

## B. Great Lakes of the World

### Background

A lake is a large inland body of water. A river may feed into a lake and a river may flow out of it. The Great Rift Valley of East Africa has several lakes and rivers running through it. There are lakes on most continents and most of them contain fresh water. Lakes are often important sources of water for irrigation and hydroelectric power, as well as transportation and recreation.

### Asia: Caspian Sea and Aral Sea

The Caspian Sea actually lies between Europe and Asia, in the area known as Eurasia. The Caspian borders the countries of Russia, Kazakhstan, Turkmenistan, Iran, and Azerbaijan. It is the world's largest inland sea, spanning 143,000 square miles (370,368 sq. km), and has no natural outlets to the ocean; a canal links the Caspian Sea to the Black Sea. The sea lies 92 feet (28 m) below sea level and is fed by rivers such as the Volga. In recent years, the sea has been shrinking because water is being drawn off the rivers that feed it for use in irrigation. The Caspian Sea is used for fishing, especially in the northern regions, and is an important source of oil and natural gas.

The Aral Sea is bordered by Uzbekistan to the south and Kazakhstan to the north. The Aral Sea was once the world's fourth-largest lake. However, in recent years, it, too, has been shrinking due to diversion of the rivers that feed it to irrigate fields devoted to cotton production. In fact, it has shrunk by more than 40% since the 1960s. This has caused the water in the sea to become highly saline,

killing large numbers of fish. The area around the sea is also heavily polluted and the population suffers from high rates of cancer, tuberculosis, and other infectious diseases. The Aral Sea is a good example of how human behavior can cause profound changes in nature. It can be taught as a cautionary tale.

## Africa: Victoria, Tanganyika, and Chad

Lake Victoria is the second-largest freshwater lake in the world, second only to Lake Superior in North America. Victoria is the largest lake on the African continent at 26,828 square miles (69,484 sq. km). It borders Tanzania, Uganda, and Kenya in eastern central Africa. It is also known as Victoria Nyanza, its Bantu name. The lake was named after Queen Victoria of Britain by British explorer John Hanning Speke, the first European to reach it. It is the chief source of the Nile River and is in a depression between the Eastern and Western Rift Valleys in East Africa. The lake contains more than 200 species of fish. The completion of the Owens Falls Dam on the Nile raised the level of Lake Victoria and is an important source of hydroelectric power.

Lake Tanganyika [tan-gan-YEEK-ah] is the second-largest freshwater lake on the African continent and is the longest (420 miles or 676 km) and second-deepest (4,700 feet or 1,433 m) lake in the world. It borders Tanzania, the Democratic Republic of the Congo (formerly Zaire), and Burundi. It is also part of the Great Rift Valley system in East Africa. Farmers grow rice and other crops along the shores of the lake. Animals who live around the lake include hippopotamuses and crocodiles.

Lake Chad is a shallow freshwater lake that borders the countries of Chad, Nigeria, Cameroon, and Niger. It has no outlets and is sometimes referred to as a “drowned prairie” because it is extremely shallow, with a large number of islands covered in grasses dotting its surface. In fact, Lake Chad is so shallow that it is in danger of drying up completely! Fishing is an important industry on Lake Chad, and a number of significant archeological discoveries have been made in the surrounding area.

## North America: The Great Lakes

Lake Superior is bordered by Canada to the north and east, and the states of Minnesota to the west and Wisconsin and Michigan to the south. It is the largest body of freshwater in the world, with a surface area of 31,700 square miles (82,103 sq. km), and is the largest of the North American Great Lakes. Some 200 rivers drain into the lake and it is a part of the St. Lawrence and Great Lakes Waterway. As such, it is a major transportation route. However, some parts freeze in winter, which limits its transportation season to about eight months. The shores around the lake are sparsely populated and as a result, it is the least polluted of the Great Lakes. The lake is a popular recreation and fishing area. However, the introduction of foreign species, particularly the sea lamprey, as a result of the ships that travel the lake, resulted in a serious decline in native fish populations. Scientists are now attempting to control the growth of foreign fish populations with chemicals that will not affect native species. Henry Wadsworth Longfellow’s famous poem “The Song of Hiawatha” begins: “By the shore of Gitche Gumee, / By the shining Big-Sea-Water, / At the doorway of his wigwam, / In the pleasant Summer morning, / Hiawatha stood and waited.” The name Gitchee Gumee was derived from a Native American name for the lake, which means something like “big water.”

