



DOGSTAILS: An Introduction to Map Reading Skills

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Grade Level 6-HS
Duration 1 class period

Adapted from a lesson by Jody Smothers, Sitka, Alaska
Use TOADS For Grades 2-5 <https://geoalliance.asu.edu/toads>

National Standards

GEOGRAPHY Element 1: The World in Spatial Terms

1. How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information

AZ Standards

ELA Reading Informational Text Key Ideas and Details

6.RI.1, 7.RI.1, and 8.RI.1 Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
9-10.RI.1 and 11-12.RI.1 Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
Integration of Knowledge and Ideas
6.RI.7 Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.

Arizona Social Science Standards

GEOGRAPHY The use of geographic representations and tools helps individuals understand their world.

6.G1.1 Use and construct maps, graphs, and other representations to explain relationships between locations of places and regions.
7.G1.1 Use and construct maps and other geographic representations to explain the spatial patterns of cultural and environmental characteristics.
8.G1.1 Use geographic tools and representations to analyze historical and modern political and economic issues and events.
HS.G1.2 Use geospatial tools and related technologies to construct relevant geographic data to explain spatial patterns and relationships.

Overview

Map skills are basic to geographic understanding. Students need a system by which to analyze and evaluate maps. DOGSTAILS provides a standard for such assessment and can be applied to commercial maps used in the classroom as well as to maps generated by students.

Purpose

In this lesson, students will learn 9 essential elements of a good map. With this knowledge, they can evaluate and create maps.

Materials

- DOGSTAILS Elements or DOGSTAILS PowerPoint
- DOGSTAILS Worksheet
- DOGSTAILS Assessment
- Enough different maps for students to work in pairs

DOGSTAILS

- DOGSTAILS arrows copied in different colors of paper (1 set for every 2 students)
- Map for Assessment (same map for every student)
- 15 Sandwich bags to hold 15 sets of arrows
- Removable sticky dots (Dots can be found at office supply stores and come in 2 types-removable and permanent. Permanent dots will ruin the maps and arrows.)

Objectives

The student will be able to:

- Name, locate, and use the essential parts of a map.

Procedures

1. Introduce the term acronym to the students and explain that DOGSTAILS is an example of an acronym.
2. Explain that DOGSTAILS is an analysis process that should be used whenever a person deals with a new map. Distribute the DOGSTAILS Worksheet.
3. Project DOGSTAILS Elements or the DOGSTAILS Power Point and explain the parts of a map. Students should be recording this information on their DOGSTAILS Worksheet.
4. Divide the students into groups of two. Give each group a different map and a sandwich bag of arrows. Model for the students how to find one of the elements on a map and affix the arrow with the sticky dot at the tip of the arrow. Give students about 5-10 minutes to find as many elements as they can. Remind students that not every map will have every element.

5. Have student take their arrows off and switch maps with another group. Repeat the process of labeling the map with the arrows.

Assessment

Geography and ELA

When students seem proficient at working in groups to find the map elements, give them the DOGSTAILS Assessment. Give each student the same map (maps can be found at <http://geoalliance.asu.edu/azga/> A good choice is Jerusalem's Old City under Maps (Historical Themes). If desired, you can hand write elements to fill in missing information so all 9 elements are present. The worksheet and assessment can be graded for accuracy. Mastery would be considered 80% or higher.

Extensions

Reinforce the procedure whenever new maps are used. (This works especially well when introducing how to read a road map.)

Whenever students create their own maps, have them include the elements of DOGSTAILS.

Sources

Labels courtesy of Jeannine Kuropatkin, Mesa Public Schools, Mesa