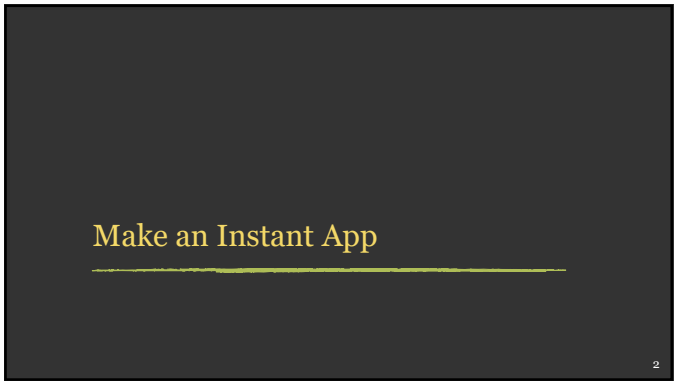
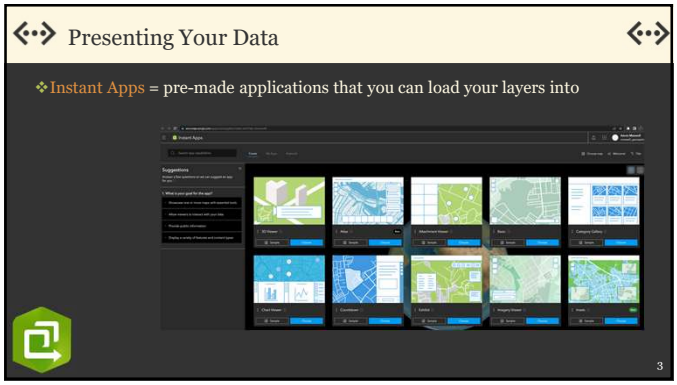
Client-Side Web GIS
Web Data and Apps
Image from NASA:
https://commons.wikimedia.org/wiki/File:Earth_Western_Hemisphere_transparent_background.png#filelinks
WV VIEW
AmericaView
Empowering Earth Observation Education
AmericaView.org - Est. 2003

1

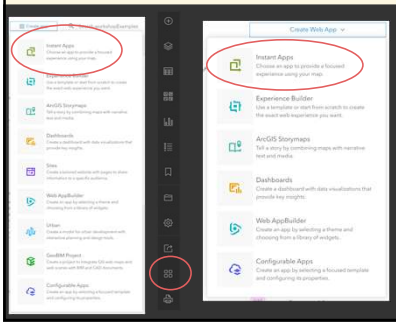

Make an Instant App
2

2


Presenting Your Data
Instant Apps = pre-made applications that you can load your layers into
3

3

Initialize App



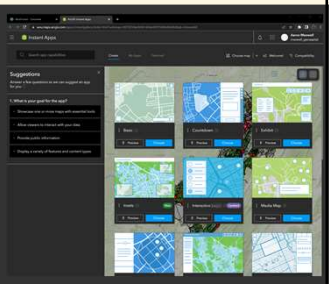
- Content → Create App→ Instant App
- From Map View Or Scene View → Create App → Instant App
- Map or Scene Drop Page → Create Web App →Instant App

4

4

Select a Template

- Different templates/apps for different purposes
- Make sure data meet the requirements of the template
- Make sure the template aligns to the goals of the app
- Some templates note the data requirements



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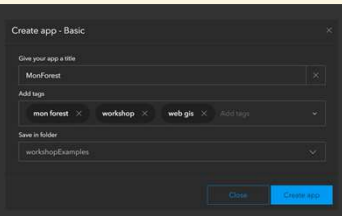
Configure App

- Select template
- Name app
- Provide tags
- Save to Content

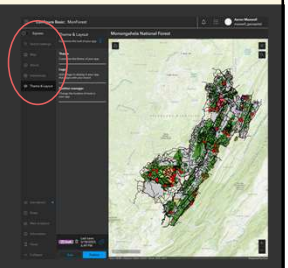


6

6

Configure App

- Available option/configurations vary by template
- Express mode = provide access to most important options only
- Common options
  - Source Map
  - Include certain components or widgets such as
    - Header, legend, layer list, basemap gallery, etc.
  - Available interactivity
  - Themes, colors, and fonts
  - Position of apps, widgets, and tools



