

Creating a dashboard with ArcGIS Dashboards

This document contains step-by-step instructions on how to create and design an informative dashboard with ArcGIS Dashboards.

ArcGIS Dashboards enables ArcGIS users to convey and visually display information by presenting location-based analytics on a single screen. Dashboards can be set up as interactive and intuitive, designed to respond to your audience's engagement with the dashboard. You can display data at the same time in a combination of ways, from maps, graphs, text, and survey responses.

Dashboards can be shared with others via a simple url. They can also be embedded into your Story Maps.

Context

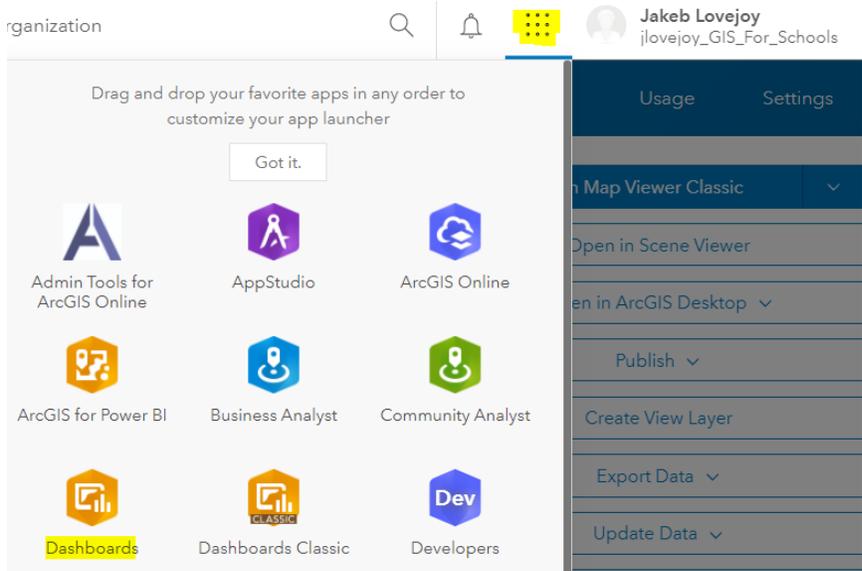
This professional development resource will take you through the process of creating a dashboard after collecting survey responses using Survey123. The survey collected data on the types of hazards around a local school, and the danger or risk associated with each of the hazards recorded.

Two ways to create a dashboard

There are several ways to begin creating a dashboard. Information on how to create a dashboard will be provided for **Option 1** but no design process will be shared for this option. It is easier to create and design a dashboard from a central data repository (i.e. a map displaying survey results). Therefore, this professional development resource will take you through the process in more detail by creating a dashboard using **Option 2**.

Option 1:

1. Login to ArcGIS Online. Click the nine-digit panel in the top-right corner of the webpage, next to your username. Select **Dashboards**.
2. This will open up a new tab, where you can choose to open existing dashboards that you have previously created or create a new dashboard.

