Book Organization

Glencoe offers resources that accompany World Geography and Cultures to expand, enrich, review, and assess every lesson you teach and for every student you teach. Now Glencoe has organized its many resources for the way you teach.

HOW THIS BOOK IS ORGANIZED

Each resources book offers blackline masters at unit, chapter, and section levels for each unit. Each book is divided into three parts—unit-based resources, chapter-based resources, and section-based resources. Glencoe has included tabs at the side of every activity page in this book to help you navigate.

UNIT-BASED RESOURCES

We have organized this book so that all unit resources appear in the first part of the unit resources book. Although you may choose to use the specific activities at any time during the course of unit study, Glencoe has placed these resources up front so that you can review your options. For example, although World Literature Contemporary Selection 5 appears in the front part of this book, you may plan to use this activity in class during the study of the cultural geography of Russia in Chapter 15.

CHAPTER-BASED AND SECTION-BASED RESOURCES

Chapter-based resources follow the unit materials. For example, Chapter 14 blackline masters appear in this book immediately following Unit 5 materials. The materials appear in the order you teach—Chapter 14 activities; Chapter 14, Section 1 activities; Chapter 14, Section 2 activities; and so on. Following the end of the last section activity for Chapter 14, the Chapter 15 resources appear.

A COMPLETE ANSWER KEY

A complete answer key appears at the back of this book. This answer key includes answers for every activity in the book in the order in which the activities appear in the book.

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To the Teacher

THE TOTAL PACKAGE—WORLD GEOGRAPHY AND CULTURES CLASSROOM RESOURCES

Glencoe’s Unit Resources books are packed with activities for the varied needs of all your students. They include the following activities.

ACTIVITIES FOUND IN UNIT RESOURCES BOOKLETS

• **Location Activities**
  These activities help students master the locations of countries, important cities, and major physical features in the region of study. These activities also reinforce students’ awareness of the relationships among places in the region.

• **Real-Life Applications and Problem Solving Activities**
  These activities present a series of realistic geographic issues and problems that students are asked to solve. The activities are designed to utilize the kinds of critical thinking and geography skills that students need to make judgments, develop their own ideas, and apply what they have learned to new situations.

• **GeoLab Activities**
  These activities give students the opportunity to explore, through hands-on experience, the various geographic topics presented in the text.

• **Environmental Issues Case Studies**
  These case studies provide students with the opportunity to actively explore environmental issues that affect each of the world’s regions. Case studies include critical thinking questions and activities designed to extend students’ knowledge and appreciation of environmental challenges.

• **World Literature Contemporary Selections**
  These readings provide students with the opportunity to read literature by or about people who live in each of the world’s geographic regions. Each selection is preceded by background information and a guided reading suggestion, and followed by comprehension and critical thinking questions.

• **Vocabulary Activities**
  These review and reinforcement activities help students to master unfamiliar terms used in the Student Edition. The worksheets emphasize identification of word meanings and provide visual and kinesthetic reinforcement of language skills.

• **Reteaching Activities**
  These are a variety of activities designed to enable students to visualize the connections among facts in the text. Graphs, charts, tables, and concept maps are among the many types of graphic organizers used.

• **Reinforcing Skills Activities**
  These activities correspond to lessons in the SkillBuilder Handbook at the end of the Student Edition. The activities give students the opportunity to gain additional skills practice. In addition, students are challenged to apply the skills to relevant issues in the region of study.

• **Enrichment Activities**
  These activities introduce students to content that is different from, but related to, the themes, ideas, and information in the Student Edition. Enrichment activities help students develop a broader and deeper understanding of the physical world and global community.

• **Guided Reading Activities**
  These activities provide help for students who are having difficulty comprehending the student text. Students fill in missing information in the guided reading outlines, sentence completion activities, or other information-organizing exercises as they read the text.
Unit 5
Resources

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Location Activity 5A

Use with Unit 5

DIRECTIONS: Label Russia and each city using the Unit 5 Reference Atlas on pages 348–351 of World Geography and Cultures.
Location Activity 5B

DIRECTIONS: Write the correct name for each numbered physical feature in the corresponding blank below.

1. ____________________________ 7. ____________________________
2. ____________________________ 8. ____________________________
3. ____________________________ 9. ____________________________
4. ____________________________ 10. ____________________________
5. ____________________________ 11. ____________________________
6. ____________________________ 12. ____________________________

North Pole
Funding to Improve Medical Care

Assume that you are the director of your country’s Department of Health. You have been asked to allocate funds to improve medical care. Your budget has been set at one million dollars, to be divided among the following categories: research, equipment and supplies, medicine, education (of medical staff and the general public), medical staff salaries, and any other appropriate expenditures.

Your country’s medical care has declined in recent years. Research lags behind other countries. Hospitals lack the equipment and supplies to perform procedures that are common in more prosperous countries. The general public lacks knowledge of good health practices, and there is a shortage of professional medical staff. Your job is to improve the overall system by financing the most-needed improvements.

Review this summary of the categories for allocating health care funds in your country.

Research
• Scientists conduct little advanced research to find cures for diseases and to determine preventative measures to improve public health.

Equipment and Supplies
• Medical equipment is outdated. In addition, hospitals lack equipment for common surgical procedures and diagnostics.
• Shortages of the most basic supplies, such as antiseptics, clean linens, and gauze, make it difficult for hospitals to provide a sanitary environment.

Medicine
• Although the country has a supply of the most vital medicines, doctors do not have access to new medicines.

Education
• Most of the population is not aware of current information on health practices, including diet, hygiene, and drug abuse.

Medical Staff
• The medical staff in this country is underpaid for long hours of difficult work.
• The demand for medical workers is greater than the supply. Too few students are studying medicine.

You must decide how to spend the one million dollars and write a draft budget to submit to the national legislature. Using the form on the next page, fill in the amount you wish to spend on each category. Write a brief explanation of why you chose that amount for each category. In the conclusion, explain how your overall plan will improve medical care in your country.

(continued)
### Budget

**Department of Health**

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Equipment &amp; Supplies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medicine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Staff</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>$</td>
<td></td>
</tr>
</tbody>
</table>

**Conclusion:**

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
In this GeoLab Activity you will perform an experiment to measure rates of soil erosion.