7

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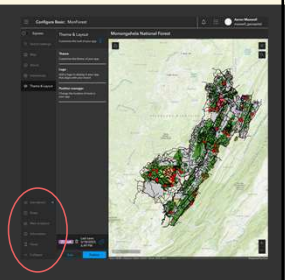
Configure App

- Share settings
- Web analytics
- Assess on different screen sizes



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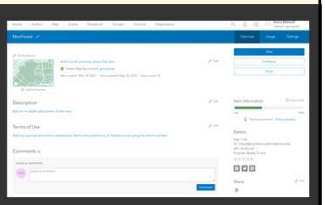
Publish

- Click Publish
- Launch
- Will save to your ArcGIS Online Content
- Can View, Configure, or change Share settings from drop page
- App will get assigned a URL



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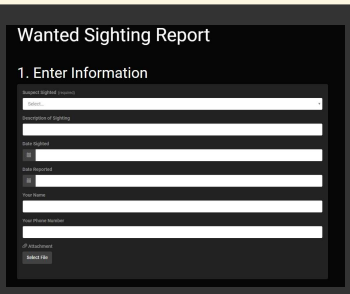
Volunteered Geographic Information (VGI)

- Allows users to edit geospatial data using a mobile or web interface
- Users will edit the data made available by the feature service



10

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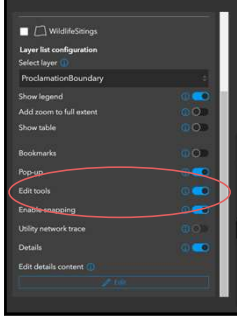
Location-Based Services (LBS)

- Use real-time geospatial from a mobile device or smartphone to provide information, entertainment, or security
- Since smartphones are GPS enables, your location information can be integrated into the apps

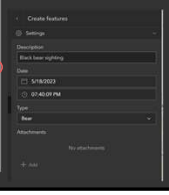
11

11

Basic apps for VGI



- Must turn on editing tools
- Sidebar app is a good choice
- Make sure to turn editing off for layers that you do not want the user to edit



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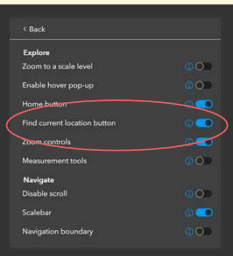
12

Activating Location-Based Services

- Add Find current location button
- User will need to allow location services to be used



13

13

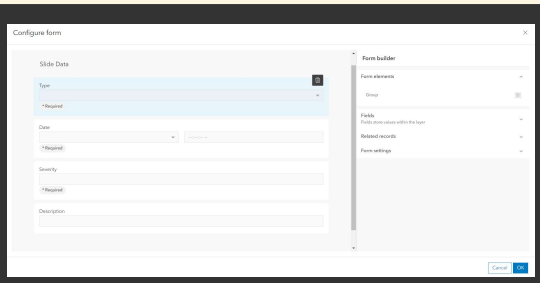
Tour of Map Viewer

- Layer properties
- Styles
- Filter
- Effects
- Pop-Ups
- Fields
- Labels
- Configure Charts
- Forms
- Analysis
- Edit
- Add Sketch
- Map tools

14

14

Collecting Data with Forms



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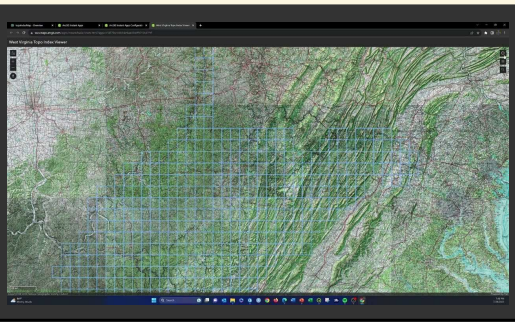
15

