Great Story Maps and How to Emulate Them

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What Is a Story Map?

Great Story Maps

NOAA Story Maps

Fridays on the Farm

Why Does It Matter?
What are Story Maps?
Story Maps are simple web apps that combine interactive maps,
**Story Maps** are simple web apps that combine interactive maps, multimedia content,
Story Maps are simple web apps that combine interactive maps, multimedia content, and user experiences.
Story Maps are simple web apps that combine interactive maps, multimedia content, and user experiences to tell stories about the world.
Most **Story Maps** are hosted by Esri in the cloud. (But you can opt to host them yourself.)
Story Maps incorporate builder functions that enable you to build a sophisticated story with no GIS or web development skills.
Story Maps work equally well on PCs, tablets, and smartphones.
Story Maps are open source. You’re free to download and customize them.
Story Maps include an array of apps that provide different ways of telling a story with maps.
What are Story Maps?

**Story Maps**

- Sequential narratives
- Presenting a series of points of interest
- Comparing several maps
- Scrolling through maps and multimedia
- Enabling a “crowd” to participate in a story
What are Story Maps?
Why

Story Maps?
“Stories are a communal currency of humanity.”

—Tahir Shah, in Arabian Nights
What are Story Maps?

“Maps codify the miracle of existence.”
—Nicholas Crane, Mercator: The Man Who Mapped the Planet
Then:

Story

Map = **Noun**

Map as static accompaniment to story
Now:

Map = Active Verb

Map as
- Context
- Connective tissue
- Windows to information
- Supporting cast
- Main character
What are Story Maps?

A new medium

Story

Map
Great Story Maps

RUPERT
Global Poverty

Poverty affects billions of people around the globe. On a daily basis, they face low wages and substandard health, education, and living standards. Because of this, poverty must be understood and approached as a multidimensional issue.

Through the use of storytelling, videos, and interactive maps, we'll take a look at one method of measuring global poverty. This measure, called the Multidimensional Poverty Index (MPI), addresses poverty through an integrative approach.

"To know is beautiful. To understand expands knowledge. To act upon creates change."

-Rodel Natividad Caslo
India Rising

Fertility rate drops by half as growth continues

Women in India have about half the number of children now than they had in 1950, from just over five children per woman to about 2.34 in 2013. This number is also known as the total fertility rate (TFR).

And now the country is on course to reach replacement fertility, which means couples are having the number of children to replace themselves without increasing the size of future generations. In India, replacement fertility is about 2.33 because some women may not survive to the end of their childbearing years. (In Europe, replacement fertility is 2.06.)

Population Reference Bureau, Washington DC | Link
Katrina +10: A Decade of Change in New Orleans

Katrina displaced over one million Louisiana residents—an estimated 277,000 did not come back to resettle.

Number of Migrants
Less than 300
Greater than 20,000

Threatened by one of the most destructive and influential storms in United States history, those living in the path of Hurricane Katrina faced a very real and costly reality. Many people relocated far away from New Orleans after the storm left. This map, which uses data from the 2006 American Community Survey, presents a graphic representation of these exact states. Click on each state for details.

Data Source: 2006 American Community Survey 1-year Estimates, State-to-County Migration (Data Extract 101: 000000).
3

NOAA Story Maps

DAN
People blame El Niño for many things, including the weather, the ocean, and the atmosphere. One of the ways to detect El Niño’s effects is by monitoring sea surface temperatures. With tools like graphs and maps, you can explore the impact of El Niño and even begin to predict it. The NOAA Data in the Classroom website offers an El Niño activity and resources for educators. 

LAUNCH THE ACTIVITY
Developed in ASP.NET
- Limited amount of activities online compared to the PDFs
- Uses antiquated browser technologies
- Inactive from HTTPS
Invention Level: Invention is the highest cognitive level. Exercises need to be designed where pedagogy and technology are integrated simultaneously. This is where the inquiry approach can be fully implemented. This area is very student driven.