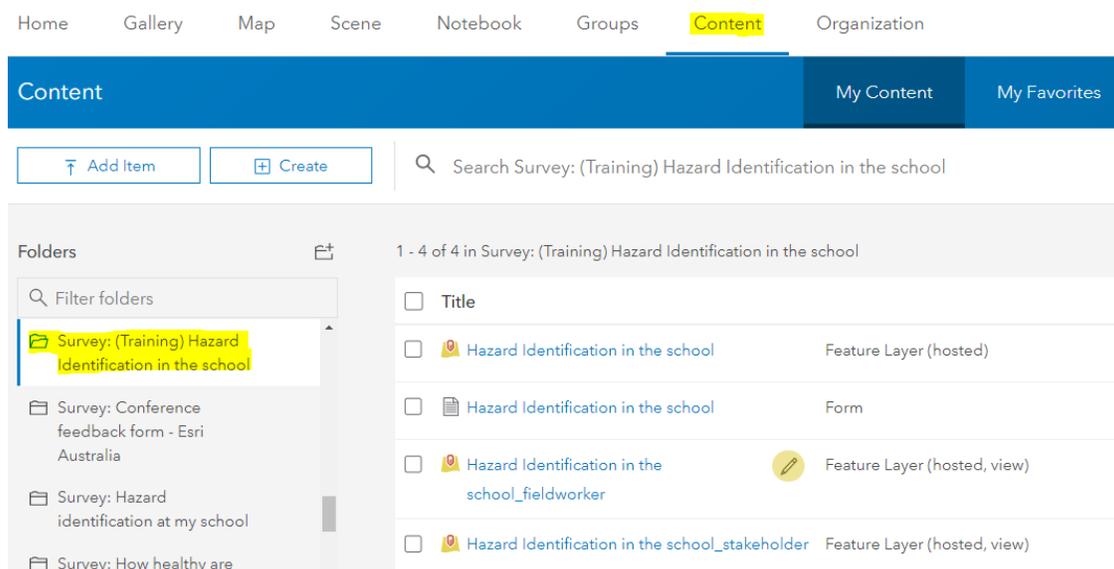


3. You can create a new dashboard by clicking **Create dashboard**.



Option 2:

1. Login to ArcGIS Online. Navigate to **Content** and locate the folder that is automatically created for each survey you create in Survey123.



- Click on the item that specifies that it is **'Feature Layer (hosted)'**. Ensure you do not select the 'Feature Layer (hosted, view)' items.

<input type="checkbox"/>	Title		
<input type="checkbox"/>	 Hazard Identification in the school	Feature Layer (hosted)	
<input type="checkbox"/>	 Hazard Identification in the school	Form	
<input type="checkbox"/>	 Hazard Identification in the school_fieldworker	 Feature Layer (hosted, view)	
<input type="checkbox"/>	 Hazard Identification in the school_stakeholder	Feature Layer (hosted, view)	

- This will open the item's overview page. Click on the thumbnail image or click **Open in Map Viewer / Map Viewer Classic** to open the survey results in a map.



- Make changes to your map to suit your needs. You may consider:
 - Changing the basemap
 - Focusing the map extent (scale) so that all survey results are visible
 - Duplicating your survey results layer multiple times to show results for different survey questions
 - Renaming layer titles
 - Making symbology changes
- Once you have made your desired changes, save the map. Provide a suitable title, tags and summary. Select the appropriate ArcGIS folder to save the map too in your ArcGIS account. Click **Save Map**.

Save Map


Save
→

Title:

Hazard identification in my school

Categories:

+ Assign Category ▾

Tags:

Year 7 Geography × Add tags

Summary:

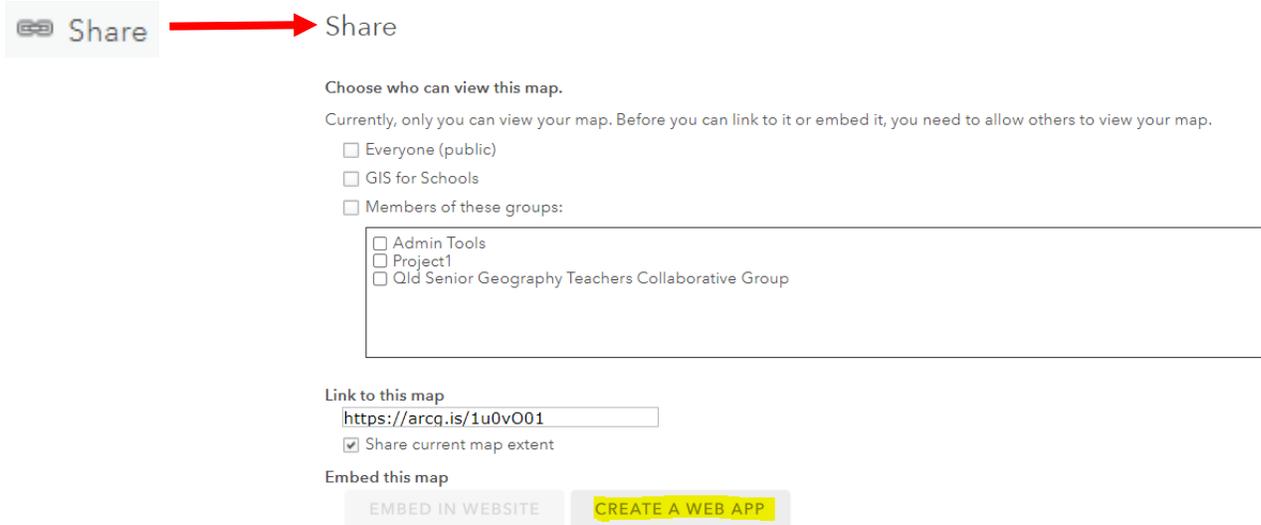
This map was created for training purposes (how to create e