Deforestation and Erosion

**OVERVIEW**

A Chinese proverb states that water is the softest of all elements, yet it wears away even the mightiest of mountains. This proverb rings especially true when the soil is not protected by plant life. Ten thousand years ago, the Earth’s forests covered 40 percent of the planet. Today clear-cutting has destroyed up to 90 percent of the world’s forests. An expansion of logging in developing countries such as China has left huge areas of deforested land, widespread erosion, and flooding.

Without roots and plant matter to help the soil absorb rainwater, deforested land sheds rainfall directly into streams and rivers. The rushing river currents further increase erosion, carrying tons of soil downstream. As soil builds up in the riverbeds, water levels rise even higher. This chain of events often leads to flooding and massive devastation, including loss of life and property.

**OBJECTIVES**

1. To understand how plant life helps prevent erosion.
2. To demonstrate the link between deforestation and erosion.

**Materials**

- 2 cardboard half-gallon milk cartons
- scissors or knife
- tape
- soil
- grass sod or grass seed
- 2 bricks or blocks (equal in size)
- 2 shallow pans (9” x 13” or larger)
- plastic drinking straws cut to twelve 4-inch lengths
- felt-tip permanent marking pen
- metric ruler
- metric measuring cup
- watering can (sprinkler type)

(continued)
GeoLab Activity

Procedures

- Use the scissors or knife to remove one side panel from each of the milk cartons. Place tape over the cut edges to seal the exposed cardboard.

- Fill both cartons with soil, and plant grass in one of them.

  *Method 1:* Measure equal amounts of soil into each carton; press soil firmly until each is full. Plant grass seed in one carton, spreading a handful of seeds evenly over the entire surface of the soil. Water both cartons equally daily until the grass grows to about 5 cm (2 inches) in height. This process takes about 2 weeks.

  *Method 2:* Fill one carton with soil as in Method 1. Fill the other partly with soil, and top the soil with grassy sod.

- Use the permanent marker to label the ends of 12 straws. Each straw should have a different number, from A1 to A6 and B1 to B6. Mark lines 1 cm (.39 inch) apart along the length of each straw.

- Insert straws A1 to A6 into the bare soil carton as shown in the illustration. Insert straws B1 to B6 into the grassy carton. Be sure that each straw is perpendicular to the surface, with only the top 1 cm (.39 inch) exposed.

- Place one end of each carton in a separate shallow pan, propping the other end on a block or brick. The soil surfaces of both cartons should have an equal degree of slope.

- Measure 500 ml (about 2 cups) of water into the sprinkler can. To simulate rainfall, pour the water gently onto the bare soil slope, near the top of the slope. Then measure and pour 500 ml of “rain” gently onto the grass-covered slope.

- Use the metric measuring cup to measure the volume of runoff water and soil that collects in each of the shallow pans. Record the measurements in a chart like the one shown in the Lab Activity Report on the next page.

- Repeat the simulated rainfall two more times, and record the measurements.

- Measure the centimeters of topsoil lost on each slope by counting the marks that have been exposed on each of the straws. Record your measurements in a chart like the one shown below.

<table>
<thead>
<tr>
<th>Soil Loss</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marker No.</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>(continued)</td>
</tr>
</tbody>
</table>
**Lab Activity Report**

1. Record your observations in a table like the one below. What differences did you notice? Which carton had more runoff? More soil erosion? Why?

<table>
<thead>
<tr>
<th></th>
<th>&quot;Rainfall&quot; amount in ml</th>
<th>Soil and water &quot;runoff&quot; in ml</th>
<th>Average soil loss in cm</th>
<th>Other observations:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Carton A</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(bare soil)</td>
<td>1.</td>
<td></td>
<td>1.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.</td>
<td></td>
<td>2.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.</td>
<td></td>
<td>3.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total:</td>
<td></td>
<td>Total:</td>
<td></td>
</tr>
<tr>
<td><strong>Carton B</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(grassy soil)</td>
<td>1.</td>
<td></td>
<td>1.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2.</td>
<td></td>
<td>2.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3.</td>
<td></td>
<td>3.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total:</td>
<td></td>
<td>Total:</td>
<td></td>
</tr>
</tbody>
</table>

2. How does the experiment illustrate the effects of deforestation? How does deforestation contribute to flooding, if at all?

3. What effect might a steeper angle of slope have on the amount of runoff or erosion? If the soil were a different type, for example, sand or clay, in what ways might this affect the results? Explain.

**Critical Thinking**

**Predicting** What effect do you think reforestation projects in China and other parts of the world will have on the rate of erosion and the severity of floods? Why?
After Chernobyl: Is Nuclear Power Safe?

On April 26, 1986 an explosion in the fourth reactor of the Chernobyl nuclear power plant in Soviet-controlled Ukraine resulted in the deaths of 31 plant and rescue workers. Furthermore, the accident released tons of radioactive material into the air that contaminated parts of Ukraine, Belarus, and Russia, and later spread to several countries in Europe. Negative environmental, economic, and health issues resulting from the disaster affected thousands of people and are still being dealt with today.

Even after Chernobyl and other, less serious, accidents, the need for clean, cheap, and abundant energy is driving a resurgence of interest in nuclear power. Many countries are reconsidering plans to shut down their own Chernobyl-era nuclear power plants, while other nations are building newer and safer nuclear power plants.

In fact, some environmentalists who were formerly opposed to the use of nuclear power are reconsidering its use because the demand for and use of fossil fuels has increased. Fossil fuels increase greenhouse gases such as CO₂ that may lead to global warming.

There remains, however, steadfast opposition to nuclear power. These environmentalists argue that renewable energy sources such as wind, solar, bioenergy, and hydroelectric power are better alternatives to fossil fuels in light of the risks associated with nuclear power. Yet, many questions remain about the ability of these energy sources to meet world demand.

DIRECTIONS: Read the pro and con arguments below. Then answer the questions under Examining the Issue. Use an additional sheet of paper for your answers if necessary.

**PRO** Nuclear energy has become a viable, safer, and more environmentally friendly alternative to fossil fuels to meet today’s energy needs. 

“The nuclear energy is the only large-scale, cost-effective energy source that can reduce CO₂ emissions while continuing to satisfy a growing demand for power. And these days it can do so safely.”

—Patrick Moore, co-founder of Greenpeace


(continued)
Environmental Issues
Case Studies

**CON** The risks associated with nuclear power such as radioactive waste, nuclear proliferation, and Chernobyl-like accidents far outweigh its benefits as an energy source.

“Greenpeace has always fought—and will continue to fight—vigorously against nuclear power because it is an unacceptable risk to the environment and to humanity. The only solution is to halt the expansion of all nuclear power, and for the shutdown of existing plants.”

