

UC Santa Barbara

The UCSB Guide to the Geographic Approach

Title

The UCSB Guide to the Geographic Approach StoryMap Template for Instructors

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Module Title

StoryMap Template

Created *Month Year*; Last Updated *Month Year*



General Guidelines

- Update the header **Module Title** and *Month Year* information
- Use the Aptos font at size 11 for main body text
- Use the Nature referencing style
- Include links to the source of images as comments. These will be used to check or copyright permissions.
- Delete all italicized and greyed guidelines when the script is complete.
- Replace italicized and blue-highlighted text with appropriate text
- Refrain from referencing relative time to extend the longevity of the materials (e.g., do not say 'last year, the IPCC released their report on climate change.' Instead say, 'In the IPCC report on climate change released in 2024...')
- Grammatically, the voice should be in second person not first person plural (e.g., 'You will work through the module,' not 'We will work through the module')
- Grammatically, do not use conjunctions like you'll, we'll, it's, etc. Instead, spell these out 'You will do x, y, and z'. (In videos, it is fine to use conjunctions).

Title

A **short title** that is engaging and starts with a verb (e.g., "Analyze health-care access during extreme weather events", "Understand disease outbreaks", "Monitor wildlife movement in a changing climate", etc.

- Use 8 words or less for the main title
- For the main title, aim to match the verb to the level of Bloom's taxonomy that best matches the level of difficulty/skill of the module

A **one-sentence subtitle** introducing the applied problem. For example, "Learn to quantify differences in access to pharmacies in normal conditions and with extreme flooding"; "Work with GIS to describe disease patterns to aid in public health decision-making"; "Explore GPS tracking data to investigate the movements of two bird species".

Introduction

Short narrative story to get students excited about the problem (no more than 500 words) with embedded graphics, maps, or animations

- The story can be real or made up but should be written in story format rather than an academic paper format

Learning Objectives that identify the key skills that the student will learn by completing the module

A **short video** introducing students to the thematic topic of the module (e.g. urban trees, epidemiology, wildlife conservation, etc). This video should focus on the applied problem rather than the GIS skills - those are introduced later.

Ethical Lesson

A **short video** (3-5 minutes) explaining the ethical lesson.

A **hands-on activity** where learners can practice the 'how to' of the ethical concept introduced in the video. Examples include situational 'flip cards', fill in the blank dialogs, writing acknowledgement statements, etc.

An **Ethics Case Study** can also be developed using the template materials provided with the project.

Considerations:

- Ethical lessons should be placed where they best support the module narrative.
- Ethical lessons and activities should be tagged using the AAC&U Ethical Reasoning Rubric and the 4 obligation presented in the GISCI Code of Ethics
- Additional reading material or websites can be linked as 'offramps'

GIS Background

This section introduces the GIS concepts that will be covered in the module. These typically take the form of a **short lecture or series of lectures** in video format. Limit the use of text in this section, but short blocks are OK.

Considerations:

- Videos should be no more than 5-7 minutes each.
- Videos should **not** make reference to other videos (e.g., do not say "as we talked about in the prior video")
- Videos should not reference other modules (e.g., do not say things like "building on what you learned in the first module")

Technical Skills

This section usually includes an **embedded interactive map viewer** in the StoryMap where learners can engage in short activities to learn some of the concepts or skills they will need for the problem-based lab.

The map is accompanied by **instructions and screenshots** on the left sidebar. Students scroll through the side bar while interacting with the embedded map viewer. Typically, the steps introduce students to the layers used in the lab, explore the metadata, view attribute tables, create charts, or change visualizations.

Periodically, **short quiz questions** should be embedded on the left sidebar to keep students engaged.

Considerations:

- Since this part does not require students to log in ArcGIS Online, the map functionality is relatively limited.
- If any proprietary datasets are used in the skills or lab sections, permission will need to be secured.
- The quiz questions are often added using Survey123 to allow interactivity

Problem-based Lab

A **step-by-step lab** that extends the concepts and data introduced in the technical skills and is related to the applied problem introduced at the top

The lab can be built in ArcGIS Online or ArcGIS Pro but should include step-by-step instructions for students to work through a hands-on problem. The intent is that instructors could use these in the lab portion of their course, so they can take students anywhere from 45 minutes to 2+ hours to complete.

Considerations:

- If you are building the lab in ArcGIS Online, be cognizant of the number of credits each step is consuming. Try to limit the number of credits to under 20.
- The labs are distributed in pdf format

Conclusion

Short Text summarizing the application, ethics, GIS skills, etc. Using bullets of key outcomes is helpful.

Callout box for extending the analysis - can include links to other, similar data sources if students want to run with different data or examples of how the analysis was used in other realms, etc.

Considerations:

- *Do not forecast the next module (e.g., say things like 'in the next module you will...') as different instructors may use them in a different order*

Acknowledgements

References include a numbered list of references that corresponds to the order in which the citations appear in the StoryMap.

- The project uses the Nature referencing system

Collaborators: Include a short paragraph acknowledging and describing the contributions of any collaborators.

- This paragraph may include references to collaborator papers
- Provide the paragraph to the collaborators and ask for their edits and approval.

Spatial Data: List all the spatial data used in the StoryMap along with the original source information