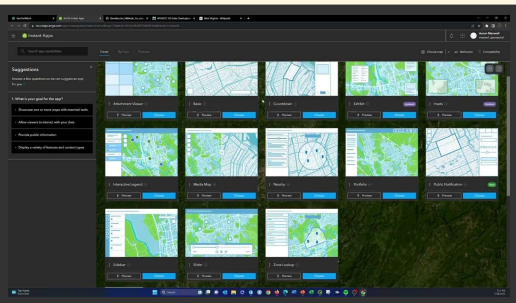
Video: Basic Viewer App



16

16

Video: Editing using Instant App



17

17

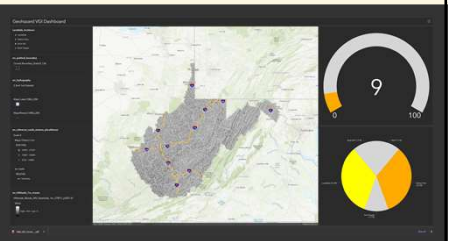
Make a Dashboard

18

18

Presenting Your Data

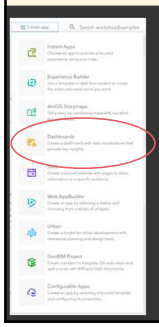
- Dashboards = focused on data visualization and data insights



19

19

Initialize a Dashboard

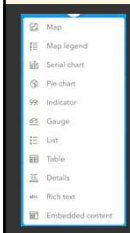


- Content → Create App→ Dashboards

20

20

Dashboard Content



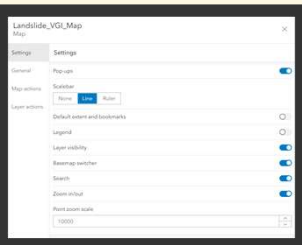
- Map
- Map legend
- Serial chart
- Pie chart
- Indicator
- Gauge
- List
- Table
- Details
- Rich text
- Embedded content

21

21

Item Properties

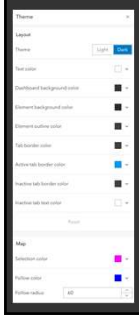
- Elements have unique settings and properties



22

22

Dashboard Themes

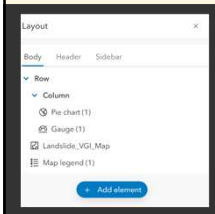


- Theme
- Text color
- Dashboard background color
- Element background color
- Element outline color
- Tab border color
- Active border color
- Inactive tab border color
- Inactive tab text color
- Map selection color
- Map follow color

23

23

Layout



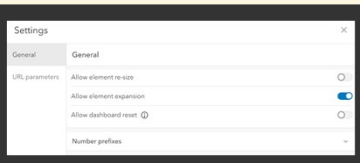
- Body
- Header
- Sidebar

24

24

Settings

- Allow element re-size
- Allow element expansion
- Allow dashboard reset
- Number prefixes
- URL parameters



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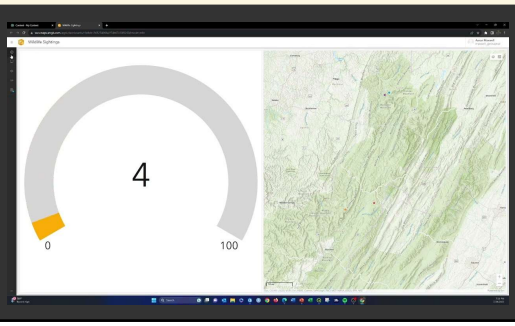
25

Video: Dashboards



26

26

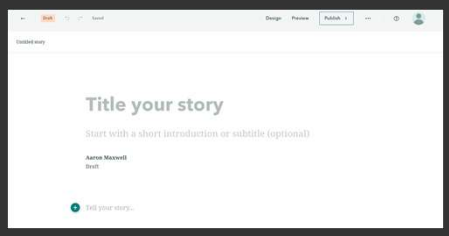
Make a Storymap

27

27

Presenting Your Data

- ArcGIS Storymaps = configurable apps designed for developing narrative using maps, text, and media



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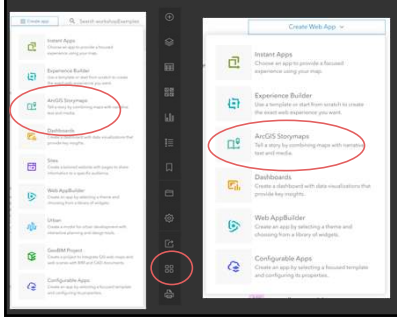
28