—Greenpeace International


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**Examining the Issue**

**Recalling Facts**

1. What happened at the Chernobyl nuclear power plant in April of 1986?

2. What issue is causing some environmentalists to reconsider the use of nuclear energy?

**Critical Thinking Skills**

3. Drawing Conclusions Which approach to meeting the world’s energy needs do you think is more realistic? Explain your answer.

4. Evaluating Information What assumption is leading both pro and con nuclear energy environmentalists to believe that new sources of energy must be developed?

**Investigating Further**

Assume that there are plans to build a nuclear energy plant within 25 miles of your school. Divide the class into two teams. One team will support the nuclear power plant and the other team will argue against the construction of the plant. Each team should prepare a persuasive Web site on the issue. Each Web site should outline the group’s position, present supporting information, and respond to the other group’s view.
From “Through the Fields”

I never met him again; once and only once we traveled together to someone’s distant dacha, in a workers’ village. We had to walk about four kilometers through a forest and then through a bare field, which may, in fact, have been pretty at any time of year, but on that day was awful. We stood at the edge of the forest and couldn’t bring ourselves to go out into the open space, there was such a thunderstorm. Lightning struck the clay earth of the path, and the field was strangely bare. I remember those mounds of clay, the bare, absolutely bare, broken earth, the cloudburst, and the lightning. Perhaps something had been planted in this field, but at that moment nothing was growing, and our feet slid every which way, buckled, and twisted in this exposed bare field, because we had decided to take the shortest route and go straight across. The way led steeply upward, and hunching over for some reason, we laughed wildly. He was a very taciturn person, from what I remembered of him on previous group outings of this kind—birthdays, trips, and the like. At the time I still did not know the value of silence, didn’t appreciate silence, and tried my best to get Vovik to open up, all the more so because we had an hour-and-a-half train ride, just the two of us, alone among strangers, and it was uncomfortable and somehow embarrassing to remain silent. Looking at me with his kind little eyes, he grinned and said almost nothing. But that was all right; it could have been endured were it not for the cloudburst that greeted us at the station. My head, my freshly washed and curled hair, my made-up eyelashes—everything was ruined, everything, my light dress and my bag, which later shriveled and faded—in short, everything. . . . For some reason we began to wander in the rain through the clay; he knew the way—I didn’t. He said that the straight route was closer, so we started across that cursed field through which the lightning gamboled, leaping now close to us, now farther away, and we jumped over the waves of clay earth. . . . We walked on the cursed soles of our shoes, slipping and sliding, a hairbreadth from death, and had a wonderful time. We were both twenty years old. . . . Those four kilometers through the clay in the rain dragged on for a remarkably long time: There are times in life that are very difficult to live through and drag on endlessly—hard labor, for example, or sudden solitude or a marathon. We endured those four kilometers together. At the end, when we reached the porch, he even helped me climb up the steps, and accompanied by the astonished laughter of the assembled group and the constrained exclamation of his fiancée, we entered the warm home, still cackling. . . . I vaguely surmised that I had been lucky to meet (continued)
in the course of my life a very good and faithful man. . . . They showed us to different rooms in this empty, dusty summer house, still not inhabited by summer guests. They changed my clothes and his, too, led us back . . . . At the table he glanced in my direction now and then, smiling foolishly, sniffing, and warmed his hands on a mug of tea. I knew that none of this was mine and never would be mine, this miracle of kindness, purity, and what have you—even beauty. His friend took charge of him; they settled down to a game of chess—even his fiancée was waiting for him. I was not waiting, however, for I was warming my soul after the long and difficult path of my life, realizing that tomorrow and even today I would be torn away from the warmth and the light and thrust out again to walk alone through the clay field in the rain. And that's how life is and one must become stronger, everyone has to—not just me, but Vovik, and even Vovik's poor fiancée, because a person shines for only one person once in his life and that is all.

1. Why are Vovik and the narrator reluctant to go out into the open field?

2. How does the weather affect the mood of the characters as they walk?

3. Why do Vovik and the narrator feel such a sense of comradeship as they cross the field together?

4. Making Inferences What do you think the narrator means when she compares her trek across the open field to her life?
Chapter 14
Resources

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Physical Geography of Russia

**DIRECTIONS:** Use the clues to complete the puzzle.

**Across**

2. rich black soil that supports the production of wheat and other crops
5. forest belt in Russia’s subarctic climate region
6. energy generated by falling water (2 words)

**Down**

1. permanently frozen layer of soil beneath the surface of the ground
3. vast, treeless plain in northern Russia
4. temperate grassland area with dry summers and cold, dry winters
RETEACHING ACTIVITY 14

Terms and Concepts

DIRECTIONS: Match each term from Chapter 14 with the correct definition.

1. harsh climate  
2. taiga  
3. steppe  
4. warm-water port  
5. chernozem  
6. tundra  

a. vast, treeless plain  
b. year-round access by ships  
c. rich black soil  
d. enormous belt of coniferous forest  
e. extreme weather makes human activity difficult  
f. grasslands in the mid-latitude climate zone

Organizing Information

DIRECTIONS: The lettered items in the Fact Bank describe various Russian climate zones. Complete the diagram below by writing the letter of each item in the Fact Bank in the correct box in the diagram.

Fact Bank

A. includes the taiga  
B. very limited vegetation  
C. most of Russia’s North European Plain  
D. very shallow soil over permafrost  
E. temperate region with long, cold, dry winters and dry summers  
F. vast grasslands and crops such as mint and beans  
G. mild summer temperatures and excellent soil for grain crops  
H. snow cover for 120 to 250 days each year

7. Tundra  
8. Subarctic  
9. Humid Continental  
10. Steppe

(continued)
RETEACHING ACTIVITY 14

Connecting Ideas

DIRECTIONS: Answer the following questions in the space provided.

11. How does Russia's climate affect its agriculture?
   
   
   
   

12. How does Russia’s physical geography contribute to its potential for world trade?
   
   
   
   

Working with Geography

DIRECTIONS: Match the letters on the map with the physical features of Russia. Write your answers in the space provided.

