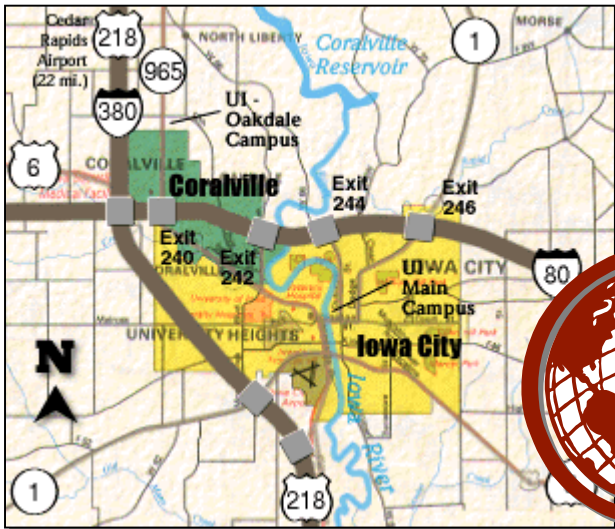


#8808

MAPS & GLOBES: A THOROUGH UNDERSTANDING

Grade Levels: 5-12
20 minutes
CLEARVUE/EAV 1999



DESCRIPTION

Identifies the basic difference between maps and globes, defining and illustrating related vocabulary. Uses a globe to explain rotation, time zones, seasons, solstice, and equinox. Notes the functions and advantages of maps. Discusses scale, legend, and how maps are made. Presents a moderately in-depth look at maps and globes, concluding with a review.

ACADEMIC STANDARDS

Subject Area: Geography

- ◆ Standard: Understands the characteristics and uses of maps, globes, and other geographic tools and technologies
 - Benchmark: Understands concepts such as axis, major parallels, seasons, rotation, revolution, and principal lines of latitude and longitude (Earth-Sun relations)
- ◆ Standard: Knows the location of places, geographic features, and patterns of the environment
 - Benchmark: Knows the relative location of, size of, and distances between places (e.g., major urban centers in the United States)

INSTRUCTIONAL GOALS

1. To describe the differences between maps and globes and how they are made by cartographers.
2. To understand the longitude and latitude components of the geographic grid and the meridians and parallels that compose it, including the prime meridian and the equator.
3. To explain the significance of the solstices and equinoxes and how they differ on opposite sides of the earth.



4. To look at a map's scale and determine the ratio or fraction that the scale represents.
5. To pinpoint a location on a map or globe using latitudinal and longitudinal degrees.
6. To describe the use of the legend on a map and explain why it is necessary.
7. To give some examples of different kinds of maps and how they are used, such as city maps, topographic maps, and road maps.

VOCABULARY

- | | |
|-----------------------------|-------------------------------------|
| 1. atmosphere | 19. legend |
| 2. cartographer | 20. longitude |
| 3. circumference | 21. map |
| 4. city map | 22. meridians |
| 5. compass | 23. parallels |
| 6. equator | 24. perspective |
| 7. equinox | 25. prime meridian |
| 8. geographic grid | 26. road map |
| 9. geography | 27. scale |
| 10. globe | 28. small-scale map |
| 11. graphic scale | 29. square grid |
| 12. great circle | 30. summer solstice |
| 13. grid | 31. time zones |
| 14. hemispheres | 32. topographic map |
| 15. historical map | 33. tropic parallels |
| 16. International Date Line | 34. United States Geological Survey |
| 17. large-scale map | 35. winter solstice |
| 18. latitude | |

BEFORE SHOWING

Have students locate on a map and globe a specific place that you name. Have any of the students ever used computer software or the Internet to find locations?

AFTER SHOWING

Discussion Items and Questions

1. Why do we use globes and maps? What do they tell us about earth's features and the people who live here? What is the goal of globes and maps?
2. What important fact is basic to all mapmakers? What are mapmakers called?
3. What is the system of intersecting lines that maps and globes use to accurately represent the earth's features?
4. What is the most important grid used by geographers? How is this grid created? What are *latitude* and *longitude*? Have students name some of the better-known meridians and parallels.