Initialize App

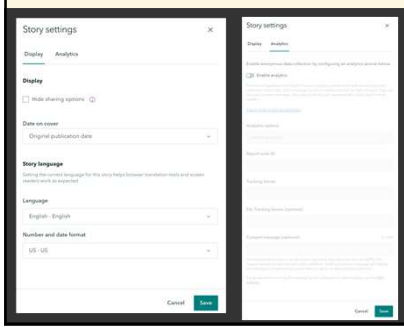


- Content → Create App→ ArcGIS Storymaps
- From Map View Or Scene View → Create App → ArcGIS Storymaps
- Map or Scene Drop Page → Create Web App → ArcGIS Storymaps

29

29

Story Settings

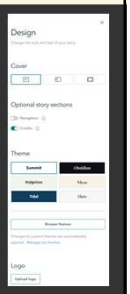


30

30

Configuration

- Cascading webpage format
- Design
  - Cover
    - Minimal
    - Side-by-Side
    - Full
  - Navigation links
  - Credits
  - Theme
  - Logo

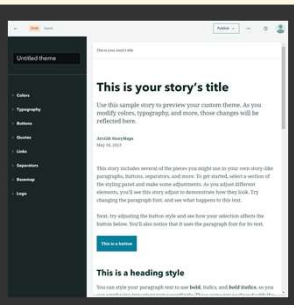


31

31

Themes

- Can create custom themes
- Can share themes with Groups and Organization

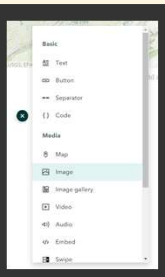


32

32

Content Blocks

Basic	Media	Immersive
Text	Map	Slideshow
Button	Image	Sidecar
Separator	Image gallery	Map tour
Code	Video	
	Audio	
	Embed	
	Swipe	
	Timeline	



33

33

Content Blocks

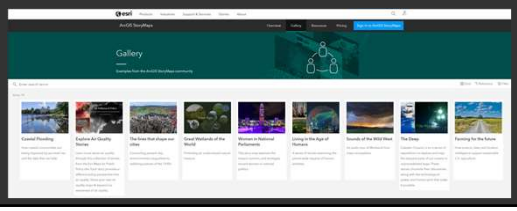
- Each content block type has unique settings
- User is walked through configurations using wizards

34

34

Storymaps

- Check out examples:
  - https://www.esri.com/en-us/arcgis/products/arcgis-storymaps/overview
  - https://doc.arcgis.com/en/arcgis-storymaps/gallery/



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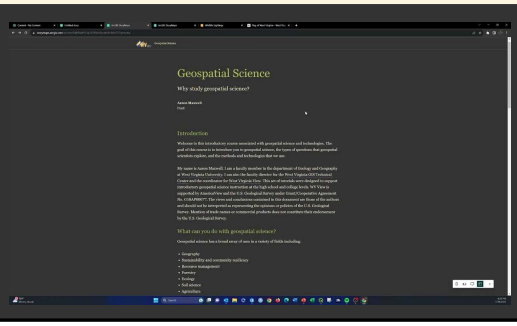
35

Video: Storymap



36

36

*Deprecated

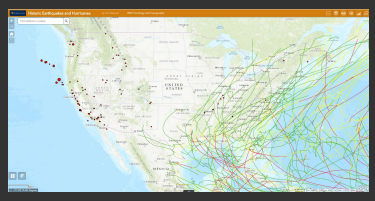
Make an App with Web AppBuilder

37

37

Presenting Your Data

- Web AppBuilder for ArcGIS = offers more functionality and is more flexible and configurable than Configurable Apps (does not require coding, can use pre-made widgets)



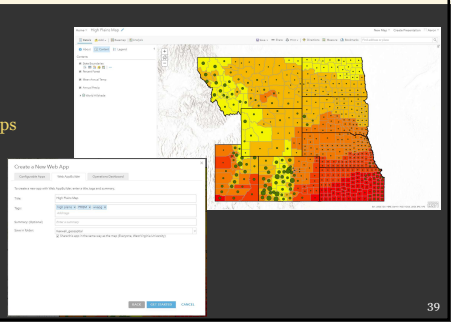
*This is being phased out.