13. A: __________________
    __________________

14. B: __________________
    __________________

15. C: __________________
    __________________

16. D: __________________
    __________________

17. E: __________________
    __________________

18. F: __________________
    __________________
CHAPTER 14 REINFORCING SKILLS ACTIVITY

Understanding Climographs

Climate depends on a combination of factors, including latitude, wind patterns, precipitation, and temperature. Climographs present information about two of these factors—precipitation and temperature. A climograph combines two kinds of graphs, a line graph and a bar graph, to show average variation in precipitation and temperature over time in a given area. In this climograph, the months of the year are shown on the horizontal axis. Temperature appears on the right vertical axis as a line graph, and precipitation is shown on the left vertical axis as a bar graph.

The climograph below shows the average monthly temperature and precipitation of Yakutsk, Russia. This area is part of the subarctic climate region, which stretches across most of Canada and eastern Russia.

**Practicing the Skill**

**DIRECTIONS:** Use the climograph at the right to answer the following questions.

1. What is the warmest month in Yakutsk, Russia?

2. What is the coldest month?

3. During what month is there the most precipitation? What is the average precipitation and temperature during this month?

4. Would the climate of this area support agriculture? Explain.

---

Yakutsk, Russia
62°N 129°E

Precipitation
Temperature

<table>
<thead>
<tr>
<th>Precipitation</th>
<th>Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>In./Cm</strong></td>
<td><strong>°F/°C</strong></td>
</tr>
<tr>
<td>10/25.4</td>
<td>75/23.9</td>
</tr>
<tr>
<td>9/22.9</td>
<td>50/10</td>
</tr>
<tr>
<td>8/20.3</td>
<td>-25/-3.9</td>
</tr>
<tr>
<td>7/17.8</td>
<td>-50/-45.5</td>
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<td>2/5.1</td>
<td>-50/-45.5</td>
</tr>
<tr>
<td>1/2.5</td>
<td>-50/-45.5</td>
</tr>
</tbody>
</table>

Source: weather.com
The Tundra

The word *tundra* is of Finnish origin and means “barren land.” The Arctic tundra, a huge area surrounding the North Pole, covers 10 percent of Russia.

Winters are long and harsh on the tundra. Temperatures may reach –60°F (–51°C). Summers are brief and cool. On the warmest days, the temperature does not climb above 50°F (10°C). Because of the bitter climate, permafrost, a permanently frozen layer of soil, always lies just beneath the surface of the ground.

Many shallow lakes and streams dot the Russian tundra. However, the permafrost does not allow this water to seep into the ground. The frozen plain also lacks natural runoffs, such as steep mountain slopes. As a result, the tundra maintains a frozen stillness most of the year.

**DIRECTIONS:** Use the article and study the graphic to fill in the blanks in the following sentences.

1. In winter, the temperature on the tundra may reach ___________ Fahrenheit, which is ___________ degrees Fahrenheit below the freezing point of water.

2. ____________, a layer of frozen ground, keeps water from seeping into the ground.

3. As lake water freezes, ____________ forces it upward, forming ____________, or low hills or mounds of frozen ground with a core of ice.

4. Found on the tundra’s surface, polygons are uniform ____________ made of ____________.

5. In summer, ____________ soil slowly creeps downhill in a movement known as ____________.

6. Why wouldn’t you find complex plant life with deep root systems on the tundra? ____________

7. Why would larger animals and humans tend to develop migratory habits on the tundra? ____________
Chapter 14
Section Resources

Guided Reading Activity 14-1
The Land ................................................................. 21

Guided Reading Activity 14-2
Climate and Vegetation ........................................... 22
The Land

Modified True or False

DIRECTIONS: Use the information in your textbook to determine whether the underlined word makes each sentence true or false. Circle the correct answer. If the sentence is false, fill in the blank with the word or phrase that makes the sentence true.

1. Russia is the world’s coldest country. (true/false) ____________________________

2. Russia spans 11 time zones; when it is noon in Moscow, it is 11 P.M. on Russia’s Pacific coast. (true/false) ____________________________

3. European Russia and Asian Russia are separated by the Caucasus Mountains. (true/false) ____________________________

4. Russia has warm-water ports on the Baikal Sea, which empties into the Aegean. (true/false) ____________________________

5. The lake with the largest surface area is the Black Sea in southwestern Russia. (true/false) ____________________________

6. European Russia’s Dnieper River provides vital transportation links and hydroelectric power. (true/false) ____________________________

7. The great rivers of Siberia generally flow north into the Arctic Ocean. (true/false) ____________________________

8. Russia holds huge reserves of mineral resources, such as diamonds and coal. (true/false) ____________________________

9. Most of Russia cannot be farmed because of its dry climate. (true/false) ____________________________

10. Russia’s flourishing tourist industry is important to the country’s economy. (true/false) ____________________________
**Guided Reading Activity 14-2**

For use with textbook pages 361–364.

**Climate and Vegetation**

**Short Answer**

**DIRECTIONS:** Use the information in your textbook to write a short answer to each of the following questions.

1. What are the characteristics of the climate and seasons in most of Russia?

2. Why does Siberia receive very little precipitation?

3. What kind of temperature is typical of the tundra climate?

4. Why does so little vegetation grow in the tundra?

5. What temperature and snowfall is typical of the subarctic climate?

6. How large is the taiga forest and what resource does it provide?

7. Why do most Russians live in the country’s mid-latitude climates?

8. What types of vegetation are found in Russia’s humid continental climate?

9. How did the Russian winter of 1941 help defeat the German army?

10. What are the recent challenges to the steppe ecosystem?
Chapter 15
Resources

Vocabulary Activity 15
Cultural Geography of Russia ................................................................. 24

Reteaching Activity 15
Cultural Geography of Russia ...................................................................... 25

Reinforcing Skills Activity 15
Analyzing Primary and Secondary Sources ................................................. 27

Enrichment Activity 15
Major Events in Twentieth-Century Russian History ................................. 29
Cultural Geography of Russia

**DIRECTIONS:** Match each description in the first column with the correct term in the second column. Write the letter of the answer in the blank at the left of each description. Not all terms will be used.

1. general term for a major ethnic group
2. self-rule
3. supreme ruler of Russia
4. belief calling for greater economic equality
5. member of a revolutionary group led by Lenin
6. philosophy calling for a new society led by workers
7. country controlled by the Soviet Union
8. struggle between communism and capitalism for world influence
9. policy of economic restructuring
10. policy of greater political openness
11. belief that there is no God
12. second largest religion in Russia
13. the religion of Tuva, Buryatia, Kalmykia
14. organized religious persecution
15. artists glorified Soviet communism

A. atheism
B. Bolshevik
C. Cold War
D. communism
E. czar
F. ethnic group
G. glasnost
H. Buddhism
I. intelligentsia
J. nationality
K. Islam
L. perestroika
M. pogrom
N. Russification
O. satellite
P. serf
Q. socialism
R. socialist realism
S. sovereignty
RETEACHING ACTIVITY 15

Terms and Concepts

DIRECTIONS: Match each term from Chapter 15 with the correct definition.

