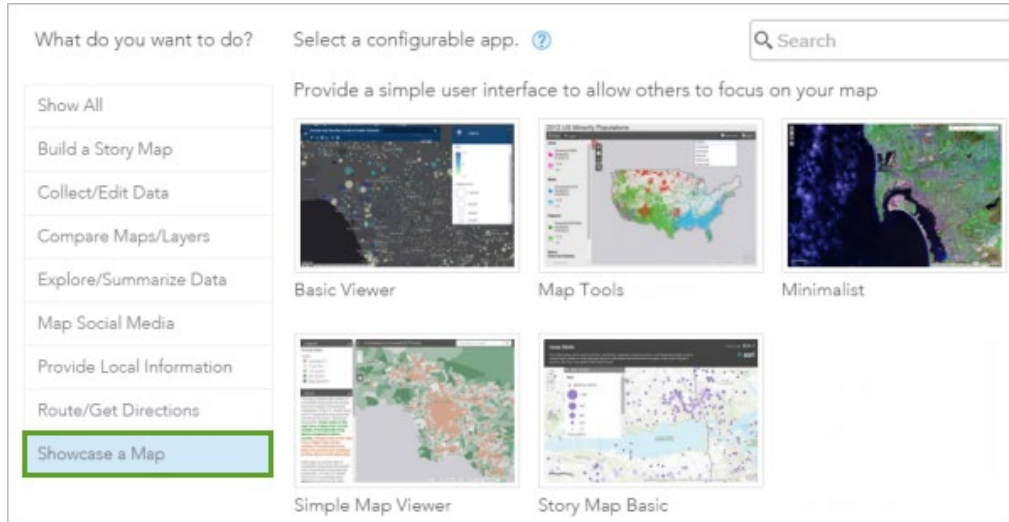


**Note:**

If your organization has configured custom galleries, you may not see these same configurable apps.

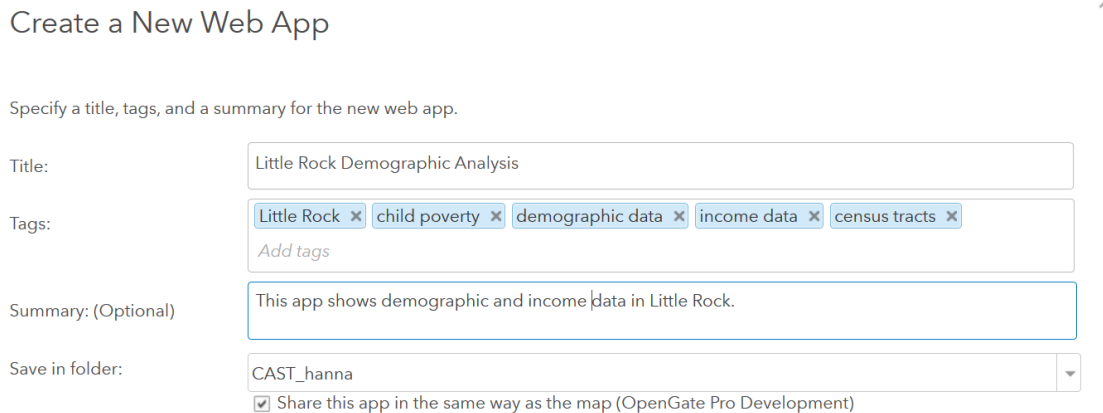**7.** Click the Minimalist app. Read the description of the app and click Create Web App.

**8.** In the Create a New Web App window, accept the default title, tags, and folder.

It won't be a problem that the app has the same title as the map because the two items are different types of content.

**9.** In the Summary field, type a summary for the app, for example:

This app shows demographic and income data in Little Rock.



By default, the app is given the same sharing properties as the map.

**Tip:** If you're signed in with an organizational account and your organization has set up content categories, you can click Assign Category to assign your app to one or more categories. Categorizing items helps others find them more easily.