Interactivity Level: This level features the use of complex technology interactions. Here problem-solving techniques are introduced that can be very student directed. Tools are needed for students to analyze data and discuss findings.

Adaptation Level: Students use portal tools to play and practice what they know. These interactions can be student-directed.

Adoption Level: Many teachers appreciate having prescriptive approaches to utilizing online tools. We recommend some form of drill and practice exercises that are predictable to teachers and will be available for them to share with their students. Once understood teachers can move to the next level of online interactivity and teacher technology inclusion.

Entry Level: The developers are making the basic assumption that first-time users of a new portal are at an entry level and need direct guidance in how to use the portal and demonstration site. This level of interaction is very teacher directed. Once teachers learn how to use the site they are ready to skip this level and move on to more complex levels. The Entry Level provides teachers with a teach-back system to help their students enter into the portal and its use.
### Simplicity and Consistency in Design

#### Story Map Series

<table>
<thead>
<tr>
<th>Intro</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
<th>Get Data</th>
</tr>
</thead>
</table>

- **scroll**
- **activity**
- **information**

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- **Mainstage**
  - maps, images, videos, web pages
  - Apps Embedded in Mainstage

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**Story Map Journal**
Teaching Sea Level with Story Maps

Understanding Sea Level Using Real Data

Measuring Sea Level From Space

Introduction

Objectives
Students will analyze real data maps from satellites to provide evidence for global variations in sea surface height. Students will construct an explanation for sea surface height variations across the equatorial Pacific Ocean.

Activities
• Analyze satellite maps of global sea surface height
• Construct explanation for sea level variations
Teaching El Nino with Story Maps

Understanding El Niño Using Data in the Classroom

Reading Sea Surface Temperature

Introduction

Objective
Students will learn how to read and interpret sea surface temperature maps.

Background
One of the ways to detect an El Niño event is to look at sea surface temperature (SST). SST can be recorded using instruments on satellites that measure heat from the surface of the ocean. These data can be represented on maps in different ways. One way scientists do this is to plot different temperature values with different colors, producing what is called a false-color map.
Teaching Coral Bleaching with Story Maps

Understanding Coral Bleaching Using Data in the Classroom

Coral Bleaching - Get Data

Coral Reef Station Data

NOAA provides station data for many coral reefs around the world (see here). This tool provides a smaller sampling of these stations, along with more simplified graphs and data outputs.

Click one of the five station locations. The pop-up provides the reef name, location, and then important data related to coral bleaching.

**Maximum Mean Temperature**: this is the mean warmest temperature coral typically experience. Anything 1°C over this value can cause bleaching.

**Graph Link**: Click this link to access a real-time graph of Degree Heating Week data.

**Data Link**: Click this link to get a CSV file (can be analyzed in Microsoft Excel or any other spreadsheet software) of daily SST, HotSpots (degrees above the Maximum Mean Temperature), Degree Heating weeks, and Bleaching Alert Area.

For more information about the HotSpots and Bleaching Alert Area data, please visit the NOAA.
Taking a Dive Under the Ocean

**Understanding Coral Bleaching Using Data in the Classroom**

**Monitoring Coral Reefs in the Field**

**Optional: Surveying Coral Reefs**

By using underwater 360° cameras, X. Catlin and Google have created underwater tours of coral reefs around the world. In this activity, we’ll use these tours to do some qualitative comparisons of reefs around the world. Qualitative methods mean that you provide descriptions instead of numerical data.

Click on a reef tour location and virtually swim through the reef using your mouse or touchpad to zoom and pan.

Record your observations on:
- Reef health (e.g., bleached or not)
- Abundance of fish
- Mix of hard coral, soft coral, sponges, and algae

Cheeka Rocks, Florida Keys

View on Google Maps

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Cozumel, Mexico
NRCS Story Maps
MICHELLE
Helping People, Help the Land
Voluntary Conservation on America’s Working Lands

• We provide one-on-one, personalized advice on the best solutions to meet the unique conservation and business goals of those who grow our nation’s food and fiber.

