

Chapter 3

From Hunters and Gatherers to Farmers

How did the development of agriculture change daily life in the Neolithic Age?

3.1 Introduction

Scientists have identified and studied five important groups of hominids. Like the hominids before them, early modern humans hunted and gathered their food. In this chapter, you'll read about how early people learned, over thousands of years, to produce food by farming.

Humans discovered farming toward the end of the Stone Age. This period gets its name from the stone tools prehistoric people made and used. Historians divide the Stone Age into two periods. The first is the Paleolithic Age, or Old Stone Age. During this period, people got food by roaming from place to place to hunt wild animals and gather nuts, berries, and seeds from the plants they found.

By about 8000 B.C.E., some people had learned how to raise animals and crops for food. This knowledge **enabled** these people, for the first time, to live in one place. The Neolithic Age, or New Stone Age, had begun.

This gradual shift from hunter-gatherers (food collectors) to farmers (food producers) is one of the most important advances in human development. People built permanent shelters. They settled in larger communities. Together, they produced what they needed. People developed new skills and made a variety of things that improved the quality of their lives. Over time, they also began to exchange goods with people in other communities for the things they lacked in their own villages. In this chapter, you will explore the many ways in which the development of farming changed human life.

◀ Gradually, over thousands of years, hunter-gatherers became farmers.



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This prehistoric cave painting in northern Africa shows people herding animals. This ability marked a major change in how people lived.

Paleolithic Age the first period of the Stone Age, called the Old Stone Age, from about 2 million years ago to around 8000 B.C.E.

Neolithic Age the later part of the Stone Age, called the New Stone Age, lasted from around 8000 B.C.E. to 3000 B.C.E.

Fertile Crescent an arc-shaped region in Southwest Asia, with rich soil

Catal Hoyuk a Neolithic town discovered in central Turkey

Most people in the Neolithic Age settled in fertile areas near sources of water.

3.2 From Old Stone Age to New Stone Age

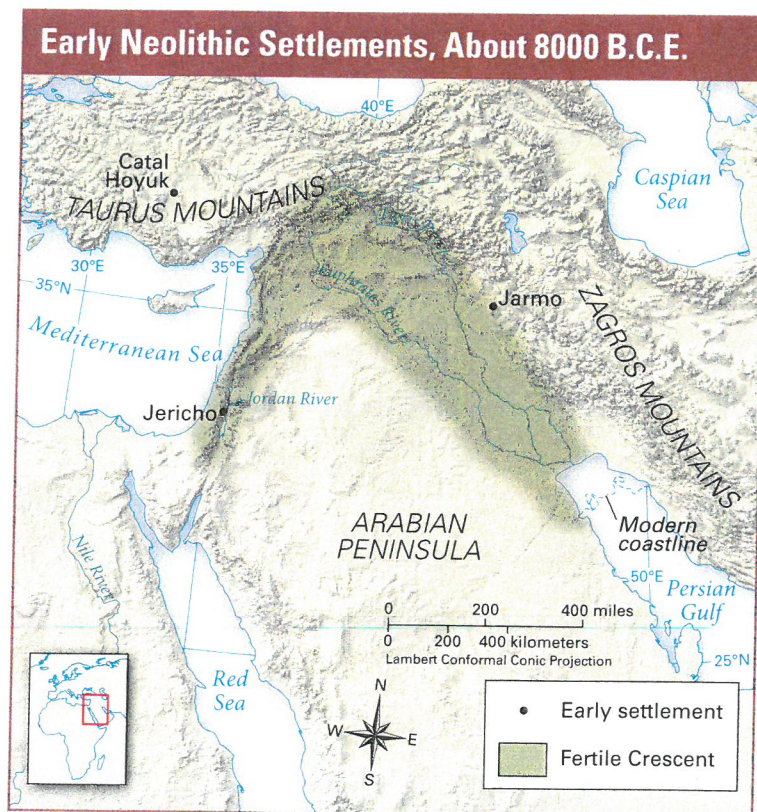
The Old Stone Age, or **Paleolithic Age**, began about 2 million years ago, with the first toolmaking hominids, and lasted until about 8000 B.C.E. It was during this time period that early modern humans developed. Like the hominids before them, early humans were hunter-gatherers. They wandered from place to place, hunting animals and gathering plants for food. Often, they took shelter in caves. Prehistoric cave painters left clues about their way of life.