5. Demonstrate the earth's rotation on its axis by spinning a globe. Discuss how this rotation produces the daily cycles of morning, noon, evening, and night and that two opposite sides of the earth are experiencing opposite times.
6. How many time zones are there? Why? How are time zones marked? What is the *International Date Line*? What does the earth's tilt on its axis produce?
7. Are the time zones in the United States based strictly on meridian lines? Ask the students to name the time zones in the United States and to give the current times in each one.
8. What are the *solstices*? What are *equinoxes*? How much daylight and darkness is there during a 24-hour period on the equator?
9. Why don't maps represent the surface of a planet the way globes can?
10. What are the main functions of a map? What is *scale*?
11. What are *large-scale* and *small-scale* maps?
12. How do you find a location on a map? What is a *square grid*?
13. What does the legend of a map tell us?
14. How are maps made?
15. What are some different kinds of maps and their uses?
16. Why do we need maps? What would we do without them? Would we know as much as we do about past cultures if maps had never been made? When have students used maps?

Applications and Activities

1. Have students develop some scale ratios of their own or look at a map to understand the significance of scale.
2. Create a map, or plug in students' addresses on the Internet to see a map of their neighborhood, or find driving directions (or all of the above).



SUMMARY

This video is designed to teach and reinforce basic geography principles. *Maps & Globes: A Thorough Understanding* provides students with the necessary background information to comprehend map legends and time zones and to gain an in-depth understanding of the grids upon which maps and globes are based.

Examining the differences between globes and maps, this program weighs their benefits by detailing how and when each of them is used. Students will learn about the prime meridian and the equator and their significance to time zones; the use of scale on a map and the difference between large-scale and small-scale maps; the convention of using a geographic grid on globes and a square grid on maps; and the many different types of maps.

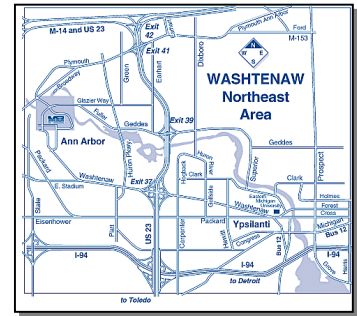
A narrator takes students on a path to understanding as they view the many features of maps and globes. Illustrations and visually stimulating footage will inspire students to step into the world that exists outside their view, able to be seen only from above, as represented on maps and globes.

RELATED RESOURCES



Captioned Media Program

- Basic Map Skills #8626
- Latitude and Longitude #3263
- Map and Globe Skills #8807



World Wide Web



The following Web sites complement the contents of this guide; they were selected by professionals who have experience in teaching deaf and hard of hearing students. Every effort was made to select accurate, educationally relevant, and "kid-safe" sites. However, teachers should preview them before use. The U.S. Department of Education, the National Association of the Deaf, and the Captioned Media Program do not endorse the sites and are not responsible for their content.

- **EXPLORING MAPS**

<http://www.usgs.gov/education/learnweb/maps.html>

From the U.S. Geological Survey, do activities on "Location," "Navigation," "Exploration," or click on topics such as "1901 Pheil's Universal Time Indicator" and more.

- **ETAK GUIDE**

<http://www.etakguide.com/>

Find a location anywhere in the United States and center a map on the spot you've chosen. Zoom in for a view of specific streets or for a bird's-eye view.

- **GEOGRAPHY AND MAPS**

<http://lcweb.loc.gov/rr/geogmap/guide/gmillspc.html>

From the geography and map division of the Library of Congress, special collections of such maps are presented here. Read a short description of each and click on several examples such as George Washington's manuscript plat in 1766, a computer-generated version of L'Enfant's original plan for the capital of the United States, and many more.