

```
<arcgis-map zoom="4" center="-118,34">  
  <arcgis-search position="top-right" />  
</arcgis-map>
```

ArcGIS Maps SDK for JavaScript: Better UX with Popups

Lauren Ballantyne & Lauren Boyd

```
<arcgis-map zoom="4" center="-118,34" />
```

```
view.goTo({  
  center: [-126, 49]  
})  
.catch(function(error) {  
  if (error.name !== "AbortError") {  
    console.error(error);  
  }  
});
```

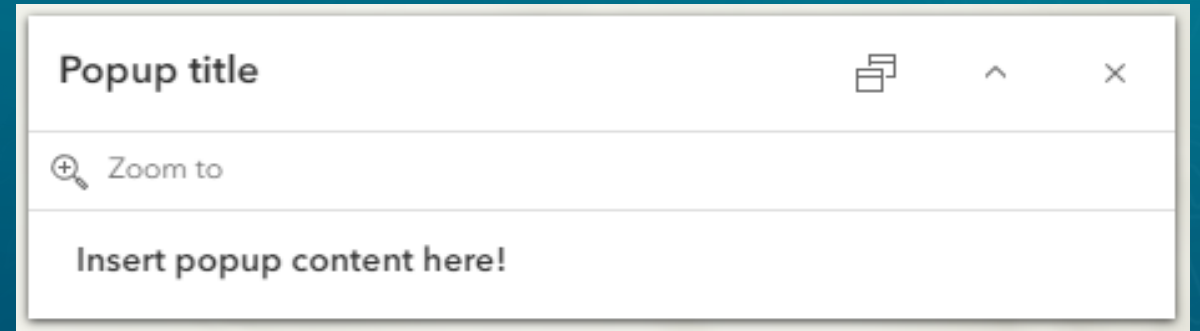
Agenda

- Intro to popups
- Popup Elements
- Arcade
- What's changed
- Demos
 - Configuring popups in the Map Viewer
 - Adding more to popups using JS Maps SDK

Popups

What are they?

- Customizable
- Interactive
- Cross-platform feature
- Available for a variety of layer types



Popup Elements

- Text
- Fields list
- Attachments
- Media (Charts and Images)
- Related records
- Arcade

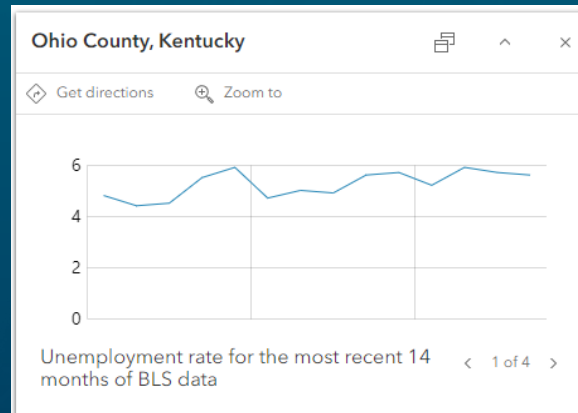
1 of 2

Get directions Zoom to

6.6 Magnitude Earthquake
614.46 km depth
2024-01-20, 4:31 p.m.
[124 km NW of Tarauacá, Brazil \(-7.28, -71.47\)](#)

USGS PAGER ALERT:
No Response Needed (GREEN)

TSUNAMI WARNING:
No Alert Issued



Station: NWSEVRG1 (NOAA)

Get directions Zoom to

Status	MODERATE FLOOD
Height	14.23 FEET (4.34 METERS)
Flow	61800 ft³/s (1749.98 m³/s)

AED Location: York

Edit Get directions Zoom to


AED_Instructions.txt

Bird species observations

Edit Get directions Zoom to

Canada Goose
Below are the two most recent behavior comments relating to Canada Goose observation. Click "Show all" to see all relating comments.

Canada Goose behavior comments
July 20, 2022 >

Arcade

What is it?