Lake Huron is the second-largest North American Great Lake (23,000 square miles or 59,570 sq. km) and is bordered by Canada to the north and east and the state of Michigan to the south and west. It is also part of the St. Lawrence and Great Lakes Waterway and is connected on its western side to Lake Superior by the St. Mary's River and the Soo Canals, and to Lake Michigan by the Strait of Mackinac. Fishing and lumbering are important economic activities, and the lake is used extensively for commercial transportation. However, as with Lake Superior, areas often freeze in the winter, limiting the shipping season to about eight months.

Lake Michigan is the third-largest Great Lake and the largest freshwater lake located entirely within the United States. The lake covers about 22,300 square miles (57,757 sq. km) and is bordered by Michigan to the north and east, Wisconsin to the west, Illinois to the southwest, and Indiana to the southeast. It is part of the St. Lawrence and Great Lakes Waterway, and the Chicago River links the lake to the Mississippi River and, via the river, the Gulf of Mexico. Chicago and Milwaukee are important ports.

Although the *Sequence* only lists Superior, Huron, and Michigan, you may also wish to teach the other two Great Lakes. They are briefly described below.

Lake Erie is the fourth-largest of the five Great Lakes. It is named for Erie Indians who once lived along its shores. Lake Erie forms the boundary between Canada and the United States (specifically, the states of Michigan, Ohio, Pennsylvania, and New York). It covers 9,910 square miles (25,667 sq. km). The lake lets out at its eastern end through the Niagara River. The water descends at Niagara Falls as part of its journey from Lake Erie to Lake Ontario. During the War of 1812, U.S. commodore Oliver H. Perry defeated a British squadron on Lake Erie and secured the Northwest for the United States. The Erie Canal, which students study in American history for this grade, connects Lake Erie with the Hudson River and the Atlantic Ocean. Today the steel industry depends upon the movement of iron ore and limestone across the Great Lakes to ports on Lake Erie, including Cleveland. The lake became badly polluted in the 1960s but has since improved.

Lake Ontario is the smallest of the Great Lakes. It covers 7,550 square miles (19,554 sq. km) and is fed by water from the Niagara River. The lake was explored by the French but came into British control after the French and Indian War. The name Ontario comes from an Iroquois word meaning either "beautiful lake" or "sparkling water." The climate along the lake's shores is appropriate for fruit growing and the region is a major producer of apples, pears, plums, peaches, and cherries.

## South America: Maracaibo and Titicaca

Lake Maracaibo [mare-uh-KAI-bow] is a large body of water in South America and is located in Venezuela. Experts disagree on whether Maracaibo should be considered a sea or a lake because of its connection via a strait to the Gulf of Venezuela on the Caribbean Sea. The water in the southern portion of the lake is fresh, but the part of the lake closer to the ocean is brackish.

The lake contains rich oilfields and is suffering from pollution from oil spills. Fishing is another major industry. A large portion (approximately 12%) of the lake's surface is now covered with a plant called duckweed. Despite efforts by the government to eradicate the weed, it reproduces so rapidly that the cleanup can barely keep pace with the new growth. Although the plant doesn't appear to harm marine life in the lake, it may become a hazard to fishing boats and other vessels that use the lake for transportation.

Lake Titicaca [tee-tee-KAH-kah] is bordered by Peru and Bolivia. It is the largest freshwater lake in South America, and, if Maracaibo is considered a sea, it is the largest lake in South America. Located in the Andes Mountains, it is the world's highest large lake and is an important transportation route between Peru and Bolivia. Located more than 2.37 miles (3.8 km) above sea level, Lake Titicaca is the highest navigable lake in the world. Powered boats steam across the lake carrying passengers and freight. But Lake Titicaca is also home to ancient boats made of reeds by indigenous people called the Uru who predate the Inca. The Uru live in marshlands on platforms also made of reeds they harvest from the lake.