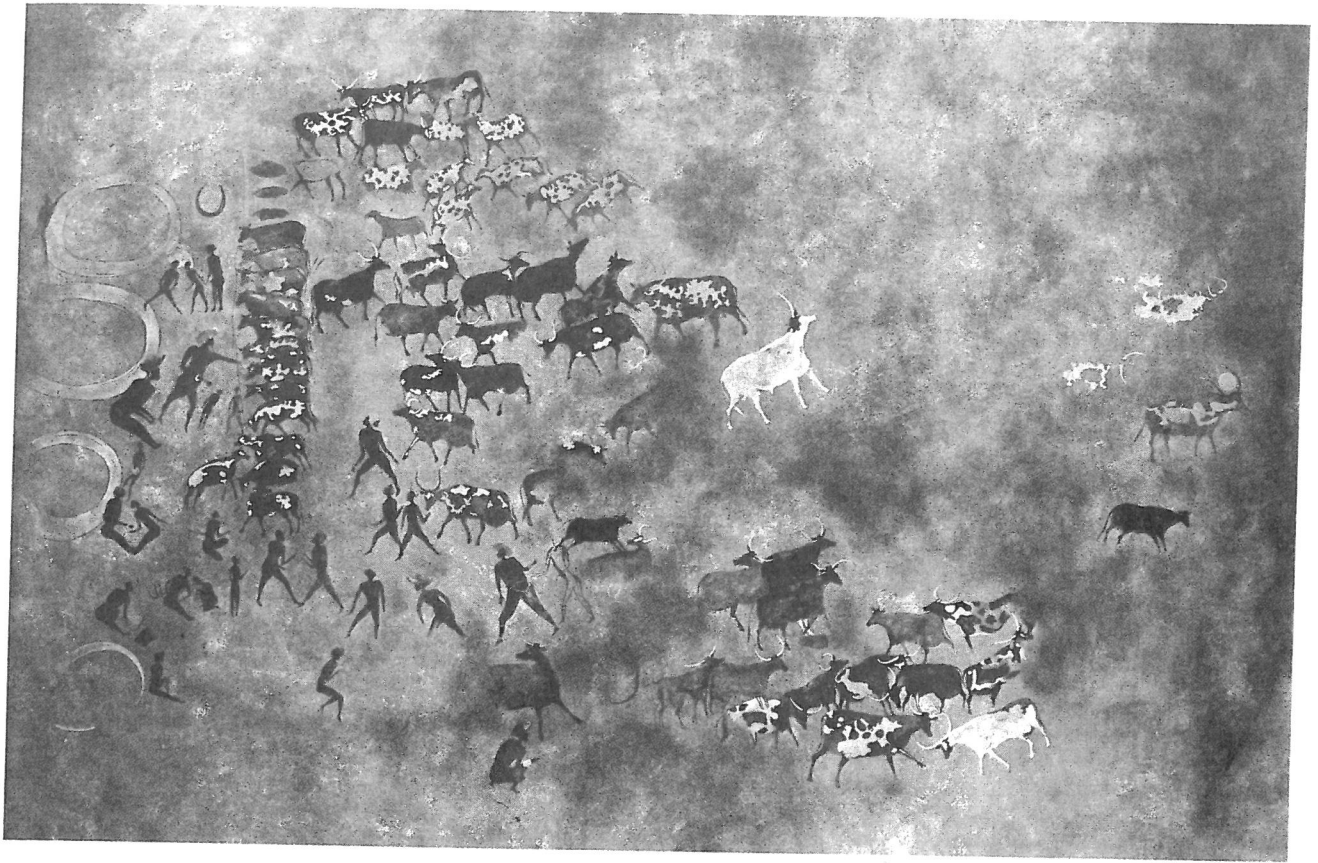
The New Stone Age, or **Neolithic Age**, began when people started to farm and produce their own food. The discovery of farming did not happen all at once. Over thousands of years, people gradually learned to raise animals and plant crops. They eventually began to rely on these farms for their food. Now, rather than having to roam long distances in search of things to eat, people could settle down in one place.

The Neolithic Age began around 8000 B.C.E. and lasted until about 3000 B.C.E., when people learned to make tools out of metal instead of stone. During this time, farming developed in many places throughout the world, including parts of Europe, Africa, Asia, and the Americas.

Many Neolithic settlements were located in the **Fertile Crescent**, east of the Mediterranean Sea, where the land was fertile (good for growing crops). Here, people built towns such as Jericho (JER-ih-koh), **Catal Hoyuk** (CHAHT-ul hoo-YOOK), and Jarmo (see map).

People in settlements like these lived very different lives from earlier hunter-gatherers. They could now concern themselves with other matters such as building permanent shelters and forming larger communities. They could make better tools and clothing. And they could swap items they had with other communities to get the things they lacked. As you will see, these changes made life safer, more comfortable, and more interesting.





3.3 Creating a Stable Food Supply

During the Paleolithic Age, people obtained food by hunting animals and gathering plants. They did not have a stable, or dependable, food supply. Wild plants and animals grew scarce when people stayed in one area for too long. And hunting was dangerous. Hunters were often injured or killed.

Gradually, people found ways to lessen their dependence on hunting and gathering. Instead of gathering wild plants, people discovered that they could plant seeds and harvest crops. Over time, farmers learned which seeds produced the most crops in the areas where they lived.