1. czar  a. struggle between communism and capitalism
2. ethnic diversity  b. impoverished workers
3. serfs  c. philosophy based on Karl Marx’s ideas
4. reform  d. change intended as improvement
5. communism  e. ruler of Russia before the revolution
6. Cold War  f. variety of ethnic groups

Summarizing Information

DIRECTIONS: Read the passage below, and then answer the questions.

In 1921 the Bolsheviks, now known as Communists, won the civil war in Russia. The following year they established a new country, the Union of Soviet Socialist Republics (USSR), or the Soviet Union, with Moscow as the capital. Under the Communists, the Soviet Union gradually gained back Ukraine, Belorussia (now Belarus), much of the Caucasus region, and a large part of central Asia. After Lenin’s death in 1924, Joseph Stalin, a leading Communist Party official, began a five-year climb to power. Defeating his rivals, Stalin set about making the Soviet Union into a powerful industrial giant.

7. What is the main topic of the passage?

8. What did the Communists accomplish after they won the civil war in Russia?

9. In what new direction did Joseph Stalin take the country?
RETEACHING ACTIVITY 15

Connecting Ideas

DIRECTIONS: Answer the following questions in the space provided.

10. What features influence Russia's population distribution?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

11. How has education changed since the collapse of the Soviet Union?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Organizing Information

DIRECTIONS: The lettered items in the Fact Bank name some of Russia's many peoples. Complete the diagram below by writing the letter of each group in the Fact Bank in the correct box in the diagram. (You will not use every writing line in every box.)

Fact Bank

A. Serbs  E. Chechens  I. Ukrainians
B. Poles    F. Bashkirs  J. Ingushetians
C. Dagestanis  G. Sakha
D. Chuvash    H. Tatars

12. Slavs

________________________________________________________________________

13. Turkic Peoples

________________________________________________________________________

14. Caucasian Peoples

________________________________________________________________________
Analyzing Primary and Secondary Sources

A primary source is material about an event created by an eyewitness. It may be a book, letter, interview, article, or document. Primary sources provide an important understanding of how an event affected the people involved. Secondary sources contain information gathered from primary sources. For this reason, a secondary source gives a broader perspective on an event. Secondary sources include textbooks, encyclopedias, documentaries, and biographies.

To decide whether material is a primary or secondary source, ask:
- Did the source witness the event or gather information about it?
- Was the account written at the time of the event or afterward?
- What kind of information is given, and what questions remain?

Practicing the Skill

DIRECTIONS: Read the excerpt from each of the three sources below. Then label each of the sources as a primary or secondary source.

**Source 1**
Gorbachev was elected by the Congress of People’s Deputies to the newly created office of president in February 1990. Many people worried that he had too much power and that he might become a dictator. During his last year in office, Gorbachev rejected reforms that he had previously supported. The President’s popularity waned as Prime Minister Boris Yeltsin gained support. Yeltsin called for a rally of support. This was perceived by some to be a challenge to Gorbachev’s authority. In August, 1991, Communist hardliners attempted a coup.

1. Type of source: __________________________
   How do you know? __________________________

**Source 2**
Top officials have declared that Gorbachev has taken ill and is no longer in charge. Yanvev has assumed command. Officials have declared a ban on all strikes and demonstrations. We will give you updates throughout the day on the situation.

2. Type of source: __________________________
   How do you know? __________________________

**Source 3**
Word spread through the crowd like wildfire. Yeltsin was in the Parliament building, and he had not been arrested by the KGB. I was very worried when the tanks arrived. How many people in the crowd around me might be injured or arrested? My fears turned to elation when I saw Yeltsin climb on top of a tank. He called for mass resistance. The crowd swelled. Yeltsin denounced the coup as unconstitutional. He called for a general strike and declared himself the “guardian of democracy.”

3. Type of source: __________________________
   How do you know? __________________________
Enrichment Activity 15

Major Events in Twentieth-Century Russian History

DIRECTIONS: Use the following information to complete the timeline on the right. Be sure to consider the distance between the marks when placing entries.

1957 — The Soviet Union launches Sputnik I, the first spacecraft to circle the earth.

1917 — A revolution overthrows the government of Czar Nicholas II.

1961 — Yuri Gagarin, a Soviet Air Force officer, becomes the first person to orbit the Earth.

1991 — The Soviet Union collapses; Boris Yeltsin becomes the first democratically elected president of Russia.

1986 — Mikhail Gorbachev introduces his policies of glasnost and perestroika.

1999 — On December 31, Yeltsin resigns.

1941 — German forces invade the Soviet Union during World War II.

1922 — The Soviet Union is established; Joseph Stalin becomes general secretary of the Communist Party.

2000 — Vladimir Putin is elected president of Russia.

DIRECTIONS: Use the time line to decide whether each of the following statements is true or false. Write true or false on the blank next to each statement.

1. A revolution overthrew the Communist government in 1917.
2. Mikhail Gorbachev introduced the reform known as glasnost.
3. The first spacecraft to circle the Earth was the Soviet-made Sputnik I.
5. Boris Yeltsin was the first democratically elected president of Russia.
6. The Soviet Union lasted for 69 years.
7. Vladimir Putin was elected president of Russia on the tenth anniversary of the fall of the Soviet Union.
Chapter 15
Section Resources

Guided Reading Activity 15-1
Population and Culture ................................................................. 31

Guided Reading Activity 15-2
History and Government ................................................................. 32
Population and Culture

Fill In the Blanks

Directions: Use the information in your textbook to fill in the blanks for the following sentences.

1. The Soviet government disapproved of religion and instead promoted _________________.

2. Russia is made up of more than 120 _________________.

3. Only ________________ of the population lives in two-thirds of Russia's land area.

4. Most Russians who claim a religious affiliation belong to the _________________ church.

5. Russian Slavs dominate Russia's _________________ and culture.

6. Turkic-speaking peoples live in _________________ Russia.

7. Russia's population is _________________ because of poor health care and a low birthrate.

8. The Caucasian peoples consist of the Chechens, Dagestanis, and _________________.

9. Some of the world's greatest literature comes from Russian authors such as ______________, who wrote *Gulag Archipelago*.

