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| **LESSON 1**  **Physical Geography of the Regions**  **ESSENTIAL QUESTION: *How does geography influence the way people live?*** | |
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| *Russian Siberia, the Central Asian countries, and the Caucasus make up a large area. The regions cover about one-ninth of the world’s total land area.*  **Regions**  ***Which countries make up the regions?***  Siberian Russia, Central Asia, and the Caucasus are separate regions. They share certain characteristics, such as rugged terrain, harsh climate, and sparse population.  **Siberian Russia**  The eastern part of Russia is known as Siberia. It stretches from the Ural Mountains in the west to the Pacific Ocean in the east. Siberia is 25 percent larger than Canada, the world’s second-largest country. The region is so vast that people living on Siberia’s Pacific coast are farther from Moscow, Russia’s capital, than they are from Maine in the United States.  **Central Asia**  Central Asia is made up of five countries: Kazakhstan, Turkmenistan, Uzbekistan, Kyrgyzstan, and Tajikistan. Kazakhstan is the northernmost and largest country in Central Asia and the ninth-largest country in the world. It is also the most sparsely settled country in Central Asia.  Kazakhstan is bordered by China on the east, the Caspian Sea on the west, and Russia to its north. The Central Asian countries of Turkmenistan, Uzbekistan, and Kyrgyzstan lie along Kazakhstan’s southern border. |  |

Turkmenistan and Uzbekistan are about the same size. Both are about twice the size of Minnesota. Turkmenistan has the smallest population in Central Asia, and Uzbekistan has the largest.

Kyrgyzstan and Tajikistan form Uzbekistan’s eastern border. Both are small countries with small populations. Kyrgyzstan is about the size of South Dakota, and the smaller Tajikistan is about the size of Iowa.

Turkmenistan, Kyrgyzstan, and Tajikistan are Central Asia’s southernmost countries. South of the countries lie China, Pakistan, Afghanistan, and Iran.

**The Caucasus Region**

Between the Caspian Sea and the Black Sea and south of the Caucasus Mountains is a region called the Caucasus. Its three small countries— Georgia, Azerbaijan, and Armenia—together total about the size of North Dakota. To their north lies Russia. Turkey and Iran border the Caucasus region to the south.

***Analyzing*** Why is Kazakhstan, which has a larger population than Turkmenistan, more sparsely settled than Turkmenistan?

**Landforms and Climates**

***What are the major landforms and climates of Siberia, Central Asia, and the Caucasus region?***

The variety of landforms and climates that characterize the Caucasus, Central Asia, and Siberia make for one of the most geographically interesting regions of the world.

**Mountains**

The Caucasus Mountains **define** the Caucasus region. These mountains generally mark the border between Europe and Asia. Many of the mountains in this range are volcanoes. Although they have not erupted in thousands of years, the forces that formed them make the region prone to frequent earthquakes.

To the east, two high mountain ranges lie along Central Asia’s border with China. The rugged Tian Shan cover most of Kyrgyzstan and extend into eastern Kazakhstan and Uzbekistan. On their southwestern edge is a smaller range called the Pamirs. They cover most of Tajikistan. Like the Caucasus, the Tian Shan and the Pamirs are an earthquake zone.

The Ural Mountains, which run north and south through Russia, are yet another border range. These heavily forested mountains are much lower in elevation than the other ranges. Geographers consider the Ural Mountains to be a boundary between Europe and Asia. The Urals also mark the western border of Russia’s Siberia region. The eastern third of Siberia is another mountainous region that extends south along Russia’s border with Mongolia.

**Plains and Deserts**

Plains and deserts also characterize the regions. In Siberia, the west Siberian plain extends from the Ural Mountains east to the Yenisey River. Covering an area of almost 1 million square miles (2.6 million sq. km), the west Siberian plain is one of the world’s largest and flattest plains. Its lowland areas are poorly drained, with many swamps and marshes. East of the Yenisey River, the land rises to form the central Siberian plateau, a rugged region of hills cut by deep river gorges.

Siberia’s geography changes from north to south as well as from west to east. Extreme northern Siberia is mostly **tundra**—a treeless zone found near the Arctic Circle or at high mountain elevations. Northern Siberia is a harsh environment of bare, rocky ground with patches of small shrubs, mosses, and lichens.

South of the tundra lies a vast area of **taiga**—a zone of coniferous forest. Siberia’s taiga is swampy, because, like the tundra, the region is covered in **permafrost**, a layer of permanently frozen ground that lies beneath the surface soil and rocks. Permafrost covers about two-thirds of Siberia. Southern portions of the western plains and central plateau contain dry grasslands called **steppe**; the steppe extends into Kazakhstan in Central Asia.

Central Asia is made up of lowland mountains and dune-covered deserts. Most of Kazakhstan consists of dry grassland plains and plateaus, with lowlands on its coast along the Caspian Sea. In eastern Kazakhstan, the Kyzyl Kum desert stretches south into Uzbekistan. Another desert, the Kara–Kum, extends over most of nearby Turkmenistan. Together, they form a harsh region, nearly the size of Texas, consisting of sand ridges, scattered grasses, and desert plants.

