



TOADS: An Introduction to Map Reading

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Grade Level 2-3
Duration 1 class period

Adapted from the work of Jody M. Smothers
Use DOGSTAILS For Grades 6-HS <https://geoalliance.asu.edu/dogstails>

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

2.RI.1 Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.
3.RI.1 Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.

Craft and Structure

2.RI.4 Determine the meaning of words and phrases in a text relevant to a grade 2 topic or subject area.
3.RI.4 Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 3 topic or subject area.
2.RI.5 Know and use various text features (e.g., captions, bold print, subheadings, glossaries, indexes, electronic menus, icons) to locate key facts or information in a text efficiently.
3.RI.5 Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.

Integration of Knowledge and Ideas

2.RI.7 Explain how specific images (e.g., a diagram showing how a machine works) contribute to and clarify a text.
3.RI.7 Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

Range of Reading and Level of Text Complexity

2.RI.10 By the end of year, read and comprehend functional texts, including history/social studies, science, and technical texts, in the text complexity range determined by qualitative and quantitative measures appropriate to grade two.

Arizona Social Science Standards

GEOGRAPHY

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

2.G1.1 Use and construct maps, graphs, and other geographic representations of familiar and unfamiliar places in the world; and locate physical and human features. Key physical features include but are not limited to seven continents, oceans, lakes, rivers, mountain ranges, coasts, seas, and deserts. Key human features include but are not limited to equator, hemispheres, North and South Pole, cities, states, countries, regions, and landmarks

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

3.G1.1 Use and construct maps and graphs to represent changes in Arizona over time.

TOADS: An Introduction to Map Reading

3.RI.10 By the end of the year, read and comprehend functional texts, including history/social studies, science, and technical texts in a text complexity range determined by qualitative and quantitative measures appropriate to grade 3.

Overview

Map skills are basic to geographic understanding. Students need a system to analyze and evaluate maps. TOADS 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 the 5 basic elements for creating and reading a map. In the lesson for older students, students will learn the 9 basic elements for a map (DOGSTAILS).

Materials

- Explanation of TOADS Acronym
- TOADS worksheet
- Toads Test
- Enough different maps for students to work in pairs (these can be road maps, maps from text books, student atlases, etc.)
- Removable sticky dots (optional)
- Arrow labels with the 5 elements

Objectives

The students will be able to:

- Name, locate, and use essential parts of a map.
- Understand the correct way to analyze and interpret a map.

Procedures

1. Introduce the term "acronym" to the students and explain that TOADS is an example of an acronym—a way to help them remember key ideas about maps.
2. Explain that TOADS is a way of interpreting maps that should be used whenever a person uses a new map.
3. Distribute the TOADS worksheet. Project the Explanation of TOADS Acronym and explain the

parts of a map. T=Title, O=Orientation, A=Author (Cartographer), D=Date, and S=Scale. Have students record this information on their worksheet.

4. If desired, spend additional time modeling how to use the map scale but for this lesson, just identifying the scale is all that is expected.

5. Divide the students into pairs. Give each pair of students a different map. Pass out the TOADS arrows and removable sticky dots. Model how to find the title on a map and show students how to put the arrow label on the map using the sticky dot.

***Note-NOT all elements will be found on ALL maps.**

6. Check the work of the pair of students and assist in correcting mistakes.

7. Rotate the maps to another group (with arrows removed) and complete a new worksheet. Keep rotating the maps until students are observed to be proficient.

8. For the assessment, distribute a new TOADS worksheet and the same map to each student. A suggested map is Arizona's Cities with Compass Rose found at http://geoalliance.asu.edu/sites/default/files/maps/Az_citiesCompassLatLong.PDF Have students work independently to complete the worksheet.

Assessment

Students will correctly identify on a map the 5 components on the TOADS Test. Mastery for geography and reading will be considered 4 of the 5 components done correctly.

Extensions

Reinforce the procedure whenever new maps are used. This analysis of elements can be applied to historical maps of the eras being studied.

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

Progress to DOGSTAILS as students are able to add new skills (grid, symbols, legend, etc.) in map reading. <https://geoalliance.asu.edu/dogstails>