**10.** Click Done.
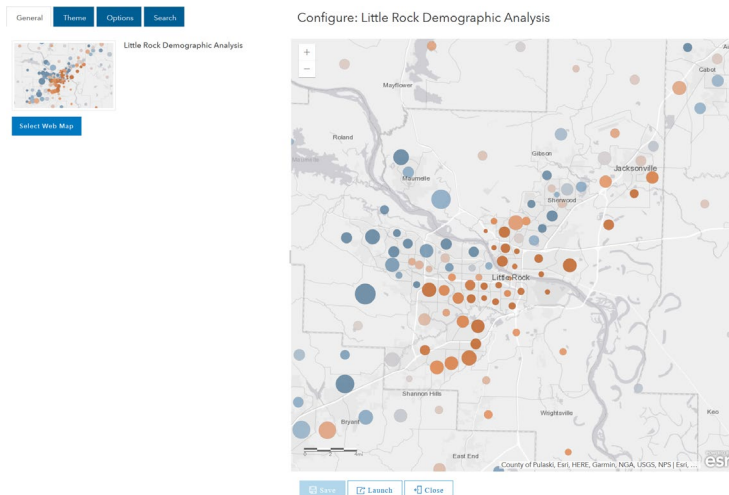


The app opens in its configurable state.

## 4.2  Configure the app

Next, you'll change elements of the app's presentation to better communicate the map's meaning. You'll also add a logo and a link to your website in case users want to learn more.

1. Click the Theme tab.

   This tab allows you to add a logo as well as a link. Your charity's logo, shown below, will clearly mark the app as belonging to your organization.
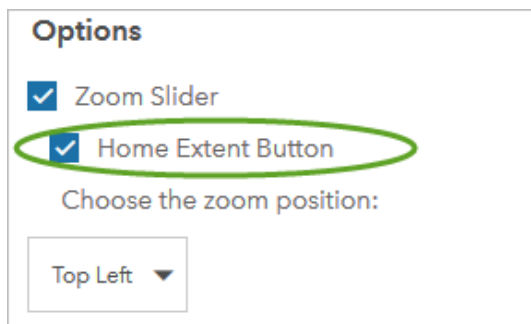
   

2. For Map Logo URL, paste the following URL:

   http://www.arcgis.com/sharing/rest/content/items/2fb705fd4cfb43e195a83eae295c5ea5/data

   You'll also add a link to your charity's website, so that when users click the logo, they are directed to a place where they can learn more about your organization's goals and programs. (For this lesson, you'll use the project link in lieu of an actual charity website.)

3. For Map Logo Link, paste the following URL:

   http://learn.arcgis.com/en/projects/fight-child-poverty-with-demographic-analysis/

4. Click the Options tab.
5. Check the Home Extent Button box.

   

   With the Home Extent Button, users can return to the original view of the map after panning and zooming.

   Next, you'll configure a side panel in your app to display a legend, the map details, and the configured pop-up information.

6. Check the Display the side panel when the app loads and Display a legend boxes. Keep Legend as the default panel.

   When your app opens, the legend will automatically appear in the opened side panel. Seeing the legend helps to understand the symbols and styling in the map.

7. Check the Display map details in side panel box.

   This setting provides a Details tab in the side panel so users can read the description that you added to the map's item page.

8. Check the Display popup content in side panel box.

   When the user clicks a feature on the map, the side panel will display the pop-up content.

Options to add a legend, details and popup info to the side panel.

☑ Display the side panel when the app loads.

Choose to display either the legend alone or as an integrated legend + layer list.
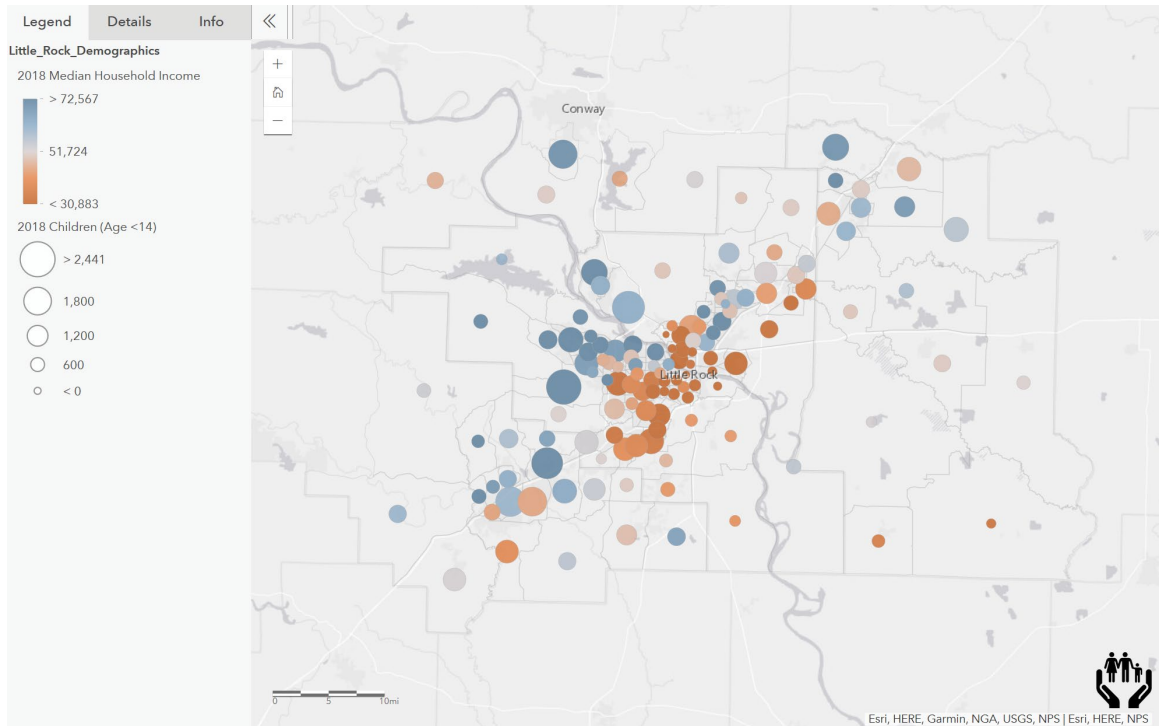
☑ Display a legend

