Section 20.1 Air Masses
This section describes air masses and explains how they affect weather.

Reading Strategy
As you read, write a definition for each of the terms in the table. Refer to the table as you read the rest of the chapter. For more information on this Reading Strategy, see the Reading and Study Skills in the Skills and Reference Handbook at the end of your textbook.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Air mass</td>
<td>a. an immense body of air characterized by similar temperatures and amounts of moisture at any given altitude</td>
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<tr>
<td>Source region</td>
<td>b. area over which an air mass gets its characteristic properties of temperature and moisture</td>
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<tr>
<td>Polar air mass</td>
<td>c. cold air mass that forms at high latitudes toward Earth’s poles</td>
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<tr>
<td>Tropical air mass</td>
<td>d. warm air mass that forms at low latitudes</td>
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<tr>
<td>Continental air mass</td>
<td>e. dry air mass that forms over land</td>
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<tr>
<td>Maritime air mass</td>
<td>f. humid air mass that forms over water</td>
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</tbody>
</table>

Air Masses and Weather
1. Changes in weather patterns are often caused by movement of air masses.

2. ☐ Is the following sentence true or false? As an air mass moves, its characteristics change. __________ true __________

3. Circle the letter of a common size for an air mass.
   a. 600 km or less across
   ☐ b. 1600 km or more across
   c. 16,000 km or more across
   d. 160,000 km or more across
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Classifying Air Masses

4. Identify each labeled air mass on the figure as continental tropical, continental polar, maritime polar, or maritime tropical.
   A. ____________
   B. ____________
   C. ____________
   D. ____________
   E. ____________
   F. ____________
   G. ____________

5. List two characteristics used to classify air masses. overall temperature, surface over which the air mass forms

6. Circle the letter of the terms that describe the temperature characteristics of an air mass.
   a. continental and maritime
   b. continental and tropical
   c. polar and maritime
   d. polar and tropical

Weather in North America

7. Is the following sentence true or false? Much of the weather in eastern North America is influenced by continental tropical and maritime polar air masses. ________false

8. Although __________ continental polar __________ air masses are not usually associated with heavy precipitation, they can sometimes cause lake-effect snow.

9. Circle the letter of the type of air mass that is the source of much of the precipitation that falls on the eastern United States.
   a. continental tropical      b. maritime tropical
   c. maritime polar            d. continental polar

10. Is the following sentence true or false? In the winter, maritime polar air masses often bring rain and snow to the west coast of North America. ________true

11. What causes Indian summer? The movement of continental tropical air masses ________into the Great Lakes region in the fall causes Indian summer.