**A Variety of Climates**

The regions have many climates, ranging from arctic climates in Siberia to desert climates in Central Asia. Dry conditions prevail across much of Central Asia, characterizing what is called an arid climate. The steppe of southwest Siberia and northern Kazakhstan receives a little more rain and has a semiarid climate. Moving north and east, summers become shorter and cooler, and the winters become colder. Summer in the Siberian tundra, for example, lasts only two months. Temperatures rarely rise above 50°F (10°C). Summers in the mountain valleys of eastern Siberia are longer and milder. Eastern and central Siberia have some of the coldest winters on Earth. There, the temperature has reached as low as −96°F (−71°C). The west Siberian plain experiences heavy snows, but elsewhere snowfall is light.

The mountain areas of Central Asia have a humid continental climate. Temperatures and precipitation in these areas vary according to location and elevation. Mountain valleys have hot, dry summers and cold winters. Rainfall varies from 4 inches to 20 inches (10 cm to 51 cm) per year. Mountain foothills are cooler and get more rain. The high elevations are even colder, with more rain and snow.

The Caucasus Mountains give Georgia, Azerbaijan, and Armenia a climate much like the mountains of eastern Central Asia. The presence, however, of two large bodies of water—the Caspian Sea and the Black Sea—makes the region’s summers cooler and winters warmer. The Black Sea gives Georgia’s coastal lowlands a humid subtropical climate, with up to 100 inches (254 cm) of rainfall in a year. Farther east, in the mountains and mountain valleys, the climate is much drier.

**Waterways**

The Caspian Sea separates the Caucasus and Central Asia. At nearly the size of California, this saltwater lake is the largest inland body of water in the world. To the east, the Aral Sea, a much smaller saltwater lake, straddles the Kazakhstan-Uzbekistan border. Once the world’s fourth-largest lake, the Aral has been shrinking for decades.

Lake Baikal, in southeastern Siberia, is the world’s largest freshwater lake by volume. It holds about 20 percent of all the freshwater on Earth. With a maximum depth of more than 1 mile (0.6 km), Lake Baikal is also the deepest lake in the world.

The dry climate forces many people in Central Asia to depend heavily on the region’s two major rivers, the Syr Dar’ya and the Amu Dar’ya. The rivers flow from mountains across deserts and are used for irrigation. In Siberia, four great rivers—the Ob’, the Irtysh, the Yenisey, and the Lena—flow north to empty into the Arctic Ocean. They are among the world’s largest river systems. The north-flowing Siberian rivers flood vast areas in the spring. Temperatures are warmer where the rivers begin in the south than at their mouths in the north. Ice in the north blocks the rivers from emptying into the Arctic Ocean, resulting in floods.

Unlike other main Siberian rivers, the Amur River drains eastward. Some of it forms the border between Russia and China. Affected by summer winds, the Amur river valley is warmer than the rest of Siberia. It is Siberia’s main food-producing area.

***Citing Text Evidence*** What type of terrain is common in Siberia, Central Asia, and the Caucasus region?

**Natural Resources**

***Which natural resources of Siberia, Central Asia, and the Caucasus are economically important?***

Siberia holds some of the greatest wealth in natural resources on Earth. The Caucasus is also rich in natural resources. Central Asia is rich in natural resources too, but the area has little water.

**Vast Forests**

Siberia’s vast taiga contains about 20 percent of all the world’s trees. The economic value of this resource is limited, however. One reason is that a lack of roads makes logging in the region difficult. Another is that most of the taiga’s trees are larch, one of the few species that will grow on permafrost. Because the quality of larch wood is poor, it is not in demand. Central Asia has few trees because of the arid climate. Parts of the Caucasus are forested. Oak and other **deciduous** trees are found in some lowlands and at lower mountain elevations. Higher in the mountains, pine, fir, and other coniferous trees grow.

**Energy and Mineral Resources**

All three regions are important producers of oil and natural gas. Fields in the tundra and taiga of Siberia’s Ob’ River basin make Russia a major provider of these fuels. The Central Siberian Plateau supplies most of Russia’s coal. Other huge coal deposits exist in the Lena River valley in southeast Siberia. These areas are so remote, however, that most of their resources remain untapped. Eastern Siberia also holds most of Russia’s gold, lead, and iron ore. The tundra region near the mouth of the Yenisey River is one of the world’s leading producers of nickel and platinum.

Important oil and gas resources are found in Kazakhstan, Uzbekistan, and Turkmenistan in Central Asia. Large coal deposits are present in Kazakhstan, Tajikistan, and Uzbekistan. Kazakhstan is a major producer of uranium. The mountains of Tajikistan and Kyrgyzstan contain rich mineral resources, as do the eastern mountain areas of Kazakhstan and Uzbekistan. Gold, mercury, copper, iron, tin, lead, zinc, and other metals are mined there.

Most of the Central Asian countries have harnessed their rivers, especially in mountain areas, to produce electricity. The same is true of the Caucasus region, which does not have the rich energy resources of Siberia or Central Asia. Only Azerbaijan is a major oil and gas producer, mainly from the fields near or in the Caspian Sea.

***Identifying*** Which three resources are economically important in all three regions?

**Lesson 1 Review**

**Reviewing Vocabulary**

**1.** How does the *permafrost* affect the geography of Siberian Russia?

**Answering the Guiding Questions**

**2.*Identifying*** What countries make up the Caucasus region and Central Asia?

**3. *Identifying*** Where are Siberia’s lowlands and mountains?

**4. Identifying** What geographic feature separates the Caucasus and Central Asia?

**5.*Analyzing*** Why are so many of Siberia’s vast resources undeveloped?

**6. *Informative/Explanatory Writing*** Write a paragraph to answer the question: How do you think climate affects the way people of the regions make a living?