

LESSON 2

POPULATION WAVES

Activity 2: Mapping a Fish Story

Students will explore the "Saving Our Sturgeon" StoryMap to learn skills in map reading and to explore the story of the lake sturgeon through a spatial lens.

The "Saving Our Sturgeon" StoryMap URL is
<https://arcg.is/OnTaOG>.



Objectives

After participating in this activity, students can:

Use digital maps associated with an Arc GIS StoryMap to answer geographic questions (e.g., Where are there patterns? On the landscape? Why there? So what?)

Analyze how technology (for example, dams) interacts with the environment and how increased use of this technology affects natural resources.

Activity Preparation

Review the StoryMap and become familiar with the various menus and functionality. Distribute handout and display the StoryMap on screen.

Prior Knowledge

Basic computer literacy skills to navigate to a designated website and use navigational links, scroll bars, and zoom functionality.

Spatial awareness and basic understanding of the connection between two-dimensional representations depicted within maps and the relative positions of these objects within the real world.

Familiarity with common elements of narrative stories such as characters, scene, and plot.

Key Vocabulary

ArcGIS: a family of client, server, and online geographic information system (GIS) software developed and maintained by Esri.

Geographic Information System (GIS): a computer system that analyzes and displays geographically referenced information. It uses data that is attached to a unique location.

StoryMap: web app that combines interactive maps, multimedia content, and user experiences to tell stories about the world.

Files Needed

- Mapping a Fish Story (handout)
- Drawing Lake Winnebago to Scale (handout)
- Threats to Sturgeon (handout)

Materials Needed

- Saving Our Sturgeon StoryMap
- 1:1 device
- Optional: Graph paper (to assist in drawing Lake Winnebago to scale)

Wisconsin Academic Standards

Covered

Social studies

SS.Geog1.a.m, SS.Geog5.a.m

Science

SCI.ETS2.B.m, SCI.LS2.A.m

Great Lakes Literacy Principles

Principle 5

The Great Lakes support a broad diversity of life and ecosystems.

Principle 6

The Great Lakes and humans in their watersheds are inextricably interconnected.

Principle 8

The Great Lakes are socially, economically, and environmentally significant to the region, the nation, and the planet.

Activity Steps

Total estimated activity time – 120 minutes

1. Display "Saving Our Sturgeon" StoryMap for students and demonstrate menu functionality.
2. Ask students, "Why do you think the technology is called a 'StoryMap'?" [Hint: What are the characteristics of any story that you anticipate you will experience? Answer: See the third paragraph of the StoryMap.]
3. Inform students that "Saving our Sturgeon" is a place-based story. Some of the places will be depicted in maps. Depending on prior instruction, this StoryMap will introduce them to, or remind them of, several key features of maps.
4. Distribute the "Mapping a Fish Story" handout and allow time for students to independently read through the first three sections of the StoryMap (there are questions under the Dinosaur Fish and Where in the World sections) and answer the associated questions.
5. Before students complete the "Drawing Lake Winnebago to Scale" handout, discuss/reinforce the concept of scale and its importance in creating and interpreting a map, as well as the potential difficulty of including a scale on a map. A scale should only be included on a map if all parts of the map align to that scale. A scale map requires accurate measurements and drawing capabilities. If you are drawing a map for someone seeking directions, knowing the relative locations of landmarks along the route may be sufficient. Remind the students to consider their paper size when choosing their scale. For example, the maximum length of Lake Winnebago is 48 km and the maximum width is 16 km. If they used a scaling factor of 1 km = 2.5 cm, the students would need paper that is at least 120 cm tall and 40 cm wide.
6. Distribute "Threats to Sturgeon" handout and allow time for students to independently read through this section of the StoryMap to answer the associated questions.