38

38

Prep

- Create a map
- Add data
- Symbolize data
- Configure/disable pop-ups
- Share map
- Create an App



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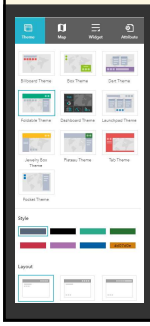
39

Configure the App

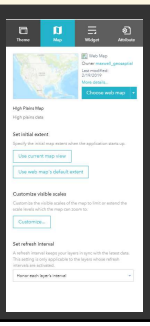


- Select a Theme
- Select a Style
- Select a Layout

40

40

Configure the App

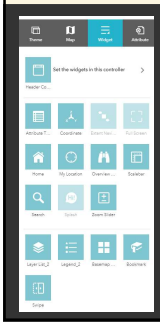


- Link app to a map
- Set initial extent
- Customize visibility scales

41

41

Configure the App



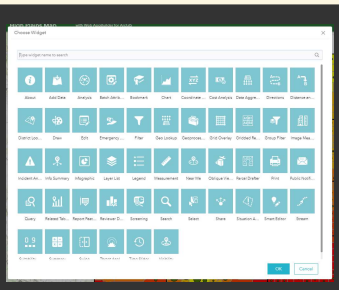
- Add widgets
- Configure widgets

42

42

Widgets

- Add functionality to your map
- Do not require coding
- Common widgets:
  - Basemap Gallery
  - Bookmark
  - Draw
  - Edit
  - Layer List
  - Legend
  - Measure
  - Print
  - Query
  - Select



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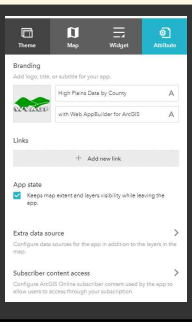
43

Configure the App

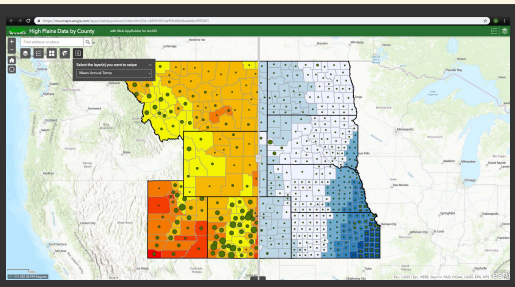
- Define title
- Define subtitle
- Add a link
- Add logo



44

44

Save and Launch



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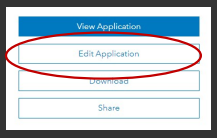
Edit App

- App will be added as an item in your ArcGIS content list
- Provides access for additional editing



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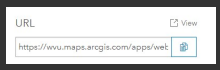
46

Web App URL

- If shared with organization, user must log in to see app
- If shared with everyone, no log in is required



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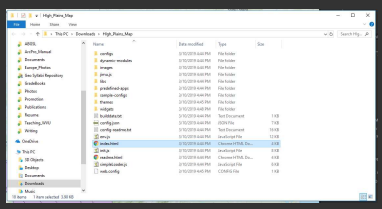
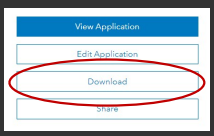
47

Download App Code

- Can download the code associated with the app





48

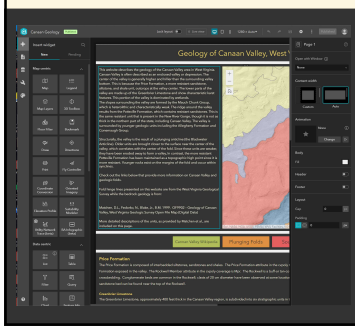
48

Make a Website with ExperienceBuilder

49

49

Presenting Your Data

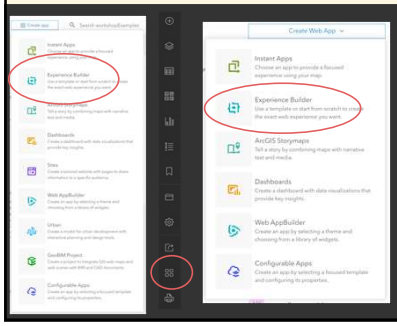


- ArcGIS ExperienceBuilder = web-based tool for generating multi-page websites that do not need to be centered around a map