Save in folder:

Survey: (Training) Hazard Identification in the school ▾

SAVE MAP
CANCEL

6. Click **Share**. Make changes to your sharing level if you wish. Click **Create a Web App**.



Share → Share

Choose who can view this map.

Currently, only you can view your map. Before you can link to it or embed it, you need to allow others to view your map.

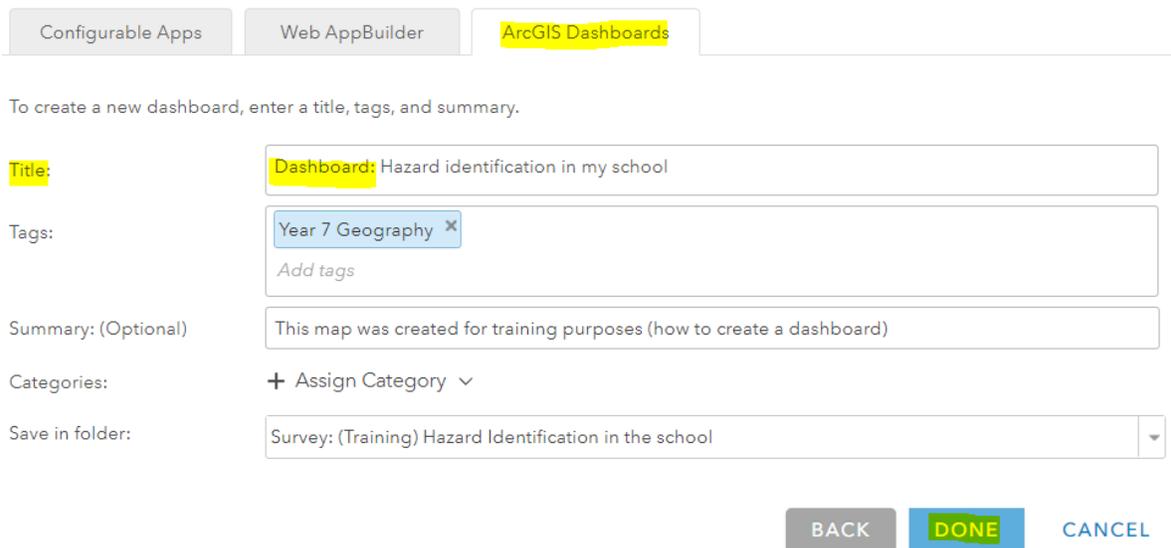
- Everyone (public)
- GIS for Schools
- Members of these groups:
 - Admin Tools
 - Project1
 - Qld Senior Geography Teachers Collaborative Group

Link to this map
<https://arcg.is/1u0vO01>
 Share current map extent

Embed this map
EMBED IN WEBSITE **CREATE A WEB APP**

7. Select the **ArcGIS Dashboards** tab from the three tabs at the top of this page. Add 'Dashboard' to your title. Press **DONE**.

