

Lesson 2 How Maps Help Us Study History

MAIN IDEAS

Geography Geographers use maps and globes to measure and describe Earth.

Geography We use maps to see natural and human-made features and to understand patterns.

Geography Maps have changed over time to reflect people's increasing understanding of the world.

The Geographer's Tools

ESSENTIAL QUESTION What are the geographer's tools?

Globes

- Show Earth's true shapes, locations, relative sizes
- Show how continents, oceans appear on Earth's curved surface

Maps

- Flat representation of Earth is distorted, not as accurate as globe
- Most people prefer because easy to use, fold, carry
 - show whole world at a glance, unlike globe
 - make measuring distances easy

Reading a Map

- Nine map features help you read, understand maps
- **Title** tells subject of map, what information is shown
- **Compass** rose shows directions: north, south, east, west
- **Symbols** represent items such as capital cities, natural resources
- **Legend**, or key, lists and explains symbols, colors used on map
- Lines of **longitude**—measure distances east, west of prime meridian
- Lines of **latitude**—measure distances north, south of equator
- **Scale** is used to figure out distance between two locations on map
- **Labels** indicate names of cities, landforms, bodies of water
- **Colors** represent variety of information on map, explained in legend

Map Projections

- Mapmakers use different projections to control distortion
 - projection— way of showing Earth’s curved surface on flat map
- Mercator projection
- Homolosine projection
- Robinson projection

Hemispheres

- Geographers divide globe into equal halves called **hemispheres**
- Equator divides globe into north and south halves
 - Northern Hemisphere and Southern Hemisphere
- Prime meridian divides globe into east and west halves
 - Western Hemisphere and Eastern Hemisphere
- United States is in northern and western hemispheres

The Geographic Grid

- Grid system finds point where longitude, latitude lines cross
- Point identifies an absolute location
 - exact place on Earth where a city or other feature is found
 - expressed using set of numbers called coordinates
 - coordinates measured in degrees
 - every place on Earth has only one absolute location

REVIEW QUESTION

How do the latitude and longitude lines on a map help geographers?

Different Maps for Different Purposes

ESSENTIAL QUESTION What different maps do we use to see natural and human-made features and to understand patterns?

Political Maps

- **Political maps** show features that people created
 - cities, territories, provinces; state, county boundaries

Physical Maps

- **Physical maps** show landforms, bodies of water
 - show what Earth's surface might look like from space
 - use colors to show elevations
- Maps often combine political, physical features

Thematic Maps

- **Thematic maps** have certain information about a place, region
 - use colors, symbols, lines, dots to show patterns
 - title and legend indicate map's theme, information
 - can show information such as vegetation, population density

REVIEW QUESTION

Which type of map might help you find the highest mountain in Brazil?

How Maps Change

ESSENTIAL QUESTION How have maps changed to reflect people's increasing understanding of the world?

Earliest Maps

- Oldest known maps carved on Babylonian clay tablets around 2300 B.C.
- Greek astronomer, mathematician Ptolemy produced *Geography*
 - second-century A.D. work gives instruction on preparing maps

Maps in the Middle Ages

- Arab, Chinese maps more accurate than European maps
- European mapmakers did not have Ptolemy's work until about 1405
- European maps improved after 1569
 - mapmaker Gerhardus Mercator showed curved surface on flat map
 - Mercator projection helped explorers plot straight routes

Today's Maps

- Today's mapmakers use Global Positioning System (GPS) satellites

REVIEW QUESTION

What were some of the results as maps improved?

Lesson Summary

- Maps and globes have different advantages as tools used to measure and describe Earth.
- Political, physical, and thematic maps show us different things about the world and our place in it.
- Over time, maps have become more accurate.

Why It Matters Now...

We still use maps to find our way around and to learn more about familiar and unfamiliar places.