10. Soviet “socialist ________________” strangled artistic expression in Russia.

11. May 1, or _________________, was a workers' holiday in Soviet Russia, but today it is just a spring celebration.

12. Since 1991, ________________ have returned to their homeland.

13. Southeastern Russia is the home of _________________.

14. Since 1990, urban population growth in most industrialized cities has _________________.

15. Prominent educators, writers, artists and scientists made up the Soviet _________________.

**History and Government**

**Underline the Correct Word**

**DIRECTIONS:** Use the information in your textbook to choose the word or phrase that best completes the sentence. Underline the correct answer.

1. In the A.D. 600s, Slavs settled near ________________ on the North European Plain.
   (cities/waterways)

2. Kievan Rus was a loose union of ________________ organized by the Varangians.
   (city-states/ethnic groups)

3. Ivan the Great, king of the Muscovites, built a huge fortress called the ________________.
   (Kremlin/Muskovy)

4. Ivan the Terrible expanded Russian territory and became the country’s supreme ruler, called a(n) ________________.
   (emperor/czar)

5. By the late 1600s, Peter the Great had ________________ Russia, built ports, and encouraged trade.
   (conquered/modernized)

6. Because of government oppression and extreme poverty, many Russians were drawn to a belief in economic equality known as ________________.
   (feudalism/socialism)

7. The Bolsheviks, who believed in ________________ , took control of the government in November 1917.
   (socialism/communism)

8. After winning the civil war, the Bolsheviks established a new ________________.
   (country/army)

9. Countries in the region controlled by the Soviet Union were called ________________.
   (satellites/provinces)

10. The Cold War was the struggle between communism and ________________ for world influence.
    (socialism/capitalism)

11. Mikhail Gorbachev began to restructure Russia’s economy through a policy called ________________.
    (glasnost/perestroika)

12. The Soviet Union collapsed when all the Soviet Republics declared ________________.
    (war/independence)

13. The move from a command economy to a ________________ economy brought severe economic hardship to Russians.
    (market/industrial)

14. Russia’s stability has been threatened by ________________ movements.
    (separatist/socialist)
Chapter 16
Resources

Vocabulary Activity 16
The Region Today: Russia ................................................................. 34

Reteaching Activity 16
The Region Today: Russia ................................................................. 35

Reinforcing Skills Activity 16
Categorizing Information ............................................................... 37

Enrichment Activity 16
Communications Transformation in Russia ................................... 39
The Region Today: Russia

**DIRECTIONS:** Use the clues to complete the puzzle.

**Across**
2. change to private ownership
4. privately owned businesses respond to supply and demand (2 words)
7. chemical used to kill insects

**Down**
1. trade in which illegal goods are bought and sold (2 words)
3. small farm where farmers share in production and profits
5. by-product of producing nuclear power (2 words)
6. central authority makes key economic decisions (2 words)
RETEACHING ACTIVITY 16

Terms and Concepts

DIRECTIONS: Match each term from Chapter 16 with the correct definition.

1. nuclear waste  a. farm in which workers receive wages
2. black market  b. illegal method of buying scarce and illegal goods
3. sovkhoz  c. by-product of producing nuclear power
4. radioactive material  d. change to private ownership
5. consumer goods  e. contaminated by nuclear energy
6. privatization  f. goods needed for everyday life

Visualizing Information

DIRECTIONS: In the chart below, fill in the types of transportation used for each category.

<table>
<thead>
<tr>
<th>TRANSPORTATION IN RUSSIA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GOODS</strong></td>
</tr>
<tr>
<td>7.</td>
</tr>
</tbody>
</table>
CHAPTER 16

Connecting Ideas

DIRECTIONS: Answer the following questions in the space provided.

10. What are the main differences between the old Soviet command economy and today’s Russian market economy?

11. In what ways did the Soviet Union create serious environmental problems for itself?

Summarizing Information

DIRECTIONS: Read the passage below, and then answer the questions.

Under the Soviet Union, the state owned and controlled all the mass communication systems, including newspapers, magazines, television, the postal service, and the telegraph and telephone systems. State agencies reviewed all print and broadcast materials to make sure that they contained no criticism of the government. Since the breakup of the Soviet Union, Russians have heard and read new voices and fresh views. Most families own radios and television sets, and by 1995 Russians could choose from among 10,000 newspapers and journals.

12. What is this passage about?

13. What role did the Soviet government play in communications?

14. How did the availability of mass communications change after the breakup of the Soviet Union?
CHAPTER 16  REINFORCING SKILLS ACTIVITY

Categorizing Information

Categorizing information is an important skill that can help you understand relationships, remember details, and draw conclusions. Categorizing is sorting details into groups. Making a chart is a useful way to organize information into categories. Columns and rows provide spaces for grouping details. After information has been categorized, you can review it, compare or contrast it, and draw conclusions about it.

**Practicing the Skill**

**DIRECTIONS:** Categorize the details listed below the chart. Write the number of each detail under characteristics beside the item it matches. Then answer the question at the end of the list.

<table>
<thead>
<tr>
<th>Items transported</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goods</td>
<td></td>
</tr>
<tr>
<td>People</td>
<td></td>
</tr>
<tr>
<td>Energy</td>
<td></td>
</tr>
</tbody>
</table>

**Details:**

1. Few people own cars.
2. Railroads transport food great distances.
3. The Trans-Siberian Railroad carries goods on the longest continuous railroad line.
4. At its peak during the Soviet era, the passenger airline, Aeroflot, carried 135 million people per year.
5. A complex maze of pipelines carries fuel across Russia.
6. Oil pipelines run through republics fighting for independence.
7. Public transportation systems need repair.
8. Millions of tons of materials travel along thousands of miles of navigable inland waterways.
9. The high cost of fuel and reduced passenger traffic has caused airports to close.

What word would you use to describe the transportation of people in Russia?
Communications Transformation in Russia

Russia began to move toward a market economy in 1987. Since then, the number of telephones, radio stations, and Internet service providers in the country has increased dramatically. Still, Russia lags behind other industrialized democracies, such as the United States, that have had private communications systems in place for decades.

DIRECTIONS: Study the table below. Then answer the questions that follow.