Create a New Web App



Configurable Apps Web AppBuilder **ArcGIS Dashboards**

To create a new dashboard, enter a title, tags, and summary.

Title: **Dashboard:** Hazard identification in my school

Tags: Year 7 Geography
Add tags

Summary: (Optional) This map was created for training purposes (how to create a dashboard)

Categories: + Assign Category

Save in folder: Survey: (Training) Hazard Identification in the school

You have created a dashboard. Now it is time to begin designing the layout.

Designing your dashboard

A newly created dashboard will appear. At this stage, all that your dashboard will have is a map.

1. Hover over the map. You will notice a small blue button appear in the top-left corner of the map. Once you hover over this, more functions appear:



2. Click on the second icon, which is the **Configure** icon. 
3. This allows you to change the settings on your map. For instance, you can enable the legend and other map/navigation functions. Turn on the **Scale**, **Legend** and **Layer visibility**. Press **Done**.

Hazard identification in my school

Settings General Map actions Layer actions

Pop-ups

Scalebar

Default extent and bookmarks

Legend

Layer visibility

Basemap switcher

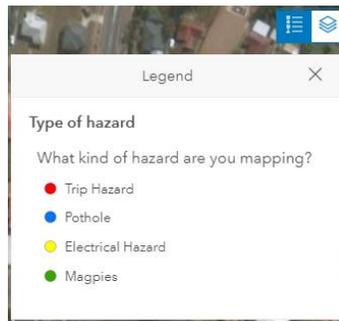
Search

Zoom in/out

Point zoom scale

Done

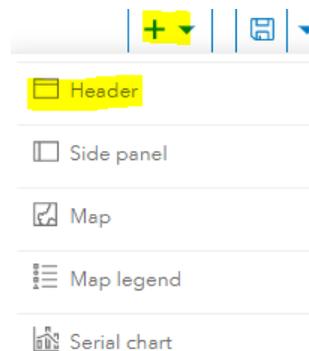
Your map will now have a scale bar and two additional icons (Legend and Layer list). These buttons will appear in the top-right corner of your map.



4. Save your dashboard.



5. Click on the + button. This is where you can go to add additional data and information to your dashboard. Select **Header**.



- Adjust the size of the header panel (Small / Large), add a title and experiment with the text colour and background colour. As you make changes, it will be displayed on the right-hand side of the screen so you can see how it will look. Once you have completed your changes, click **Done**.

Appearance

Size

Title

Subtitle

Logo type

Logo image URL

Logo URL

Text color

Background color

The header will now be added to your dashboard.

- Click on the **+** button again. This time, choose side panel. In the **Title** section, add some text (e.g. A title and short summary about the nature or purpose of this dashboard). Experiment with your text colour and background colour and add a 'slide over panel' if desired. Click **Done**.

Appearance

Title

Description

Text color

Background color

Slide over panel

About this dashboard

This dashboard has been created to show the location of hazards around my school.

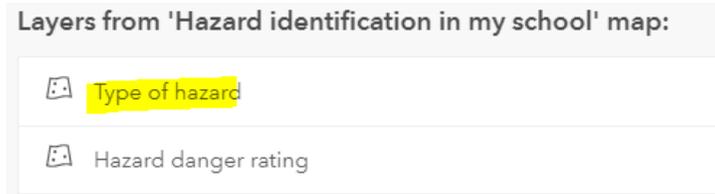
The dashboard provides the following information at a quick glance:

- Location of identified hazards
- Category of hazard
- Determined risk / danger of each identified hazard
- A link to the hazard identification survey
- A gallery of images for each hazard