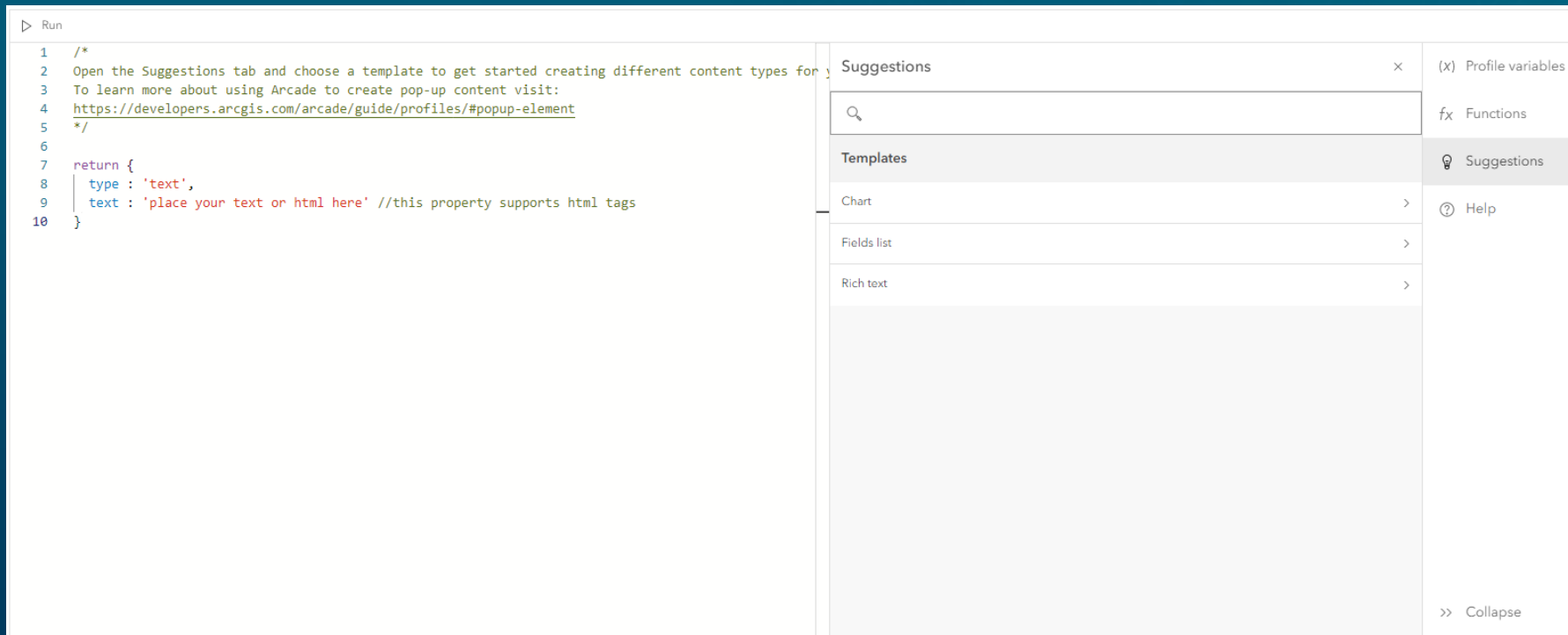
- ArcGIS's cross-platform expression language
- Create expressions to calculate new values on the fly
 - Use values
 - Use geometries
- Use FeatureSets to access data from other layers hosted in ArcGIS Online
- What Arcade is not:
 - Language for building apps



Arcade

Use in pop-ups

- Attribute expressions
- Arcade elements



The screenshot displays the Arcade editor interface. On the left is a code editor with a 'Run' button at the top left. The code contains a multi-line comment and a return statement for a popup element.

```
1  /*  
2  Open the Suggestions tab and choose a template to get started creating different content types for y  
3  To learn more about using Arcade to create pop-up content visit:  
4  https://developers.arcgis.com/arcade/guide/profiles/#popup-element  
5  */  
6  
7  return {  
8    type : 'text',  
9    text : 'place your text or html here' //this property supports html tags  
10 }
```

On the right is a sidebar with a 'Suggestions' tab. It includes a search bar, a 'Templates' section with options like 'Chart', 'Fields list', and 'Rich text', and a list of other resources: '(x) Profile variables', 'fx Functions', '💡 Suggestions', and '🔗 Help'. A 'Collapse' button is at the bottom right of the sidebar.

What has changed since we last saw you?

- Design enhancements
- Custom chart colors
- New text editor plugins
- Honoring layer and feature order
- Arcade:
 - M-value support
 - Subtype group layer support
 - Knowledge graph

```
val queryParameters =  
queryParams().apply {  
    put("price", "price > 200")  
}  
viewModelScope.launch {  
  
    featureTable.queryFeatures(queryParameters  
    ).onFailure {  
        showError("Feature query failed")  
    }.onSuccess { featureQueryResult ->  
        val featureResult =  
        featureQueryResults.firstOrNull()  
    }  
}
```



Map Viewer Popups

Lauren Ballantyne

Going beyond Map Viewer

- Pros of Map Viewer
 - Easy UI + Arcade editor
 - No coding
 - Configuration sticks with web map
- Pros of the JS Maps SDK
 - Customize use case per custom application
 - More control over popup UI