50

50

Initialize App



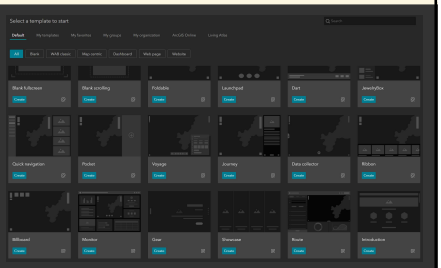
- Content → Create App→ Experience Builder
- From Map View Or Scene View → Create App → Experience Builder
- Map or Scene Drop Page → Create Web App → Experience Builder

51

51

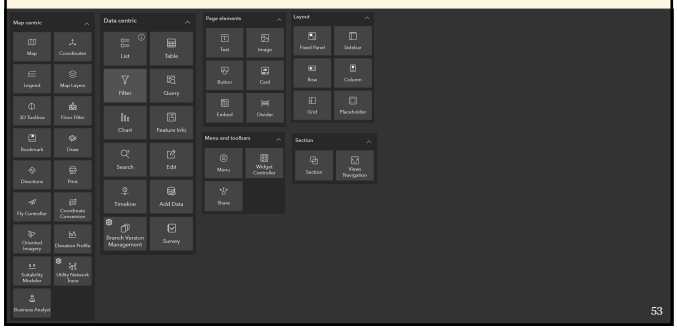
Templates

- Select a template
- Types
  - Blank
  - Web AppBuilder Classic
  - Map centric
  - Dashboard
  - Web page
  - Website



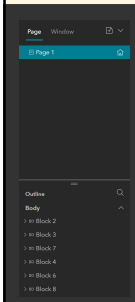
52

Content



53

Multiple Pages and Navigation

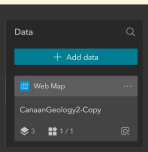


- Generate multiple pages
- Link pages with navigation

54

Data

- Link data and assets to app

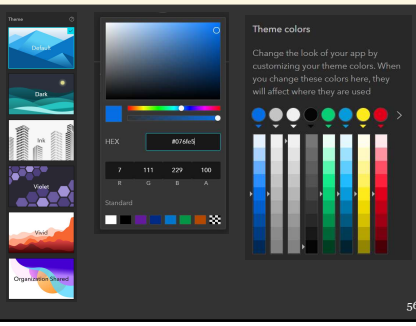


55

55

Themes

- Standard themes
- Can customize and generate your own themes

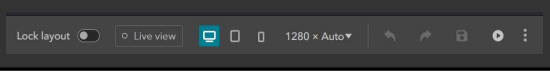


56

56

Responsiveness

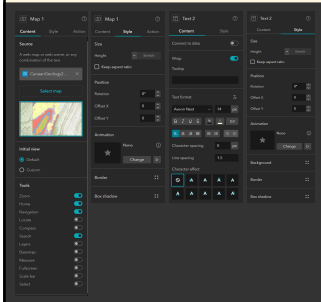
- Web design that allows automatic resizing, hiding, shrinking, or enlargement of webpage content so that it looks good on all devices (devices with different screen sizes)
- Responsive to different screen sizes
- Can preview on different screen sizes



57

57

Editing Elements



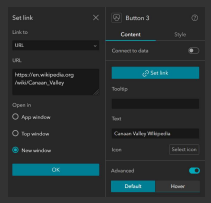
- All elements have settings and parameters that can be manipulated
- Options depend on type of element

58

58

Linking Pages

- Use buttons and assign links

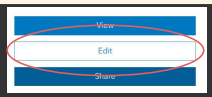


59

59

Additional Editing

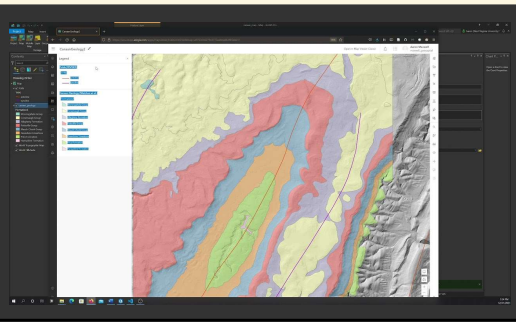
- Once app is saved, it can be further edited
- Go to drop page for app



60

60

Video: ExperienceBuilder



61

61

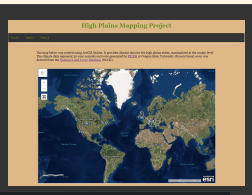
Add Web Map to HTML Webpage

62

62

Embed a Map in HTML Page

- ArcGIS Online can produce CSS/HTML to add to a web document
- May need to manipulate the code to achieve the desired result.