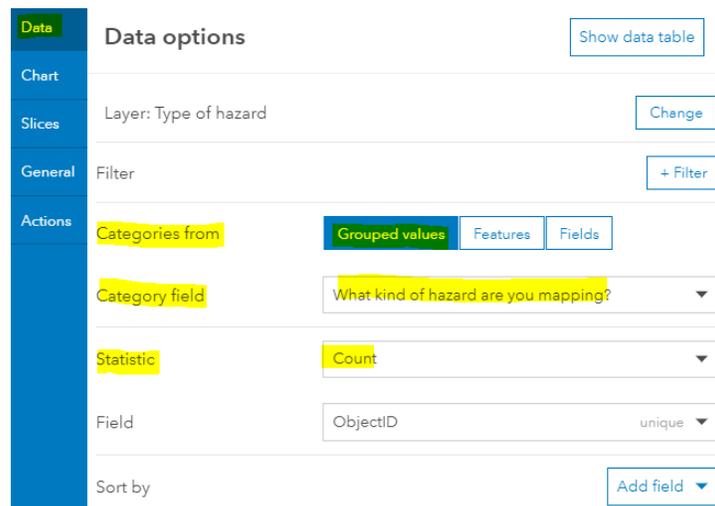
- Press the **+** icon again. Choose **Pie Chart**.



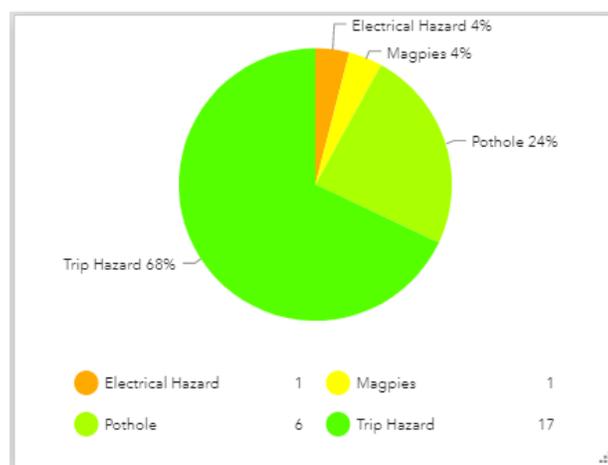
9. It will prompt you to select a feature layer (survey question), that you wish to display as a pie chart. In this case, we have chosen **Type of Hazard**.



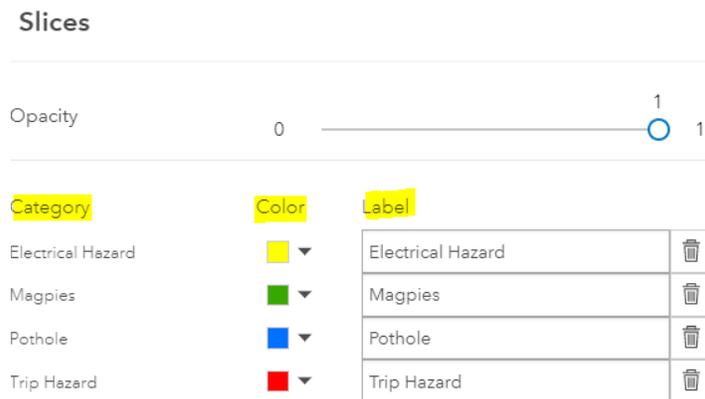
10. Once you have selected your feature layer, a new settings panel, with multiple tabs, will display. Under the **Data** tab, set **Grouped values** for the 'Categories from' option. Below this, for 'Category field', select the survey question that matches the feature layer you chose in step 9. You can change the **Statistic** type if desired. In this case, it will be left as **Count**.



11. Click on the **Chart** tab. Here you can set your font size, starting angle, label settings and legend settings. Experiment with these until you are happy with how your data is displayed.



- Click on the **Slices** tab. Here you can, symbolise your categories and appearance. It is recommended that you match symbology changes to your map's symbology for consistency.



- Click on the **General** tab. Here you can add a title for your pie chart and experiment with text colour and background colour as desired.
- Do not engage with the **Actions** tab at this stage. Click **Done** to finalise your Pie Chart changes.
- The Chart will appear on your dashboard. It may appear quite large. Hover over the Pie Chart panel so that the blue button appears. This time, click and hold the **Drag item** icon. Drag the pie chart to a position of your choice. You can also resize the panel by clicking and dragging on the area between panels.