Popups & the JS Maps SDK

Lauren Boyd

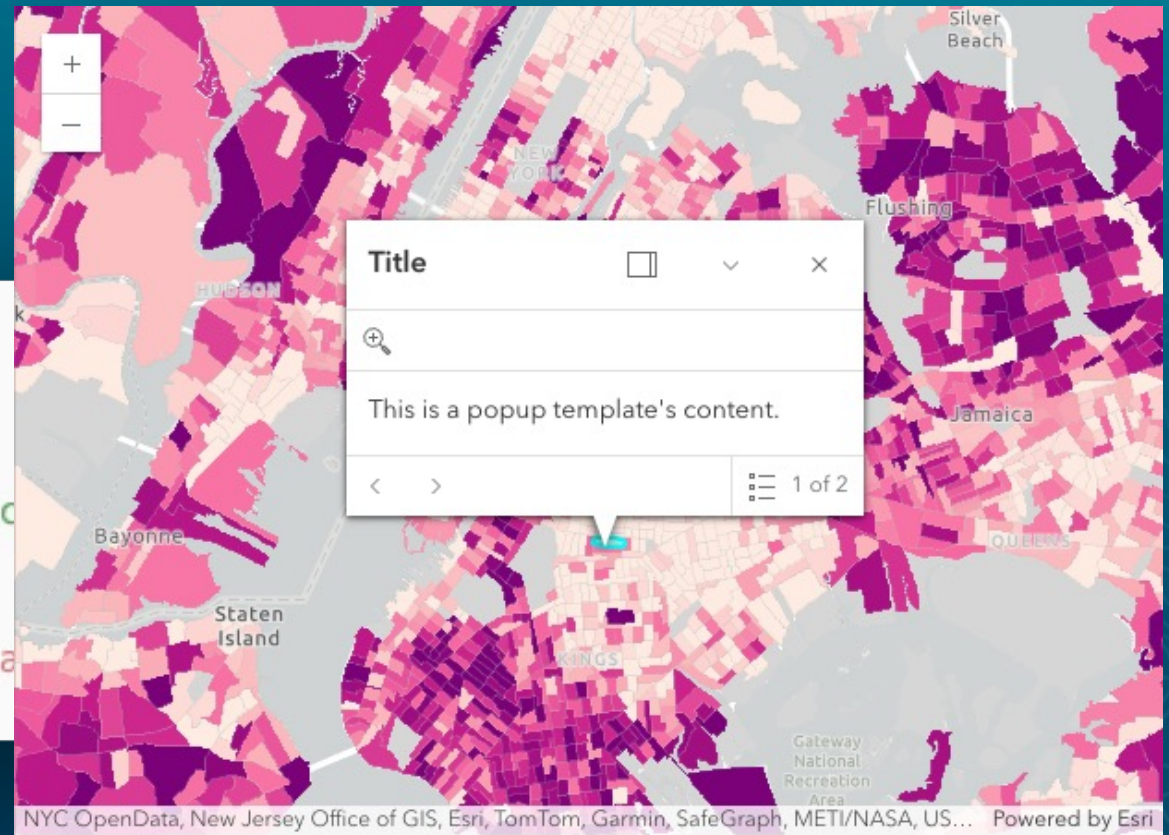
```
view.goTo({  
  center: [-126, 49]  
})  
.catch(function(error) {  
  if (error.name !== "AbortError") {  
    console.error(error);  
  }  
});
```

```
queryParams =  
queryParams().apply {  
  whereClause = "price > 200"  
}  
viewModelScope.launch {
```

PopupTemplate

- Formats and defines the popup content
- Set defaultPopupTemplateEnabled

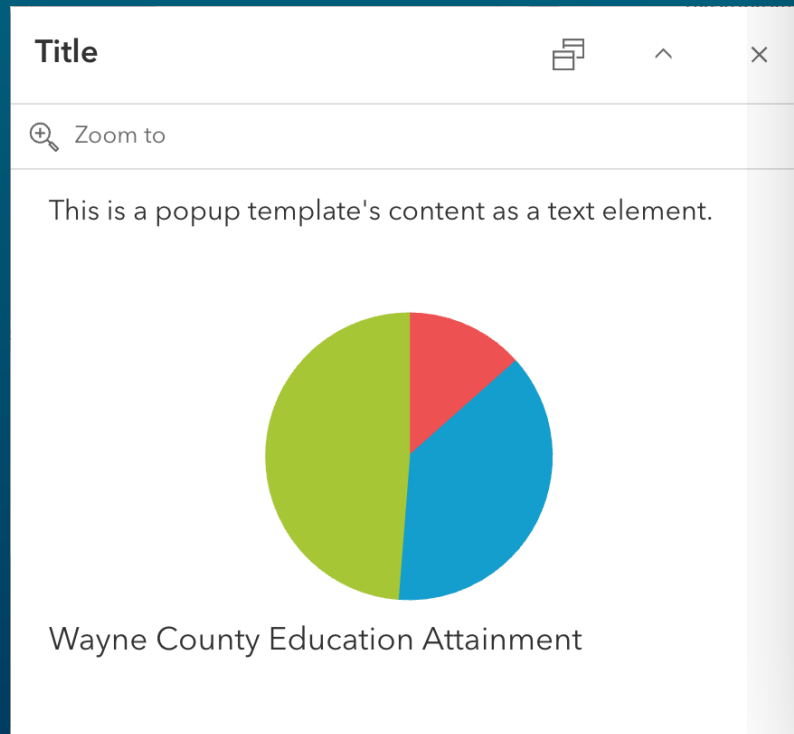
```
1 const popupTemplate = {  
2   // autocasts as new PopupTemplate()  
3   title: "Title",  
4   content: "This is a popup template's content",  
5 };  
6  
7 featureLayer.popupTemplate = popupTemplate
```



PopupTemplate

Content

- String, function, promise, or array of elements



```
1 const popupTemplate = new PopupTemplate({
2   title: 'Title',
3   content: [
4     {
5       type: 'text',
6       text: "This is a popup template's content as a text element.",
7     },
8     {
9       type: 'media',
10      mediaInfos: [
11        {
12          title: '{COUNTY} County Education Attainment',
13          type: 'pie-chart',
14          value: {
15            fields: ['SOMEHS_CY', 'HSGRAD_CY', 'CollegeEducated'],
16          },
17        },
18      ],
19    },
20  ],
21 });
22 featureLayer.popupTemplate = popupTemplate
23
```