<table>
<thead>
<tr>
<th></th>
<th>Russia</th>
<th>United States</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Population (2009)</td>
<td>141.8 million</td>
<td>306.8 million</td>
</tr>
<tr>
<td>Internet Hosts (2009)</td>
<td>7.6 million</td>
<td>383 million</td>
</tr>
<tr>
<td>Internet Users (2008)</td>
<td>45.2 million</td>
<td>231 million</td>
</tr>
<tr>
<td>Cellular Phones (2008)</td>
<td>187.5 million</td>
<td>270 million</td>
</tr>
<tr>
<td>Telephone Landlines (2008)</td>
<td>44.2 million</td>
<td>150 million</td>
</tr>
</tbody>
</table>

Sources: World Population Data Sheet 2009, CIA World Factbook 2009

1. How many more radio stations were there in the United States than in Russia?

2. Using the estimated population figures, what percentage of Russia’s total population used the Internet in 2008?

3. Using the estimated population figures, what percentage of the United States population used the Internet in 2008?

4. How might you expect these numbers to look if this data was collected in 1983?

5. Prior to privatization, who owned and operated the communications media in Russia?

6. Why would the economic changes after 1987 lead to an increase in the number of communication networks?

7. Cellular telephone networks were first introduced in the mid 1980s. Based on this information, why might Russia have so few telephone landlines compared to the United States?
Guided Reading Activity 16-1

For use with textbook pages 390–394.

The Economy

Fill In the Blanks

DIRECTIONS: Use the information in your textbook to fill in the blanks for the following sentences with words from the Word Bank.

1. Among the many economic challenges Russia now faces are expanding trade, increasing food production, and providing more ____________.

2. Soviet planners emphasized machinery production and other heavy ____________.

3. The Soviet Union did not develop new ____________ industries, and its economy suffered.

4. Major economic and social reforms were begun in 1985 by ____________, who made the economy more market-oriented.

5. ____________ began the privatization of state-owned businesses, permitting individuals to own companies.

6. Foreign ____________ and wealthy Russians bought companies, but most workers did not benefit from these changes.

7. Between 1900 and 1995, the value of goods and services produced in Russia ____________ by 50 percent.

8. Russian farmers cannot afford to buy the land they farm, so agriculture’s transition to a ____________ economy has been slow.

9. The extraction of ____________ is Russia’s most important industry.

10. Railroads and ____________ provide most of Russia’s transportation needs.

11. Improvements in Russia’s ____________ systems help the transition to a market economy.

12. Over 50 percent of Russia’s international trade is the export of energy and ____________.

Word Bank:

- communications
- high-technology
- market
- fell
- industries
- petroleum
- fuels
- investors
- waterways
- Gorbachev
- jobs
- Yeltsin
People and Their Environment

Short Answer

DIRECTIONS: Use the information in your textbook to write a short answer to each of the following questions.

1. What is the main challenge for Russia and its abundant natural resources?

2. What is one example of Russia’s second challenge—to repair environmental damage?

3. What were the concerns of Russians who opposed the Kamchatka mining operation?

4. How has the Soviets’ disregard for the environmental effects of industrialization affected Russia’s environment?

5. What are the specific threats to Russia’s water quality?

6. Why do Russians call Lake Baikal “the Pearl of Siberia?”

7. What kinds of pollution have damaged Russia’s soil and air?

8. What are the sources of nuclear waste in Russia?

9. What happened at Chernobyl, and what were the effects?

10. How did Soviet leaders respond to international pressure after the accident?
**Answer Key**

**Location Activity 5** pp. 1–2

A. Labeling should be consistent with the Unit 5 Reference Atlas.

B.

1. Black Sea
2. Barents Sea
3. Caucasus Mountains
4. Caspian Sea
5. Volga River
6. Ural Mountains
7. Ob River
8. Lena River
9. Lake Baikal
10. Central Siberian Plateau
11. Kamchatka Peninsula
12. Bering Sea

**Unit 5   Environmental Issues** p. 9–10

1. A reactor at the Chernobyl nuclear power facility exploded, killing several people and releasing tons of radioactive material into the environment.
2. Fossil fuel use that could lead to global warming is increasing.
3. Answers will vary. Those who support nuclear energy may claim that it is now safe and provides a viable and clean source of energy. Those who oppose nuclear energy may claim that other sources of renewable energy are better in light of the risks associated with nuclear power.
4. Both groups assume that fossil fuel use leads to global warming that can be dangerous to the environment.

**Unit 5   Real-Life Applications** pp. 3–4

Answers should reflect students’ understanding of the benefits of funding certain areas versus other areas. Students’ conclusions should provide a logical explanation of how their plans will work to maximize the improvement of the country’s medical care.

**Unit 5   GeoLab Activity** pp. 5–7

1. Descriptions should be clear and accurate. Soil from the carton with no grass washed away from the surface, while the carton with grass lost almost no soil. There was more erosion on bare soil because there was no plant growth to slow the water and prevent the soil from running down the slope.
2. Answers should show an understanding of the effects of erosion and its relationship to flooding.
3. A steeper slope would increase erosion because water would travel faster. Denser soil, such as clay, would not erode as quickly; less dense soil such as sand would erode even more.

**Critical Thinking**

Reforestation projects probably will reduce erosion and the severity of floods. Forests slow down runoff water, and their roots tend to hold the soil in place. Soil with plants growing, in turn, absorbs more water, further slowing runoff.

**Unit 5   World Literature** pp. 11–12

from “Through the Fields”

1. They don’t want to get soaked by the rain or to ruin their shoes in the mud. They both know their clothes will be ruined and they probably are embarrassed at how they will look to each other.
2. The pouring rain and slippery mud make them laugh. There is nothing they can do to keep from being soaked, and they probably imagine how funny they must look. The rain and lightning also make them determined to reach the dacha.
3. They are struggling together to overcome a difficulty that they cannot control—the weather that threatens to spoil their holiday. Just like buddies fighting side by side, their shared predicament removes any barriers of self-consciousness, and they would do anything to help and protect each other.
4. The field was difficult to cross, full of slippery mud, and without any shelter against the elements. The narrator has had a hard life and knows that, like everyone, she will experience challenges in the future, through no fault of her own, that she will have to overcome.
Vocabulary Activity 14  p. 14

Across
2. chernozem
5. taiga
6. hydroelectric power

Down
1. permafrost
3. tundra
4. steppe

Reteaching Activity 14  pp. 15–16

1. e
2. d
3. f
4. b
5. c
6. a
7. B, D
8. A, H
9. C, G
10. E, F

11. The very cold climate throughout most of Russia makes it difficult to grow crops in most places. Only in the mid-latitude regions in European Russia can agricultural crops thrive.

