Name _____ Date _____

Chapter 1 Geography Skills Handbook (pages 14–23) *Reading Study Guide*

Geography Skills Handbook

BEFORE YOU READ

In the last section, you read about the geographer's tools.

This handbook covers the basic map skills and information that geographers rely on as they investigate the world—the skills you will need as you study geography.

AS YOU READ

Use this graphic to take notes about the geography tools you read about.

Tools of Geography

PLACES & TERMS

legend a list that explains the symbols and use of color on the map

compass rose starlike symbol that shows you the directions on the map

scale the ratio between a unit of length on the map and a unit of distance on the earth

Reading a Map (page 15)

How *can you interpret what a map shows?*

All maps have the following elements.

The title explains the subject. Symbols represent such items as capital cities, economic activities, or natural resources. Labels are words or phrases that explain features on the map. Colors show a variety of information on a map, depending on the map's purpose. The **legend**, which is also called a map key, lists and explains the symbols and colors on the map.

Lines of latitude are the imaginary lines that measure distance north or south of the equator. Lines of longitude are the imaginary lines that measure the distance east and west of the prime meridian. Though these lines are imaginary, they are drawn on maps to make it possible to determine location.

The **compass rose** is a starlike symbol that shows directions—north (N), south (S), east (E), and west (W)—on the map. Sometimes only north is indicated. A **scale** is included to show the ratio between a unit of length on the map and a unit of distance on the earth.

1. Which element explains symbols and a map's use of color?

_____

Scale (page 16)

How *is scale shown?*

A geographer decides what scale to use by determining how much detail needs to be shown.

A ratio scale shows the ratio of distance on the map compared to real earth measurements. For example this may be written as 1:30,000,000. This means a ratio of one inch on the map is equal to 30,000,000 inches on Earth.

A bar scale also shows the relationship of map distance to earth distance. For example, if the bar scale is 1 inch to 500 miles, then there would be an inch-long bar labeled 500 miles.

2. Why would a geographer use large scale?

_____

Using the Geographic Grid (page 17)

How *does the grid work?*

Geographers use a grid system to identify absolute location. This system uses two kinds of imaginary lines. These are latitude lines which are often called parallels, and longitude lines called meridians. Lines also mark the hours of the day as the earth rotates. Every 15° east or west is equal to 1 hour.

Absolute location can be learned by noting where latitude and longitude lines cross. For more precision, each degree can be divided into 60 minutes (′). The absolute location of Dakar, Senegal, for example, is written 14° 40′ N (latitude) and 17° 26′ W (longitude).

3. Why are latitude lines often called parallels?

_____

Projections (pages 18–19)

What *causes distortion?*

A projection is a way of showing the curved surface of the earth on a flat map. Because the earth is round, a flat map will distort some aspect of the earth's surface. Distance, shape, direction, or area may be distorted by a projection.

A planar projection is a projection on a flat surface. It shows the earth so that a line from the central point to any other point on the map gives the shortest distance between two points.

A conical projection is a projection onto a cone. This projection shows shape fairly well, but it distorts landmasses at the edges of the map.

A cylindrical projection is a projection onto a cylinder. The projection shows the entire earth on one map.

4. What elements might be distorted by a projection?

_____

Using Different Types of Maps (pages 20–21)

What *do a physical map or a political map show?*

Physical maps help you see the types of landforms and bodies of water found in a specific area. They show the relative location and characteristics of a place or region. On a physical map, color, shading, or contour lines are used to indicate elevation or altitude, also called relief.

Political maps show features on the earth's surface that humans created. A political map might include cities, states, provinces, territories, or countries.

5. What information might appear on a political map?

_____

Thematic Maps (pages 22–23)

What *other information can maps show?*

Geographers also use theme maps, which focus on a specific idea. With all theme maps, look first at the title to determine the theme. Then look at the legend to determine what information is being presented.

Theme maps can be presented in a variety of ways. Qualitative maps use color, symbols, dots, or lines.

Cartograms present information about a country based on a set of data other than land area. The size of each country is drawn in proportion to that data rather than to its land size.

Flow line maps illustrate movement of people, goods, or ideas. The information is usually shown in a series of arrows. Location, direction, and scope of movement can be seen. Time may be indicated.

6. What are the different types of themes maps?

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