Content elements

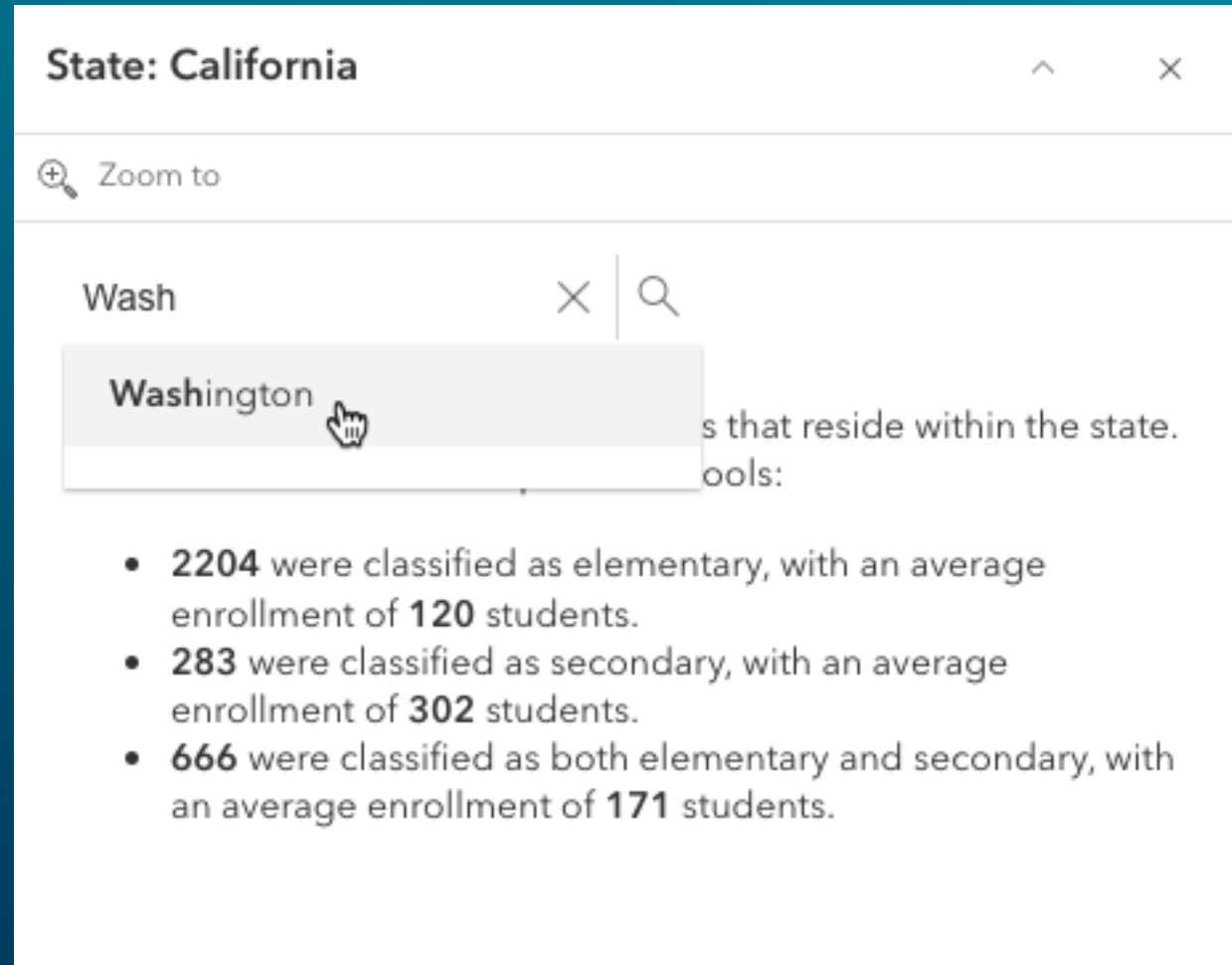
- Configured on individual layers' popupTemplate

Element	JS Maps SDK Class
Text	TextContent
Fields List	FieldsContent
Attachments	AttachmentContent
Media (charts, images)	MediaContent
Relationship browser	RelationshipContent
Arcade elements	ExpressionContent

