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Introduction

Many students in secondary school and college have not developed map-reading skills and a basic understanding of longitude and latitude. Some students may be able to verbalize the skills that relate to map reading, latitude, and longitude, but they cannot apply the skills in problem situations. This may be a result of too little time devoted to the application of these skills. Students need to be able to practice and apply map-reading skills.

The exercises in this book are designed for a wide range of students. The skills presented are designed to review and more fully develop skills introduced in the lower grades. The activities presented will reinforce and expand on the latitude and longitude skills presented in middle-grade texts.

The activities are designed so that the skills presented are reinforced through many map and diagram activities. The use of diagrams and maps ensures a better understanding of the skills relating to map reading, latitude, and longitude. Maps on pages 58 and 59 can be reproduced for use with several of the activities in the book. Additionally, there is sufficient repetition of the skills to ensure understanding for students who are experiencing difficulties.

The skills presented are developed from those that are the most basic to those that are more abstract. Some of the activities presented will challenge the most able students. However, the focus of this book is on developing and improving understanding for all middle-grade students.
Developing Map Skills

It is important to learn how to read maps. Maps are used to display all kinds of information. Maps may illustrate political, physical, climatic, religious, population, and other kinds of information.

Political maps show where the countries, capitals, and major cities are located. Physical maps show where features on the earth’s surface, such as mountains, rivers, lakes, and plains, are located. Population maps show where people live. Using a population map, one can find where the major population centers are, as well as those areas where few people live.

To use a map, one must know how to read the map. On most maps, the top of the map is north. However, when using a map, it is important to check the compass rose. The compass rose is a symbol on the map that shows where north, south, east, and west are on the map. When a map does not contain a compass rose, assume that the top of the map is north, west is left, east is right, and south is at the bottom of the map.

Refer to the information just discussed and complete the blanks.

Maps are made to show many different kinds of (1) ________________________.

Maps that show where rivers, lakes, mountains, and plains are located are known as (2) ________________________ maps. Maps that show where people live are (3) ________________________ maps. If one wants to know where a specific climate type is located, it is necessary to use a (4) ________________________ map.

When using a map, the (5) ________________________ shows the directions on the map. If no compass rose is shown, then the top of the map is (6) ________________________, and the bottom of the map is (7) ________________________.

8. Color the compass rose at right, and label with North, South, East, and West.
The Map Legend

When using a map, an important tool is the legend. The legend shows the keys that are needed to read the map correctly. An important kind of information found in the legend is a scale. This scale tells how many miles a specific distance on the map represents on the earth.

Example: A map legend indicates that one inch on the map equals 100 miles on Earth. Then three inches on the map would equal 300 miles. 3 in. x 100 miles = 300 miles.

Answer the following questions.

The legend on a map indicates that each inch equals 50 miles. Show mathematical computation in the space to the right.

1. Two inches on the map equals _______ miles.
2. Five inches on the map equals _______ miles.
3. Ten inches on the map equals _______ miles.

The legend on a map indicates that each inch equals 100 miles. Show mathematical computation in the space to the right.

4. Two inches on the map equals _______ miles.
5. Five inches on the map equals _______ miles.
6. Ten inches on the map equals _______ miles.

The legend on a map indicates that each inch equals three miles. Show mathematical computation in the space to the right.

7. Two inches on the map equals _______ miles.
8. Five inches on the map equals _______ miles.
9. Ten inches on the map equals _______ miles.
Converting Kilometers to Miles

Increasingly, metric measurements are used on maps. A scale may indicate that one centimeter equals ten kilometers. You can convert the kilometers to miles. One kilometer equals 0.621 miles. To convert kilometers to miles, multiply times 0.621.

Example: 10 km x 0.621 = 6.21 miles. Ten kilometers equals 6.21 miles.

Determine how many kilometers are represented on the map. Then convert that answer to miles.

The legend on a map indicates that each centimeter equals 50 kilometers. Show mathematical computation in the space to the right. Round to the nearest mile.

1. Two cm on the map equals _______ kilometers or _______ miles.
2. Five cm on the map equals _______ kilometers or _______ miles.
3. Ten cm on the map equals _______ kilometers or _______ miles.

The legend on a map indicates that each centimeter equals 100 kilometers. Show mathematical computation in the space to the right. Round to the nearest mile.

4. Two cm on the map equals _______ kilometers or _______ miles.
5. Five cm on the map equals _______ kilometers or _______ miles.
6. Ten cm on the map equals _______ kilometers or _______ miles.

The legend on a map indicates that each centimeter equals three kilometers. Show mathematical computation in the space to the right. Round to the nearest tenth of a mile.

7. Two cm on the map equals _______ kilometers or _______ miles.
8. Five cm on the map equals _______ kilometers or _______ miles.
9. Ten cm on the map equals _______ kilometers or _______ miles.