1. Introduction
In Chapter 3, you learned how people in the Fertile Crescent began farming and living in small villages. In this chapter, you'll see how small Neolithic villages grew into large, complex cities. These villages were located in a land of rolling hills and low plains called Mesopotamia (meh-suh-puh-TAY-mee-uh). This land is in modern-day Iraq. *Mesopotamia* is a Greek word that means the “land between the rivers.” These two main rivers of the Fertile Crescent are the Tigris (TIE-gruhs) River and the Euphrates (yuh-FRAY-teez) River. Cities first appeared in the southern part of this land.

The earliest cities in this area date back to about 3500 B.C.E. These first cities were like small, independent countries. They each had their own ruler, as well as their own farmland which provided food. Suppose that you were visiting one of these early cities. You would see a walled settlement surrounded by farmland used to supply food for the city. You would see strong city walls built of sunbaked bricks. Moats, or ditches filled with water, would surround these walls and help keep out enemies. During an attack, people living outside the city walls would flee inside for protection.

As you gazed at the city, you might wonder how it came to be built. Why didn't people in Mesopotamia go on living in small villages, as their ancestors had done for thousands of years? Why did large city-states grow in the “land between the rivers”? In this chapter, you'll find out.
It was not easy to live in the part of the Fertile Crescent called Mesopotamia. The northern part was hilly and received rain. The southern part had low plains, or flat land. The sun beat down fiercely on the plains between the Tigris River and the Euphrates River. There was little rain. The Mesopotamians were farmers, and their farms needed water. The rivers brought water to the plains in flood season, but for most of the year the soil was hard and dry.

On the plains, building materials were difficult to find. There were plenty of reeds (weeds that grow near rivers). But there were few trees to provide wood. Even stones were scarce. And there were few natural barriers to keep out enemies.

Mesopotamians faced four major problems as they tried to survive in this environment:

• food shortages in the hills
• an uncontrolled water supply on the plains
• difficulties in building and maintaining systems that provided water across village boundaries
• attacks by neighboring communities

Over time, Mesopotamians found solutions to these four problems. Let's explore how their solutions led to the building of some of the first cities in the world.

3. Food Shortages in the Hills
You learned in the last chapter that, in Neolithic times, people in some areas of the world began farming. The rolling foothills of the Zagros (ZAH-grihs) Mountains in northern Mesopotamia was one of these areas.
Mild weather and plentiful rains made the foothills a good place to farm. The wooded hills provided timber for building shelters. There were plenty of stones in the hills for toolmaking. Over several thousand years, these good conditions allowed the number of people in Mesopotamia to grow dramatically. Then problems arose. Some historians believe that by 5000 B.C.E., farmers in the Zagros foothills did not have enough land to grow food for the increasing population. As a result, villages began to suffer from food shortages.

Below the foothills and to the south, the Euphrates and Tigris rivers ran through flat plains. The plains covered a large area of land, and few people lived there. During most of the year, the land was very hard and dry. And the plains lacked trees and stones for making shelters and tools.

Yet, the plains held promise, too. In the spring, both of the rivers flooded, bringing precious water to the land. Perhaps farms could be successful there.

Driven by the need to grow food, people moved out of the foothills and onto the plains. This region became known as Sumer (SOO-mer), and its people, the Sumerians.

4. Uncontrolled Water Supply in the River Valley

The farmers who moved to Sumer faced many challenges. One of the biggest problems was the uncontrolled water supply.

During the spring, rain and melted snow from the mountains flowed into the Tigris and Euphrates rivers, causing them to flood across the plains. But no one could be sure exactly when the floods would come. If it happened after farmers planted their crops, the young plants would be washed away.

For much of the rest of the year, the sunbaked soil was dry and hard as stone. Hot, strong winds blew thick layers of dust across the ground.

Faced with such dramatic seasonal changes, farmers had to constantly struggle to raise crops. They had either too little or too much water. To grow food, they needed a way to control the water so they would have a reliable water supply all year round.
Therefore, Sumerian farmers began to create **irrigation** systems for their fields. They built **levees** along the sides of the river to prevent flooding. When the land was dry, the farmers poked holes in the levees. The water flowed through the holes and into the thirsty fields.

Over time, the Sumerians learned other ways to control the supply of water. They dug canals to shape the paths the water took. They also constructed dams along the river to block the water and force it to collect in pools they had built. These pools, or reservoirs, stored the water for later use.

### 5. Building and Maintaining a Complex Irrigation System

Irrigation systems provided enough water for Sumerian farmers to grow plenty of food. But a new problem arose: how to maintain the irrigation system across village boundaries. The irrigation system passed through a number of villages as it carried water from the river to the fields. The system needed constant care and repair. Canals became clogged with **silt**, so farmers had to clean them regularly. One clogged canal could disrupt the entire system.

Since villages were connected for miles around by these canals, farmers could no longer live apart, or in small groups. They had to work together for the common good.

Gradually, villages came to depend on one another to build and maintain this complex irrigation system. People who lived in different villages may have worked together to clear the silt from the canals to keep them open. Workers may have scooped water from one reservoir into another to ensure that water levels were balanced. As the Sumerians worked together, they began to create larger communities. Between 3500 and 3000 B.C.E., villages grew into towns. Some towns in Sumer became cities with populations as large as several thousand people.

### 6. Attacks by Neighboring Communities
As Sumerian cities grew, they fought over the right to use more water. Sometimes, people in cities located upriver (closer to where the river begins) built new canals or blocked other cities' canals. In this way, they kept water from reaching the cities that were downriver (farther from where the river begins). Disputes over water became so intense that they often led to bloodshed. The Sumerians looked for ways to protect their cities from neighboring communities. The plains provided no natural barriers. There were no mountain ranges or rushing rivers to keep out enemies. The Sumerians began to build strong walls around their cities. They constructed the walls out of mud bricks that were baked in the sun until hard. The Sumerians also dug moats outside city walls to help prevent enemies from entering their cities. Most people lived in houses within the walled cities, but the farms lay outside. In case of attack, farmers fled the fields for safety inside the city walls. The walled cities of Sumer were like independent countries. Historians call them city-states. By about 3000 B.C.E., most Sumerians lived in city-states.

7. From Small Farming Villages to Large City-States
As you've seen, beginning around 3500 B.C.E., the Sumerians progressed from living in small farming villages to building large, walled cities. How and why did this happen? The answer lies not only in the problems the Sumerians faced, but also in their solutions. A basic challenge for any group of people is how to provide food for itself. Food shortages had forced settlers in Mesopotamia to move from the foothills down to the river valley. There, farmers faced the problem of having either too much water or too little.

To control the water supply, Sumerians built a complex irrigation system. The system crossed village boundaries, so the Sumerians had to cooperate with one another. This led them to live in larger communities—the first cities. These city-states were like independent countries. Often, they fought with one another. To defend themselves, the Sumerians built walls and dug moats around their cities. By 3000 B.C.E., the solutions to the challenges faced by the Sumerians had transformed Sumerian farming villages into walled city-states.

In this chapter, you have learned how geographic challenges led to the rise of city-states in Mesopotamia.

**Food Shortages in the Hills** A shortage of food forced people to move from the foothills of the Zagros Mountains to the plains between the Tigris and Euphrates rivers. This plains area became Sumer.

**Controlling Water Supply on the Plains** Farmers in Sumer faced times of flooding and drought. They built irrigation systems to create a steady water supply. Maintaining these complex systems required cooperation among villages.

**From Farming Villages to City-States** As villages grew into towns and cities, some became large city-states with protective walls around them.