Content

JS Maps SDK Specific

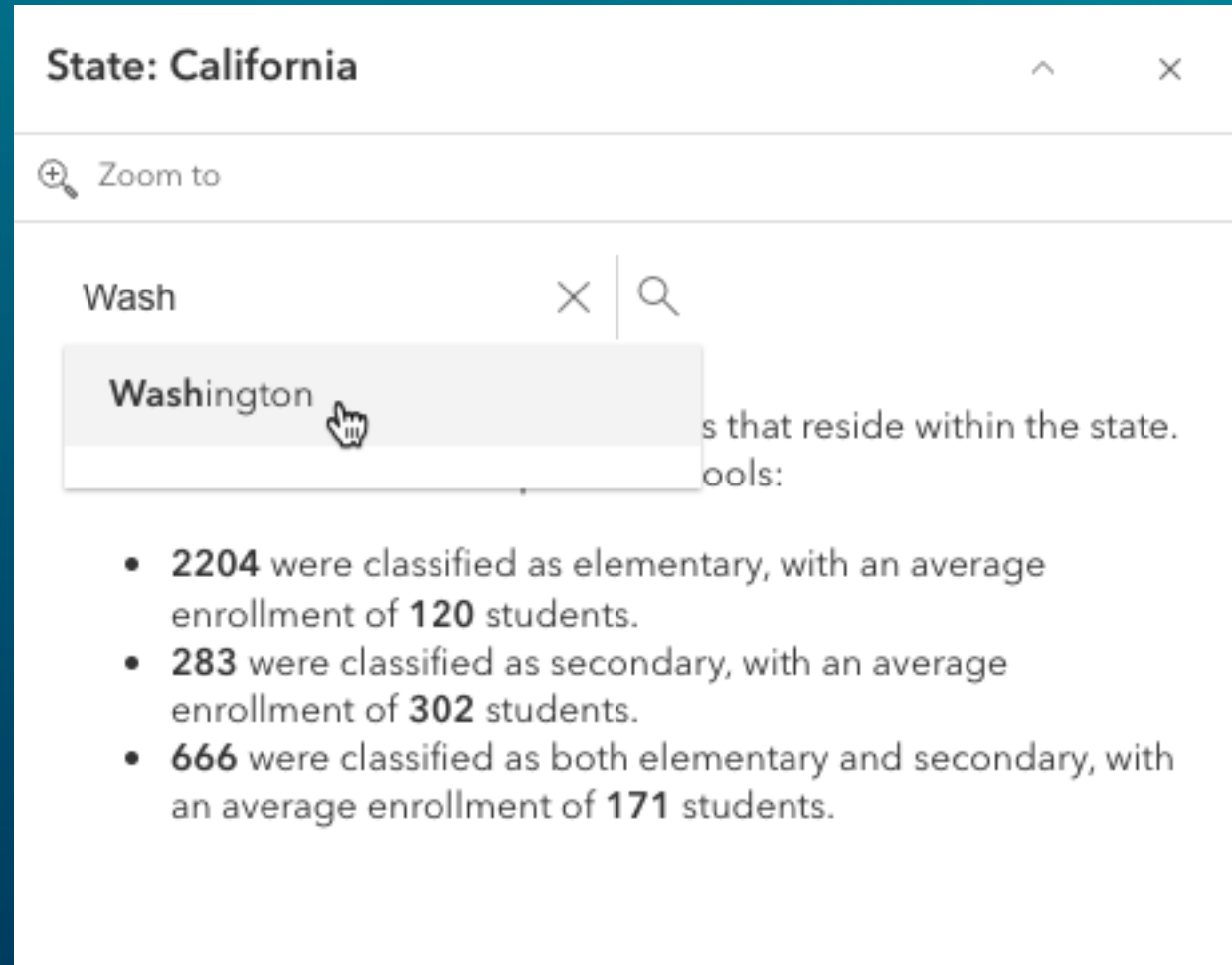
- CustomContent:
 - Displaying Widget



Content

JS Maps SDK Specific

- CustomContent:
 - Displaying Widget
- Promise
 - Useful when calling method/executing query and want to display results



Content

JS SDK Specific

- CustomContent:
 - Displaying Widget
- Promise
 - Useful when calling method/executing query and want to display results
- Function
 - Popup may require additional processing

```
1 function formatContent
2     // Check if t
3     // the color
4     let color =
5         feature.g
6         ? "gre
7         : "rec
8
9     let textCenter
10    // Create the
11    // the feature
12    if (feature.g
13        textCenter
14        `<b>{LABEL}</b> resides along {TRAIL}. This site is currently <span style='color: ` +
15        color + `>{ACCESS}</span>`:
16    } else {
17        textCenter
18        `{TRAI
19        color
20    }
21    return [textCo
22    };
```

#76 Kirkland Creek Backcountry Campsite

Zoom to

#76 Kirkland Creek resides along Lakeshore Trail. This site is currently **Open** and can be reached by Hiker Only.

There are 6 sites and resides in Swain, North Carolina.
Site access restriction: Hiker.

< > 1 of 2

Lakeshore Trail

Zoom to

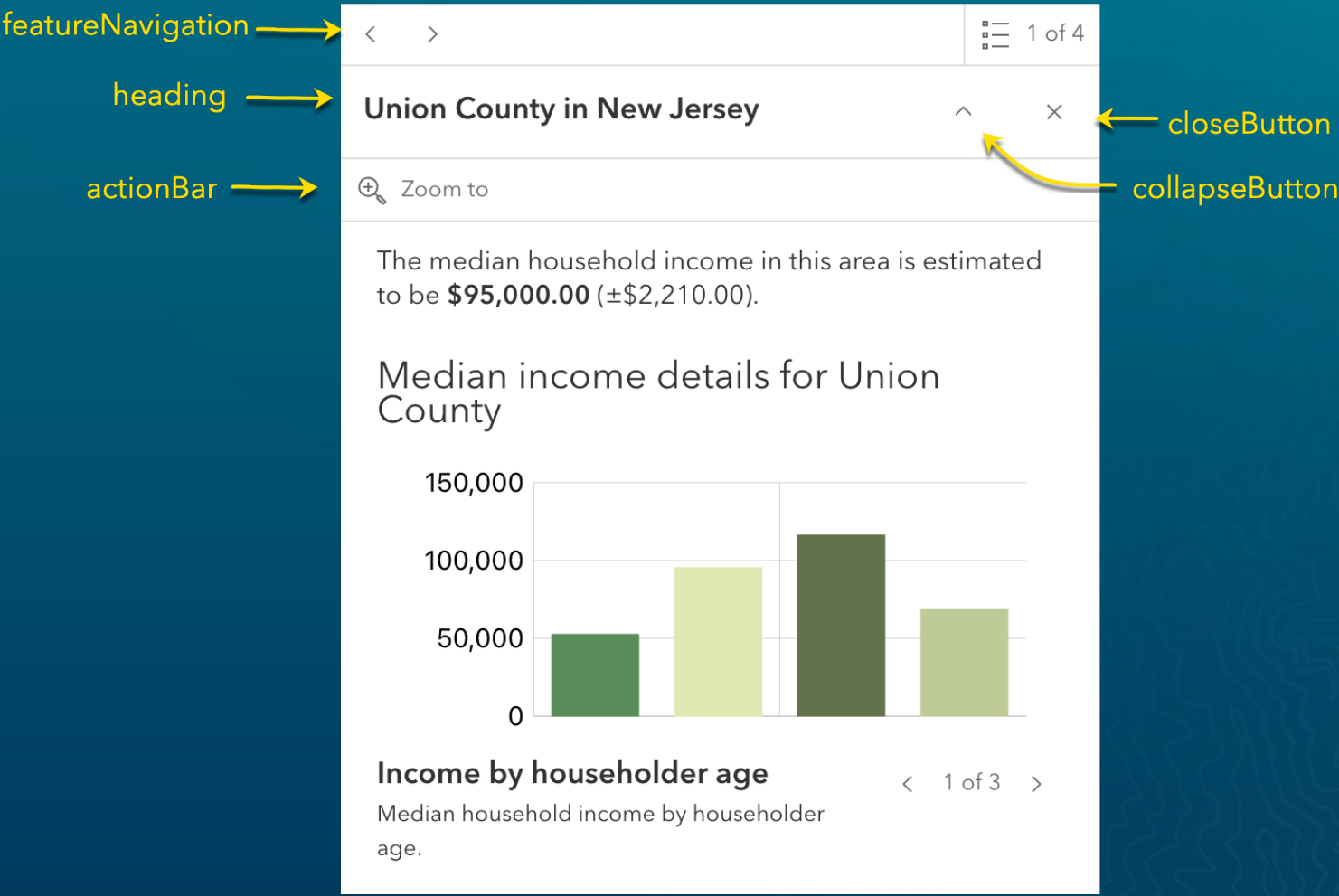
Lakeshore Trail is a **Bridle Path** and currently **Open**.
Near Hazel Creek and **Unrestricted**.