- As you add more panels, you will have to experiment with dragging each panel and resizing each panel until you are happy with the layout.
- Save your dashboard.

Here is an example of a basic dashboard interface after a header, pie chart, column graph, text and a map has been added.

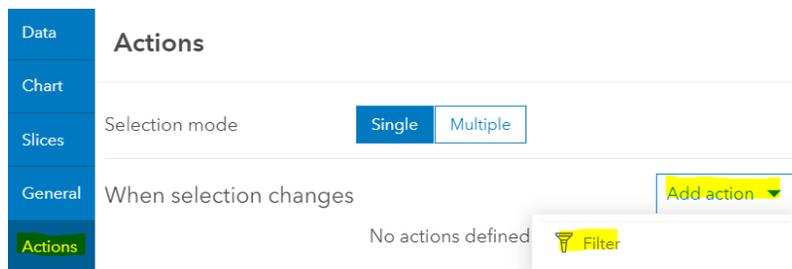


Making your dashboard responsive and intuitive

1. Return to the **Configure** button for one of your chart panels. In this case, the **Configure** button for the Pie Chart in the image above was clicked.



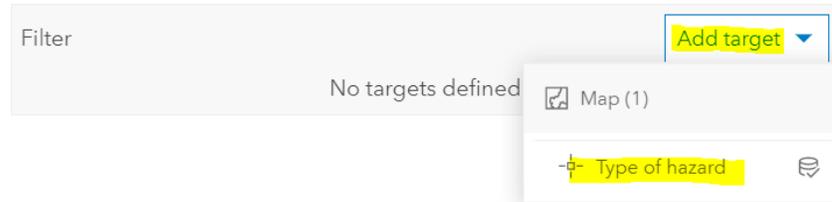
2. Click on the **Actions** tab. Select **Add Action > Filter**.



3. Select **Add Target** and choose the appropriate panel – or panels – you would like to link to. In this case, only one panel can be linked, which is the map and more specifically, the ‘Type of Hazard’ layer on the map.

This is because the pie chart is also depicting hazards by type.

When selection changes



4. Leave **Render only when filtered** unchecked. Press **Done** to apply your changes.

Render only when filtered

5. Now, when you click on a type of hazard on the pie chart, the map will only display the location of these types of hazards. You can try this out for yourself by [accessing the dashboard](#). Alternatively, it is depicted below:



6. Repeat this process for all panels that you would like to link by filter. As your audience or end user engages with the dashboard, the type of data that is displayed will change according to their user actions.