12. Russia has large amounts of many kinds of natural resources, especially minerals, that other countries need. The rich soil in the North European Plain supports the production of agricultural products. The Black Sea provides a year-round warm-water port, and extensive river systems provide internal transportation routes.

13. Volga River
14. North European Plain
15. Ural Mountains
16. Central Siberian Plateau (Siberia)
17. Caspian Sea
18. Arctic Ocean

Enrichment Activity 14  p. 19

1. –60º; 92
2. Permafrost
3. pressure; pingos
4. wedges; ice
5. saturated; solifluction
6. The permafrost just beneath the soil's surface would prevent deep root systems from developing.
7. Large animals require more food (in the form of plant life or small animal life) than is available in any one place on the tundra. Therefore, larger animals must migrate in search of food.

Guided Reading Activity 14-1  p. 21

1. false; largest
2. true
3. false; Ural
4. false; Black
5. false; Caspian
6. false; Volga
7. true
8. false; petroleum
9. false; cold
10. false; fishing

Guided Reading Activity 14-2  p. 22

1. harsh climate with temperature extremes; long, cold winters and short, relatively cool summers
2. Siberia is far from oceans and their moisture-bearing air masses.
3. The average annual temperature in the tundra is below freezing.
4. The tundra has a short growing season and thin, acidic soil just above the permafrost.
5. The temperatures are some of the world’s coldest, and for 120 to 250 days each year snow covers the ground.
6. The taiga forest covers two-fifths of Siberia and supplies one-half of the world’s softwood timber.
7. Mid-latitude climates are milder even though they are still relatively cold.
8. The coniferous taiga turns into mixed coniferous-deciduous forests. Its slightly more fertile soil supports agriculture. Farther south there are grasslands with rich chernozem soil for agriculture.
9. That year winter arrived early with the coldest temperatures in decades. The German soldiers’ summer uniforms could not protect them from frostbite, and the cold paralyzed military vehicles and equipment.

10. Newly introduced foreign plants have crowded out native grasses, causing soil fertility to decline. Overgrazing by animals has also damaged the ecosystem.

Vocabulary Activity 15 p. 24
1. J
2. S
3. E
4. Q
5. B
6. D
7. O
8. C
9. L
10. G
11. A
12. K
13. H
14. M
15. R

Reteaching Activity 15 pp. 25–26
1. e
2. f
3. b
4. d
5. c
6. a
7. The passage describes how the Soviet Union came into being and gained land and power.
8. They established a new country, the USSR, and gradually gained back much territory.
9. He focused on making the Soviet Union into a powerful industrial giant.
10. Only 25 percent of Russians live east of the Ural Mountains, where the harsh climate, mountainous terrain, frozen tundra, and vast forests make the land unsuitable for farming. European Russia has industrialized cities connected by waterways and is densely populated.
11. Before the collapse, Soviet education was free and mandatory with a focus on science, engineering, and military studies. Today education is still free, but funding is limited. Schools are overcrowded and in poor condition, and teachers’ salaries are low.

Guided Reading Activity 15-1 p. 31
1. atheism
2. ethnic groups
3. 20 percent
4. Russian Orthodox
5. politics
6. southwestern
7. shrinking
8. Ingushetians
9. Solzhenitsyn
10. realism
11. May Day
12. ethnic Russians
13. Caucasian peoples
14. decreased
15. intelligentsia

Guided Reading Activity 15-2 p. 32
1. waterways
2. city-states
3. Kremlin
4. czar
5. modernized
6. socialism

Reinforcing Skills Activity 15 p. 27
1. secondary source; account was written after the event occurred
2. secondary source; source provides information gathered from other people
3. primary source; use of the pronoun “I” shows that the source material was collected by an eyewitness to the event

Enrichment Activity 15 p. 29
1. false
2. true
3. true
4. false
5. true
6. true
7. false

Guided Reading Activity 15-2 p. 32
1. waterways
2. city-states
3. Kremlin
4. czar
5. modernized
6. socialism
14. After the breakup of the Soviet Union, mass communications have broadened and become more diverse. Today there are thousands of newspapers and journals available, and most people have radios and television sets.

Reinforcing Skills Activity 16 p. 37
Under Goods-Characteristics: 2, 3, 8
Under People-Characteristics: 1, 4, 7, 9
Under Energy-Characteristics: 5, 6
Possible answers include difficult or challenging.

Enrichment Activity 16 p. 39
1. 11,884 more
2. 31.8 percent
3. 75.2 percent
4. Possible response: All of the numbers for Russia’s communication systems would be much lower, while the numbers for the United States would remain relatively high.
5. the government
6. Possible response: In a market economy, private companies could own and operate communications networks.
7. Possible answer: Russia’s economic shift began in 1987, around the same time that cell phones were becoming popular. The Russian population may have tended toward cell phones rather than have landlines installed. Most Americans had landlines in place long before 1987.

Guided Reading Activity 16-1 p. 41
1. jobs
2. industries
3. high-technology
4. Gorbachev
5. Yeltsin
6. investors
7. fell
8. market
9. petroleum
10. waterways
11. communications
12. fuels
Guided Reading Activity 16-2  p. 42

1. to manage its natural resources without repeating its past disregard for the environment
2. Russia is trying to manage its forests more effectively by careful land use, forest protection, replanting, and increased private investment in forests.
3. They were concerned about damage to salmon spawning grounds and to a nearby wildlife area.
4. It has damaged Russia’s water, air, soil, and the health of millions of Russians.
5. industrial pollution, fertilizer runoff, sewage, metals, radioactive material
6. Russians consider Lake Baikal a natural wonder. It is the world’s oldest and deepest lake and contains one-fifth of the world’s freshwater and 1,500 native species of aquatic plants and animals.
7. Soil has been polluted by leaking toxic wastes, petroleum from broken pipelines, and overuse of fertilizers and pesticides. Industries, vehicle emissions, and the burning of coal are sources of air pollution.
8. more than 600 nuclear explosions, the unknown condition of stockpiled weapons, and the dumping of nuclear materials into Russia’s northern waters
9. A fire in a nuclear reactor in 1986 released tons of radioactive particles into the environment. The wind carried the particles to other countries, thousands of people died or became ill from radiation poisoning, and farmlands and forests were contaminated.
10. Soviet leaders improved nuclear safety standards, shut down dangerous plants, did not open some new reactors, abandoned plans for building others, and eventually shut down Chernobyl.