< > 2 of 2

Docking

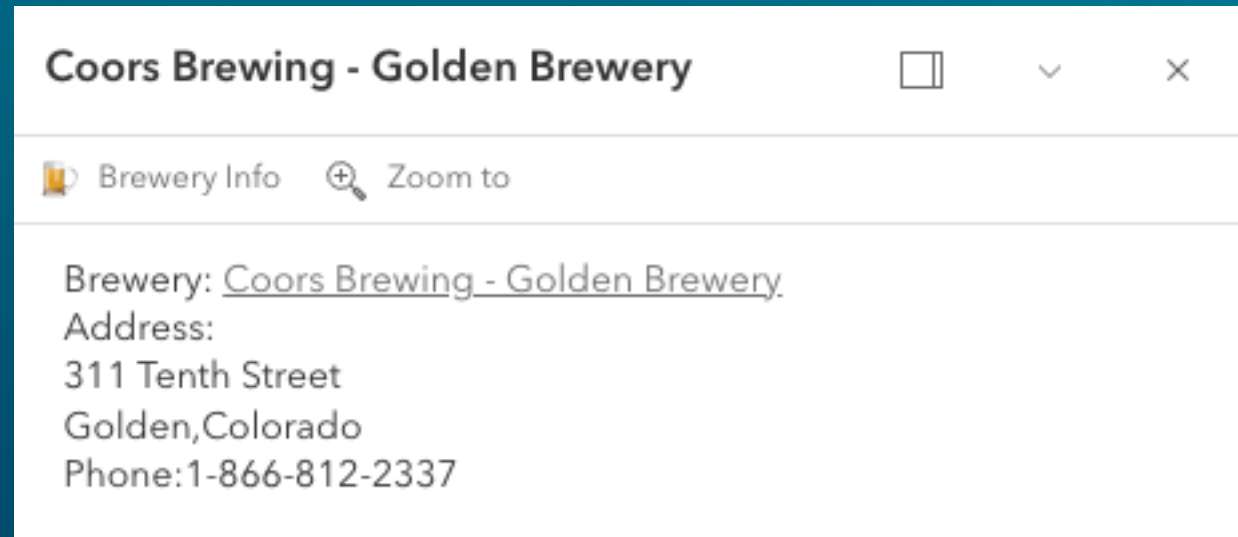
```
1 view.popup = {  
2   dockEnabled: true,  
3   dockOptions:{  
4     // Sets which position to place the popup in the view.  
5     position: "top-right",  
6     // Disables the dock button from the popup.  
7     buttonEnabled: false,  
8     // Ignores the default sizes that triggers popup docking.  
9     // The popup will always be docked when opened.  
10    breakpoint: false  
11  }  
12 };
```