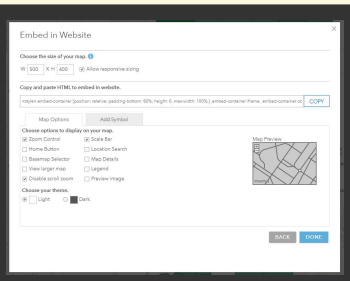

```
<style>
.embed-container {position: relative; height: 600px; max-width: 75%; margin:auto}

.embed-container iframe, .embed-container object, .embed-container iframe{display: block; top: 0; left: 0; width: 100%; height: 100%;} small{position:
absolute; z-index: 40; bottom: 0; margin-bottom: -15px;}
</style>


<div class="embed-container">
<iframe width="200" height="200" frameborder="200" scrolling="no" marginheight="0" marginwidth="0" title="High Plains Map"
src="http://maps.arcgis.com/apps/Embed/index.html?
webmap=266dd2b8c2cc4dc5a7550e204fc69b47&extent=-101.7274,-29.2456,97.9015,76.0539&zoom=true&previewImage=false&scale=true&legendlayers=true&basemap_galle
ry=true&disable_scroll=true&theme=light"></iframe>
</div>
```

63

63

Embed a Map in HTML Page

- Open map
- Share
- Select EMBED IN WEBSITE
- Copy generated HTML and CSS
- Add to HTML document
- May need to edit to achieve desired results



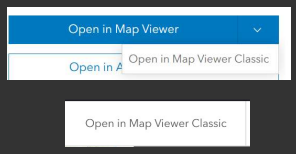
*Must use Map Viewer Classic.

64

64

Classic Map Viewer

- Can access from map drop page using dropdown associated with Open in Map Viewer button
- Can also switch to Map Viewer Classic in the Map View

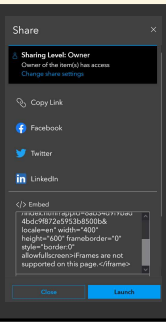


https://doc.arcgis.com/en/arcgis-online/share-maps/embed-maps-groups.htm

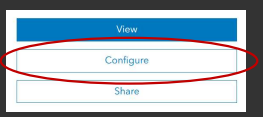
65

65

Embed App in a Website



- Some apps can be embedded in an iframe on a webpage
- Select Share in the app Configuration to obtain the code



66

66

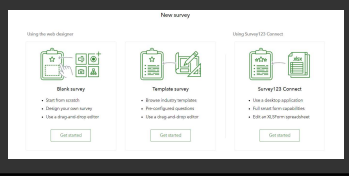
Mobile Apps

67

67

ArcGIS Survey123

- Form-centric data gathering
- Create forms to collected or edit data
- Create surveys



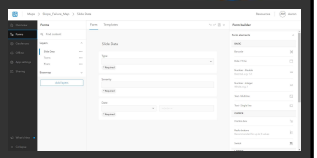
https://survey123.arcgis.com/

68

68

ArcGIS Field Maps

- Build for field mapping and data collection
- Can use maps and/or forms
- Maps are configured and deployed using the Field Maps Designer app
  - Configure app
  - Define share settings
  - Design, configure, and edit forms
  - Set of geofences to define mapping area and warn users when they are leaving the mapping area
  - Enable offline mode



https://www.esri.com/en-us/arcgis/products/arcgis-field-maps/overview

69

69

ArcGIS Workforce

- Workforce management
- Coordination of field work
- Assign work to field crews
- Provide work updates and status
- Track field worker locations information

https://www.esri.com/en-us/arcgis/products/arcgis-workforce/overview

70

70

This is the end of this lecture module.

Please return to the West Virginia View Webpage for additional content.

71