Lesson 1: Physical Geography of Western Europe

ESSENTIAL QUESTION
How does geography influence the way people live?

Terms to Know
- **dike** a large barrier built to keep out water
- **polder** the land reclaimed from building dikes and then draining the water from the land
- **estuary** an area where river currents and the ocean tide meet
- **Westerlies** strong winds that blow from west to east
- **deciduous** trees that shed their leaves in the autumn
- **coniferous** evergreen trees that produce cones to hold seeds and that have needles instead of leaves

Where in the World: Western Europe
Western Europe

Lesson 1: Physical Geography of Western Europe, continued

Landforms and Waterways

Guiding Question  How do the physical features of Western Europe make the region unique?

Western Europe includes the nations of Ireland, the United Kingdom, France, Germany, the Netherlands, Belgium, Luxembourg, Austria, and Switzerland. It also includes the tiny countries of Monaco and Liechtenstein.

The landscape of the region consists of plains with mountains in some places. Much of Western Europe lies in the Northern European Plain. Massive sheets of ice shaped the plain during the last ice age, which ended about 11,000 years ago. Melting glaciers left behind fertile soil, but also thick layers of sand and gravel. These deposits have eroded into sand dunes along some of the North Sea coastline. The glaciers also left behind areas of poorly drained wetlands along the coasts of the British Isles.

Two mountain ranges separate Western Europe from Southern Europe. They divide the cooler climates of the north from the warm, dry climate of the Mediterranean region to the south.

<table>
<thead>
<tr>
<th>Range</th>
<th>Pyrenees</th>
<th>Alps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Between France and Spain</td>
<td>France, Switzerland, Austria, Germany</td>
</tr>
<tr>
<td>Length</td>
<td>270 mi (435 km)</td>
<td>750 mi (1,207 km)</td>
</tr>
<tr>
<td>Tallest Peak</td>
<td>Pico de Aneto 11,169 ft (3,404 m)</td>
<td>Mont Blanc 15,771 ft (4,807 m)</td>
</tr>
</tbody>
</table>

The Pyrenees and the Alps were created by the folding of rocks as a result of plate tectonics. They were also shaped by glaciers. These mountains are younger than other mountains in Europe.

Western Europe has long, irregular coastlines on the Atlantic Ocean and the North, Baltic, and Mediterranean Seas. The North Sea is a part of the Atlantic Ocean that separates the island of Britain from the rest of Europe. It is a rich fishing ground for the Netherlands and the United Kingdom. It has long been important for trade. It is also the location of large oil and gas reserves.

The North Sea has helped and hindered the Dutch, the people of the Netherlands. Because 25 percent of the Netherlands is below sea level, the Dutch have built dikes, walls to hold back the water. They call the land they reclaim from the sea polders. This land is used for farming and settlement. Stormy seas have broken dikes and caused flooding in recent times.
Marking the Text

5. Read the text on the right. Underline the sentence that tells how Britain is connected to mainland Europe.

Reading Progress Check

6. How did the rivers in Western Europe affect its economic development?

Marking the Text

7. Read the text on the right. Highlight the description of the Mediterranean climate.

Reading Progress Check

8. How do the Westerlies affect the climate of Western Europe?

Climate

Guiding Question  Why is the climate mild in Western Europe?

Western Europe is located at northern latitudes, but has a milder climate than other places at the same latitudes. This is because most of Western Europe lies in the path of the Westerlies. These are strong winds that travel from west to east. They are heated by the warm water of the North Atlantic Current, which originates in the tropical waters of the Caribbean Sea.

This warm, moist air moves inland on the Westerlies. It brings mild temperatures and rain to most of Western Europe throughout the year. Summers are cool, and winters are mild. This climate is known as a marine west coast climate. Because there are no coastal mountain ranges to stop it, the Westerlies blow across the European continent.

Other areas of the region, such as southern France, have a drier climate. Summers are hot and dry, and winters are mild or cool. Most of the rainfall occurs in spring and autumn. This is called a Mediterranean climate.

Natural Resources

Guiding Question  How do the people of Western Europe use the region’s natural resources?

Deposits of coal are plentiful throughout much of Western Europe. Coal-fueled machines were invented during the Industrial
Western Europe

Lesson 1: Physical Geography of Western Europe, continued

Revolution of the 1800s. Today, coal is less important than other energy sources. In 1959 oil and natural gas were discovered under the North Sea. The United Kingdom, Norway, the Netherlands, and Germany produce oil and natural gas from the North Sea. Other countries use their rivers to supply energy. Hydroelectricity supplies more than half of Switzerland’s electricity needs.

The Northern European Plain has some of the richest soils in Europe. France is Western Europe’s leading agricultural producer. Northern France produces wheat. Orchards and vineyards are common in the central and southern parts of the country. Dairy farming is important for the economy of the Netherlands.

The moderate climate and abundant rainfall in most of Western Europe support a variety of plant and animal life. The British Isles have dense forests, grasslands, scrublands, and wetlands. The natural vegetation is mostly deciduous forest, or trees that lose their leaves in the fall. The climate on the mainland of Europe is more diverse than that of the British Isles and supports a wider range of plant life.

The drier climates farther inland, as well as the highlands and mountain ranges, support other kinds of plants. Coniferous trees, such as fir and pine trees, have cones and needle-shaped leaves. They keep their leaves during the winter. Above the tree line, grasses and shrubs are the most common plants.

Deer, wild boars, hare, and mice are common. Wildcats, lynx, and foxes roam the forests. There are brown bears in the Pyrenees. The number of large animals has decreased in the British Isles, but the islands have more than 200 kinds of birds.

Marking the Text
9. Read the text on the left. Highlight energy sources that are important in Western Europe today.

Defining
10. How do deciduous and coniferous trees differ from each other?

Reading Progress Check
11. What effect did coal have on the Industrial Revolution?

Writing
Check for Understanding
1. Expository Why is the North Sea important to Western Europe?

2. Descriptive Describe the agriculture of Western Europe.