



## Web Mapping Using ArcGIS Online - An Introduction to ArcGIS

**Overview:** Students will learn how to navigate ArcGIS through a series of activities. Students will be introduced to ArcGIS mapping and how to plot points and measure distances. Students will apply their learning to wildfires in California. The city of New York Mills is the example used in this lesson, but any city may be used. This lesson is an introduction to ArcGIS as a geospatial technology tool and can be applied to the investigation of a variety of topics and areas of the world.

### Minnesota Social Studies Standards:

(8<sup>th</sup> 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.

(9<sup>th</sup> 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.

**Objective:** 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

### Materials needed:

Computer Internet access with projector

Computer Internet access for students

Handout: “Web Mapping Using ArcGIS Online” (optional: project the handout)

Power Point: “ArcGIS Online”

**Time:** 2-3 days

**Grade:** 8<sup>th</sup> and 9<sup>th</sup>

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## Procedure:

The teacher will model the first day's activities by demonstrating Exercise 1: See Your World. The teacher may continue to model the exercises based on students' level of technology and geospatial understanding. This lesson will require monitoring of 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 three exercises.

The three exercises are:      Exercise 1: See Your World  
   Exercise 2: Measure and Mark Your World  
   Exercise 3: ArcGIS Online - Gallery

The teacher may present the power point as an overview to the exercises that students will be doing.

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

## Lesson Resources

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

## ArcGIS Online Gallery:

<http://www.arcgis.com/home/gallery.html#c=esri&t=maps&o=modified>

**"Western Wildfires: California Wildfire Ravages Small Town of Weed"** from NBC News

<http://www.nbcnews.com/storyline/western-wildfires/california-wildfire-ravages-small-town-weed-n204631>

## ArcGIS Online Resources:

1. Web mapping app: <http://esriurl.com/usademographicsforschools>  
This is an app, which contains the state and county boundaries for all the states. It has the layers that you are used to, but is an app, not a map, and looks a little different, but can be opened on any device, even down to a smartphone.
2. Demographic maps: [Esri Demographic Atlas](#)
3. Story Map: visit to DC's National Mall: <http://storymaps.esri.com>
4. Urban Observatory app: <http://www.urbanobservatory.org/compare/>
5. Terrain profile: <http://esriurl.com/elevation>
6. [Heat Wave Risk of European Cities](#)
7. [The Linked Burdens of Obesity and Diabetes](#)
8. [Esri Demographic Atlas](#)
9. ArcGIS Online in education: <http://esriurl.com/mappingwithago>  
<http://esriurl.com/agoskillbuilder>

## Contact:

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