VisibleElements

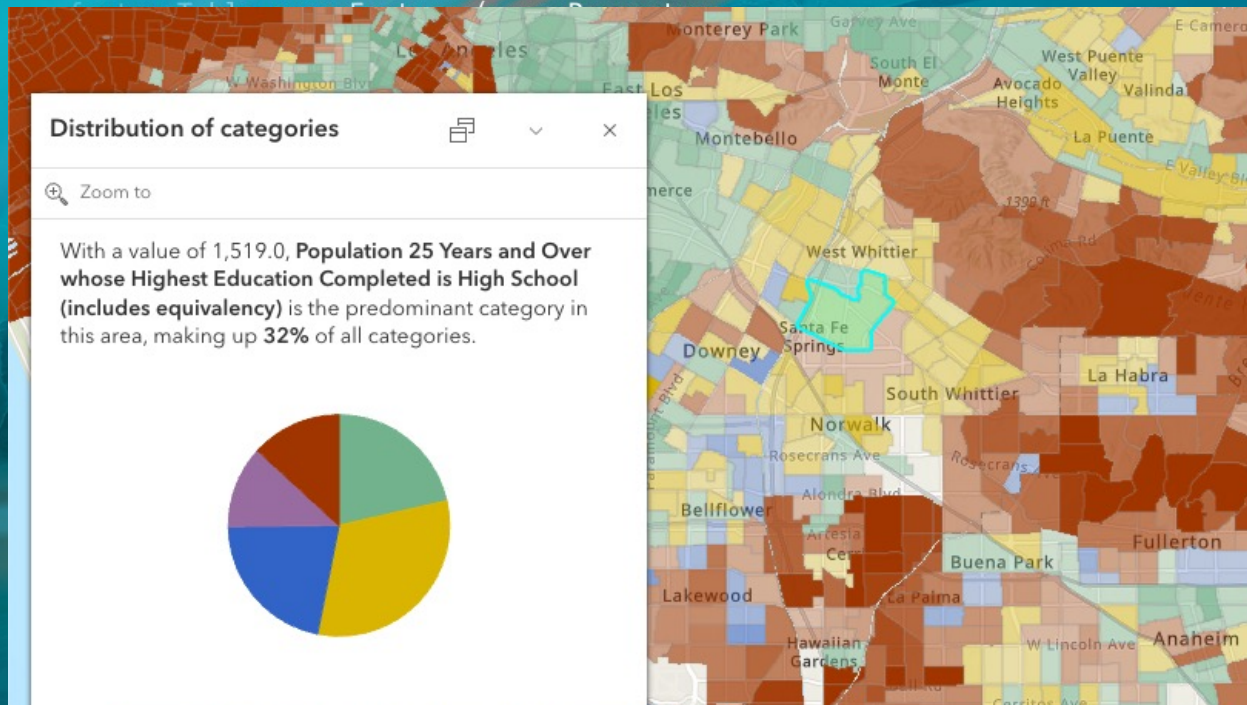


Actions

- Default actions
 - Zoom to
 - Browse features (clustering)
- Custom Actions
 - Styled with image or Calcite icon



```
queryParams =  
queryParams().apply {  
    filter { it.value = "price > 200"  
}  
viewModelScope.launch {
```



Configuring Popups

Lauren Boyd

What's to come

- Broader related record support
- Popups for vector tile layers
- Attachment improvements
- Utility Network association support

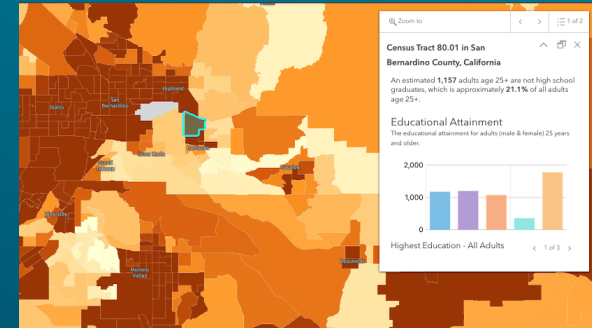
Resources



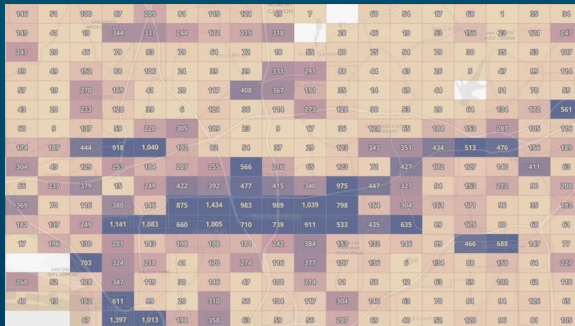
[Improving the rich text editing experience in pop-ups](#)



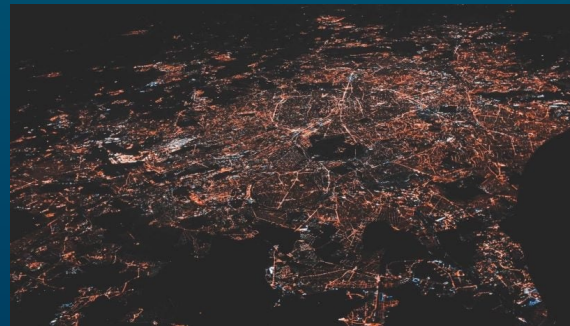
[Introducing custom colors in popup charts](#)



[A fresh new look for popups](#)



[How to summarize aggregate data using Arcade in popups](#)

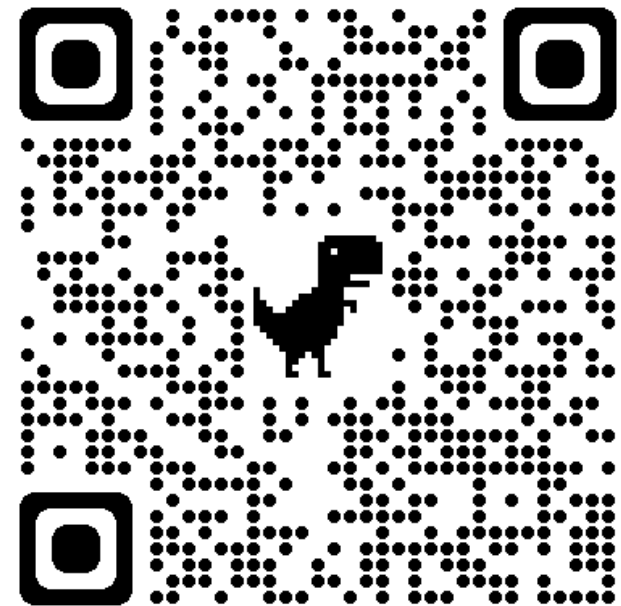


[Rolling out related records in Map Viewer](#)