• We help people make investments in their operations and local communities to keep working lands working, boost rural economies, increase the competitiveness of American agriculture, and improve the health of our air, water and soil.

• We generate, manage and share the data, research and standards that enable partners and policymakers to make decisions informed by objective, reliable science.
Stories on the Land
#Fridaysonthefarm Shortlist Collection

https://arcg.is/08Prq8
#Fridaysonthefarm Cascade Features

- Taking the High Ground and Farming with Nature
- Seminole Pride Markets Success
- Conservation Leads to Stream Delisting
- Young Iowa Farmer Implements New Grazing System
- A Place to Call Home
- Special Mother’s Day Features
- Fire Sparks New Life on an Old Farm
- Restoring a Majestic Love
- High Tunnel Increases Growing Season and Crop Yield for Mission Farmer and Local Community
#Fridaysonthefarm *Cascade* Features - Highlights

- Embedded map ties reader to the farmer, rancher, forester or partner
- Subtitle images and menus establish a narrative and move the story
- Interactive slides and media make technical information understandable
- Responsive design delivers story where users live and work

[https://arcg.is/yq9Pm](https://arcg.is/yq9Pm)
#Fridaysonthefarm – Corporate Media Strategy

- **Collaboration** between the national communication team and states
- **Uniform structure and features** for multiple authors
- **Standard branding** on story maps and digital media products
- **Integration** into digital media outreach:
  - USDA and NRCS social media channels
  - NRCS web presence
  - USDA blog stories
  - Newsletters and announcements through GovDelivery
  - National, state and programmatic media distribution through news service
  - Collaborative outreach with partners
Building on #Fridaysonthefarm - Announcements

USDA Natural Resources Conservation Service: 2017 Conservation Innovation Grants

In 2017, the NRCS will award over $22.6 million in national NURSING for 33 projects in conservation finance and pay for success models, water management, and data analytics as well as for historically underserved communities. Learn more about those projects through the storymap. (Note: Map locations for projects are estimates only to protect producer and partner privacy). The competitive NRCS Conservation Innovation Grants or CIG program - which drives public and private sector innovation in resource conservation - helps develop new tools, technologies, and strategies to support next-generation landowners.

http://arcg.is/1nGCGn
Building on #Fridaysonthefarm – More Complex Stories

http://arcg.is/1Xb8bP
Building on #Fridaysonthefarm – Collaborative Stories

Farm to Table

New Bee Better Certification for Farmers and Ranchers Who Help Bees on America’s Working Lands

http://arcg.is/1fWPOX
Thank you.
Why Does it Matter?

(’ll give you seven reasons)
Emancipate Your Data

• Too much data is enslaved within the organizations that own it
Emancipate Your Data

• It will do more, and better, if it’s available to all

• Part of the process is making your data a “good citizen”
Expand the GIS Spectrum

- It’s more than just analysis

[Diagram showing a spectrum with labels: Analysis, Decision Support, Emergency Response, Planning, Situation Awareness, Storytelling]
Share Your Work

• If you’re a GIS professional... show what you’ve done
Spread the Word

• Story maps can show people how special your place is
Rally People to Your Cause

- Recruit, convince, inspire

Brazil's People of the Forest

The Yudja are one of many indigenous groups who call Brazil's Amazon rainforest home. For decades, they've sustainably managed their community forest, relying on it for food, shelter and livelihoods.

But in the face of new roads, hydroelectric dams and mines, what will become of the Yudja and the forest they inhabit?

StoryMap by Caleb Stevens, Sarah Parsons, Katie Keydar and Bill Dugan
Photos and video by André Dhká
Express Yourself!

• Story maps are a creative medium whose potential has barely been tapped
Telling the Story of the Earth

• In aggregate we can make a difference
Please Take Our Survey on the Esri Events App!

Download the Esri Events app and find your event

Select the session you attended

Scroll down to find the survey

Complete Answers and Select “Submit”