

Lesson 3a: An Introduction to ArcGIS Online

Overview: Students will learn how to navigate ArcGIS as a geospatial technology tool through a series of exercises. Students will be introduced to ArcGIS mapping and how to plot points, measure distances, and navigate layers. Students will also apply their learning how to add maps to their ArcGIS My Content folder. The city of Princeton is the example in this lesson, but any city may be used. This lesson can be applied to the investigation of a variety of topics and areas of the world. Students are encouraged to sign up for an ESRI ArcGIS Online user account.

Minnesota Social Studies Standards:

(8th Grade)

Standard 1. People use geographic representations and geospatial technologies to acquire, process and report information within a spatial context.

8.3.1.1.2 Create and use various kinds of maps, including overlaying thematic maps, of places in the world; incorporate the “TODALSS” map basics, as well as points, lines and colored areas to display spatial information.

(9th Grade)

Standard 1. People use geographic representations and geospatial technologies to acquire, process and report information within a spatial context.

9.3.1.1.1 Create tables, graphs, charts, diagrams and various kinds of maps including symbol, dot and choropleth maps to depict the geographic implications of current world events or to solve geographic problems.

Objectives: Students will be able to:

Navigate ArcGIS as a geospatial technology tool including:

- Zooming in/out
- Finding places
- Changing basemaps
- Measuring distances
- Labeling features
- Changing symbols
- Measuring areas
- Navigating layers
- Saving maps to students “My Content folder”.

Required Materials:

Computer Internet access with projector

Computer Internet access for students

Handout: “Web Mapping Using ArcGIS Online” (The handout may be projected.)

Power Point (2 Versions): “ArcGIS Online - Web Mapping” pdf to print or scroll; “ArcGIS Online - Web Mapping” ppt to present slides

Time: 2 classes

Grade: 8th and 9th

Suggested Procedure:

The teacher will model the first day's exercises by demonstrating Exercise 1: See Your World through projecting or printing "Web Mapping Using ArcGIS Online". The teacher may continue to model the exercises based on students' level of technology and geospatial understanding. The three exercises are:

- Exercise 1: See Your World
- Exercise 2: Measure and Mark Your World
- Exercise 3: Exploring ArcGIS Gallery

This lesson will require monitoring students' progress due to their individual levels of understanding and skill. Students familiar with other geospatial technologies, such as Google Earth, will have greater success with this lesson and progress more quickly through the two exercises.

The teacher may present "Lesson 3a – Overview Introduction to ArcGIS Online.ppt" as an overview to the exercises that students will be doing. "Lesson1 – Introduction to ArcGIS Online pdf" is a pdf version to print and use as a handout. In subsequent lesson, teachers may want to use "Lesson 3b: Web Mapping Application: USA Demographics for Schools" introduces students to Census Data.

Assessment

- Exercise 1: See Your World
- Exercise 2: Measure and Mark Your World
- Exercise 3: Exploring ArcGIS Online Gallery

Website Resources

- ArcGIS
<http://www.arcgis.com>

ArcGIS Online Resources:

1. [Minnesota on the Map Contest](#)
2. Story Map: visit to DC's National Mall:
<http://storymaps.esri.com/stories/malltour/>
3. Urban Observatory app: <http://www.urbanobservatory.org/compare/>
4. Terrain profile: <http://esriurl.com/elevation>
5. [Heat Wave Risk of European Cities](#)
6. [The Linked Burdens of Obesity and Diabetes](#)
7. [Esri Demographic Atlas](#)
8. ArcGIS Online in education: <http://esriurl.com/mappingwithago>
<http://esriurl.com/agoskillbuilder>