☑ Display map details in side panel

☑ Display popup content in side panel

Choose the default panel:

| Legend ▼ |

9. Leave the other settings unchanged. At the bottom of the window, click Save to save your configuration and preview your changes.



10. Test your new app. For example, click features on the map to display pop-up information in the side panel. Zoom and pan the map, and then click the Home button to return to the default extent. Click the logo in the corner to test the link.
11. Click Close.



The app's item page opens.

# 4.3 Edit the item details

Some of the item details information from the map, such as the summary and tags, is added automatically to the web app. However, the web app item page is missing a description and some other information.

1. For Description, click Edit, and type the following text to describe the app:

   This app shows demographic and income data in Little Rock. Explore the data for various census tract areas by viewing details in the Info pane.

2. Click Save.
3. For Terms of Use, click Edit, and type None. Public domain data and images.

   **Note:** Your charity's logo is public domain, which means anyone can reuse it. If it (or any data) was copyrighted, you should mention that here, and any restriction to reusing it.

4. Click Save.
5. For Credits (Attribution), click Edit, and, type Esri, US Census. Click Save.

   You need to re-enter the credit information. This doesn't carry over from the map details.
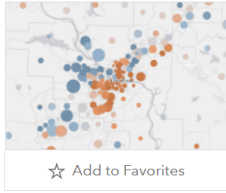
   You'll replace the automatically generated thumbnail image with one that better showcases your app. Doing so will allow other members of your charity organization or users who search for the app to get an idea of what the app contains before they open it. First, you'll create the image.

6. At the top of the item page, click the thumbnail image to open the app.
7. Capture an image of the app with your image editing software.

   **Tip:** If you're not sure how to do that, capture the image with the Print Screen key (PrtScn) on a Windows-based keyboard or Function + Shift + F11 on an Apple-based keyboard. Paste it into your image editing program, such as Windows Paint or Paintbrush for Mac.

8. Resize the image to an aspect ratio of 3:2.
9. Save the image in PNG, GIF, or JPEG file format to a folder on your computer.
10. Return to the web app's item page. Above the default thumbnail image, click Edit Thumbnail.
11. In the Upload Thumbnail window, click Choose File (or your browser's equivalent command).
12. Browse to the folder where you saved the thumbnail and double-click the image.
13. Click OK in the Upload Thumbnail window.

The edits are saved and the new thumbnail appears. This thumbnail is the image that users will see when they discover your app by searching ArcGIS. To provide members of your organization with a direct link to your app, you can copy the app's URL from its item page (from the Overview tab or the Settings tab) and send them the link.

You've finished configuring your app and updating the item details.

In these lessons, you created a map by adding layers and enriching them with demographic data. You viewed the attribute table for the Little Rock Demographics layer to learn more about its data, styled the layer to highlight patterns, and configured pop-ups to display useful information. You then studied the map and legend in detail to determine where to direct your charity's programs and used the map to create and share a web app.

A similar map can be made for any city in the United States using Living Atlas data. By enriching the data with different parameters, you can perform a demographic analysis on many different age groups, income levels, ethnicities, or populations. Lastly, with different apps, you can display your data in a variety of ways for all kinds of purposes.