Establishing default settings for your dashboard

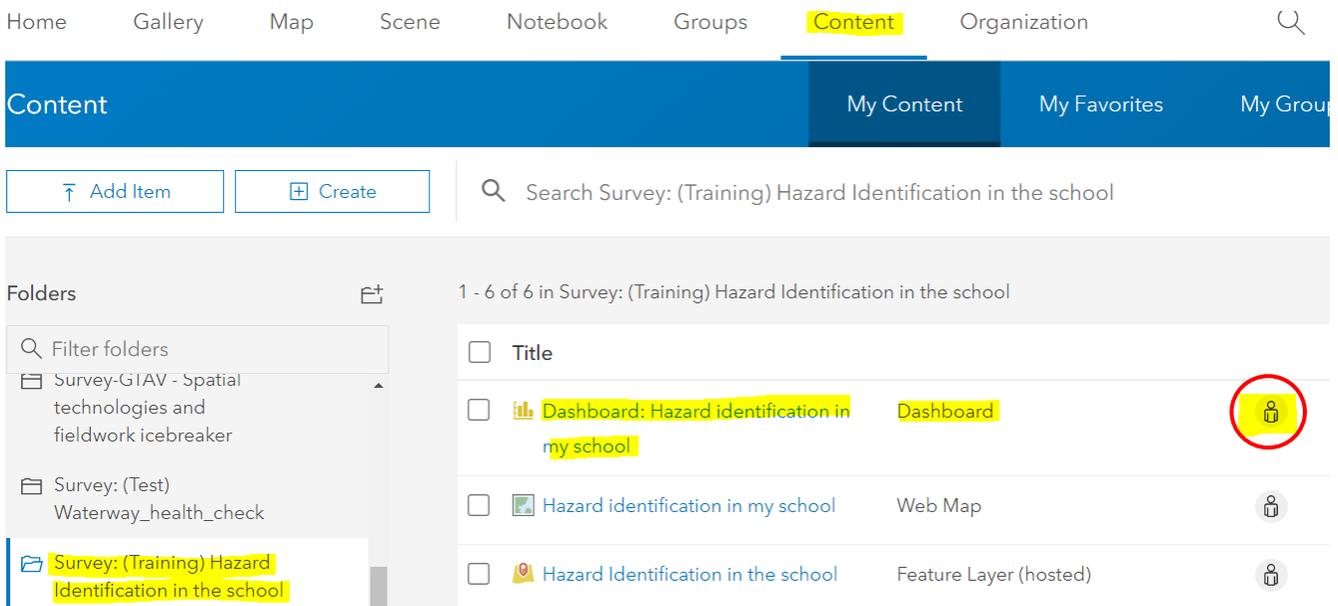
1. You can set up default settings for each dashboard by clicking the setting button at the top-right of the dashboard interface.



You can establish default settings like theme, text colour, background colour, and more. For instance, this means that you would not have to specify a particular text colour in each panel that you add to the dashboard.

Sharing your dashboard

1. Return to ArcGIS Online. Navigate to **Content** and to the folder where you saved your dashboard. Click on the small circular icon, which is circled in red below for your reference:



Home Gallery Map Scene Notebook Groups **Content** Organization

Content My Content My Favorites My Groups

↑ Add Item Create Search Survey: (Training) Hazard Identification in the school

Folders Filter folders

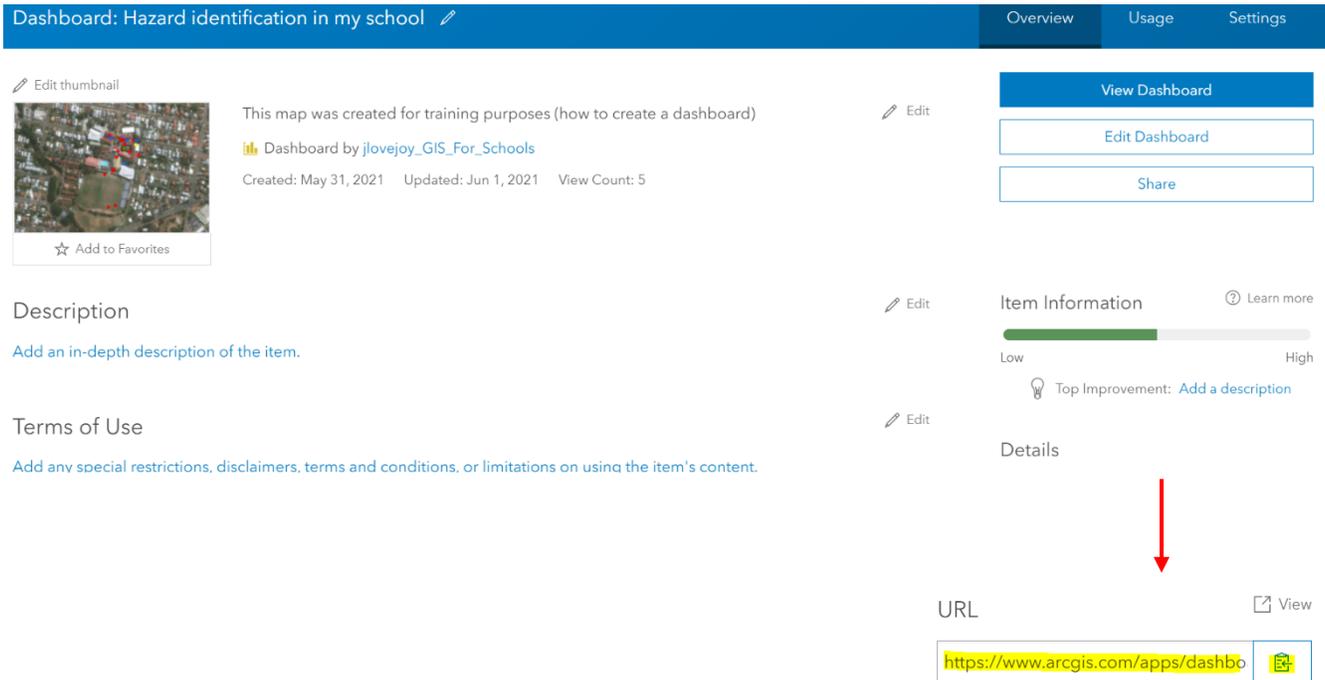
- Survey-GIAV - Spatial technologies and fieldwork icebreaker
- Survey: (Test) Waterway_health_check
- Survey: (Training) Hazard Identification in the school**