[Browsing related records with the ArcGIS API for JavaScript](#)

Link to slides & demos

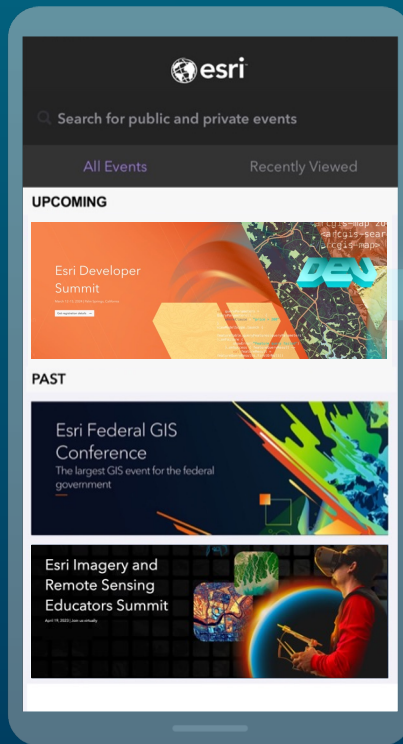


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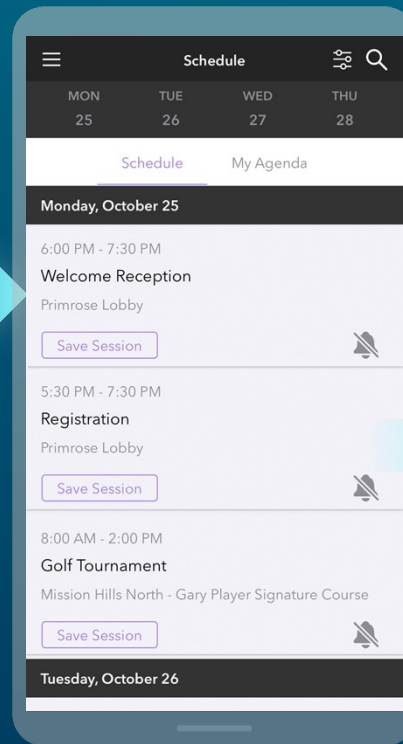
```
queryPara  
QueryParamete  
whereClau  
}  
viewModelScop
```

Please Share Your Feedback in the App

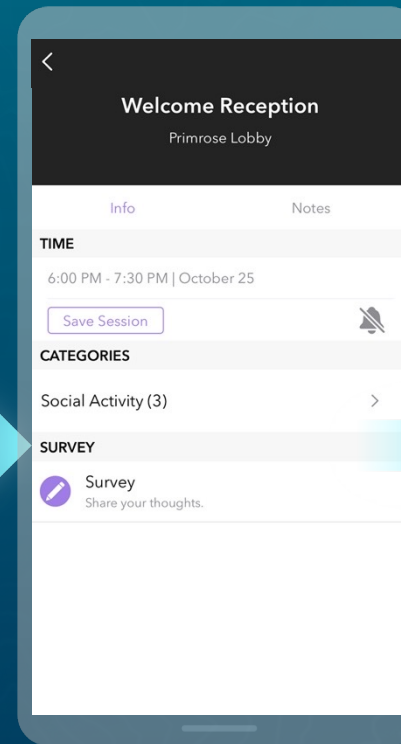
Download the Esri Events app and find your event



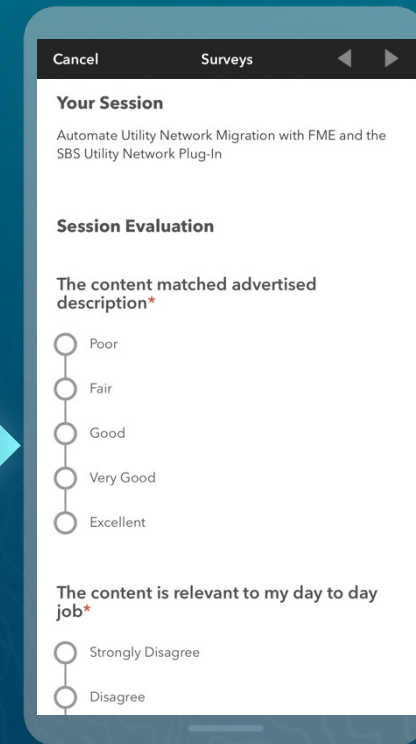
Select the session you attended



Scroll down to "Survey"



Log in to access the survey



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links.esri.com/EsriDevCommunity

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    console.error(error);  
  }  
});  
  
<arcgis-map zoom="4" center="-118,34" />
```

```
// show the compass and pass the  
mapRotation state data  
Compass(rotation = mapRotation) {  
  // reset the ComposableMap viewpoint  
rotation to point north using the  
mapViewModel  
  mapViewModel.setViewpointRotation(0.0)  
}
```



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```
const layerList = new LayerList({  
  view: view  
});  
  
// Add widget to the top right corner  
of the view  
view.ui.add(layerList, "top-right")
```

```
<arcgis-map zoom="4" center="-118,34">
```