1 - 6 of 6 in Survey: (Training) Hazard Identification in the school

<input type="checkbox"/>	Title		
<input type="checkbox"/>	Dashboard: Hazard identification in my school	Dashboard	
<input type="checkbox"/>	Hazard identification in my school	Web Map	
<input type="checkbox"/>	Hazard Identification in the school	Feature Layer (hosted)	

2. Change your sharing setting to **Organisation** or **Everyone**. Click **Save**.

3. Click on the title of the dashboard to enter the item's overview page. Scroll to the bottom of this page. On the right-hand side, there will be a url that you can copy and paste to distribute to other members of your organisation (share level: my organisation) or to the public (share level: everyone).



The screenshot shows the ArcGIS Online interface for a dashboard titled "Dashboard: Hazard identification in my school". The page has a blue header with the title and three tabs: "Overview", "Usage", and "Settings". Below the header, there are three main sections:

- Thumbnail and Metadata:** On the left, there is a thumbnail of a map with red markers. To its right, text reads: "This map was created for training purposes (how to create a dashboard)", "Dashboard by jlovejoy_GIS_For_Schools", "Created: May 31, 2021", "Updated: Jun 1, 2021", and "View Count: 5". There are "Edit thumbnail" and "Add to Favorites" buttons.
- Description and Terms of Use:** Below the thumbnail, there are sections for "Description" (with a prompt to "Add an in-depth description of the item.") and "Terms of Use" (with a prompt to "Add any special restrictions, disclaimers, terms and conditions, or limitations on using the item's content.").
- Item Information and Details:** On the right side, there are buttons for "View Dashboard", "Edit Dashboard", and "Share". Below these are sections for "Item Information" (with a progress bar from "Low" to "High" and a "Learn more" link) and "Details". A red arrow points from the "Details" section down to the "URL" field.

The "URL" field at the bottom right contains the text: `https://www.arcgis.com/apps/dashbo` with a "View" icon to its right.

Congratulations! You have now created your first dashboard. If you would like to engage with the simple dashboard that was referenced to in this survey, you can access it [here](#).

Next Steps:

Request a free ArcGIS Online Account for your school:

Australian schools can request a free ArcGIS Online account as part of Esri Australia's Classroom GIS Initiative. A school subscription provides additional map layers, content, features and privacy. Learn more about ArcGIS Online, and apply for your ArcGIS Online School subscription at <http://esriaustralia.com.au/education>

Speak to Esri Australia's Education Program Manager:

Australian schools can seek additional support or speak to our Education Program Manager by emailing education@esriaustralia.com.au.