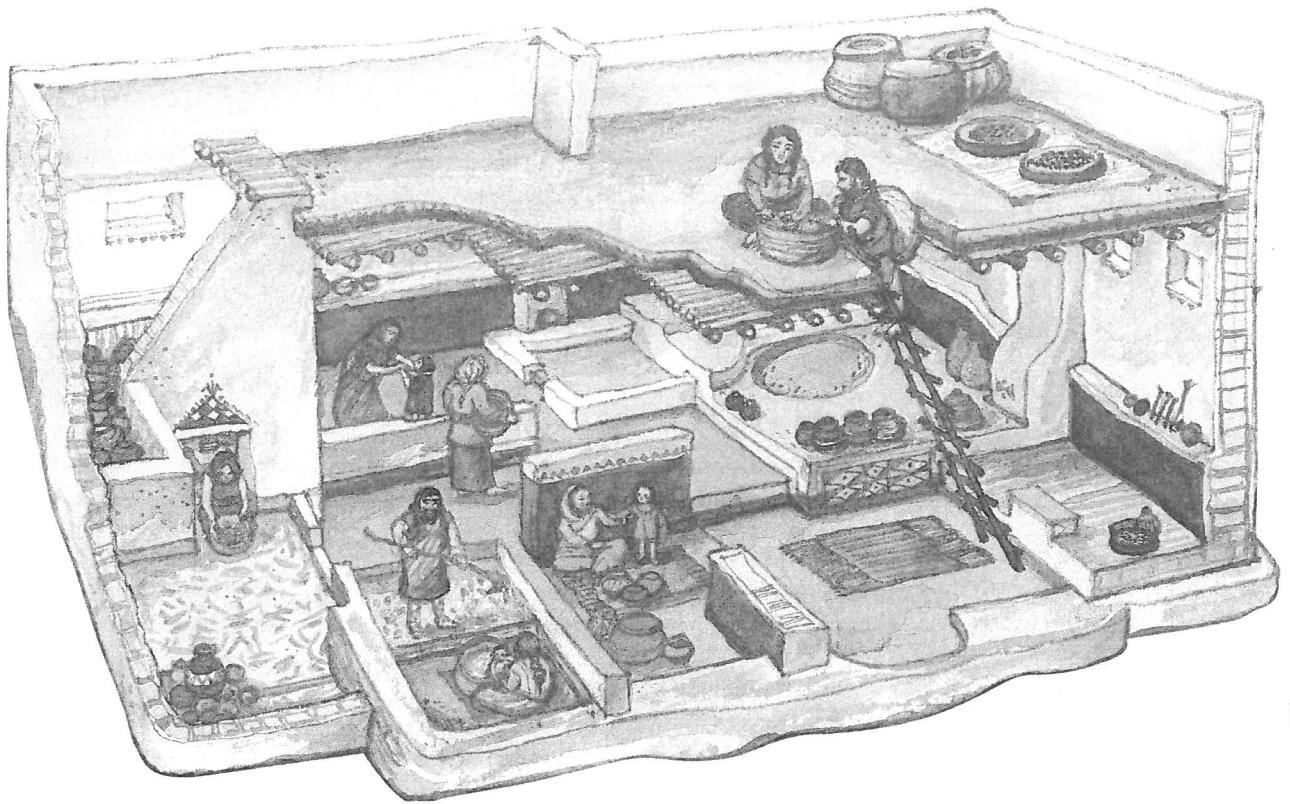
Early farmers also learned how to **domesticate** animals, to raise and use them for people's needs. They raised sheep, goats, and cattle for the meat. Goats and cattle also provided milk. Mules helped carry heavy loads and pull plows.

These two developments—the growing of crops and the domestication of animals—are called **agriculture**. The Neolithic Age began with the invention of agriculture. For the first time, people had some control over their food supply. Let's explore why this change was one of the most important advances in all of history.

In this Neolithic painting, herdsmen work with cattle.

domesticate to train a wild animal to be useful to humans

agriculture the business of farming; growing crops and raising animals



Neolithic houses made of packed mud helped people stay warm in winter and cool in summer.

nomad one who moves from place to place with no permanent home

3.4 Making Permanent Shelters

The first great change agriculture brought about was the use of permanent shelters. During the Paleolithic Age, people had lived in caves or rough, tentlike structures. These were **temporary** shelters because hunter-gatherers were **nomads**. They had to move often, to follow the wild animal herds or to find new plants to eat. As people settled down to farm during the Neolithic Age, they built shelters that were more permanent.

In many areas, people used mud bricks, packed together, to build houses that were round or **rectangular** in shape. Sometimes, people added stones and tree branches to the mud to strengthen the walls and roof. These houses had openings high in the walls. Historians believe that people may have climbed ladders to reach the openings and enter the house.

Inside were several rooms. Places to store food were built right into the floor. Pits for cooking were also dug into the floor, and lined with clay. People may have filled the pits with water, dropping in hot stones to make the water boil for cooking.

The development of permanent shelters was important in several ways. Houses gave people protection from harsh weather and wild animals. Houses made life more comfortable. People could cook food in new ways. The long-lasting shelters enabled people to settle together in larger communities.

3.5 Establishing Communities

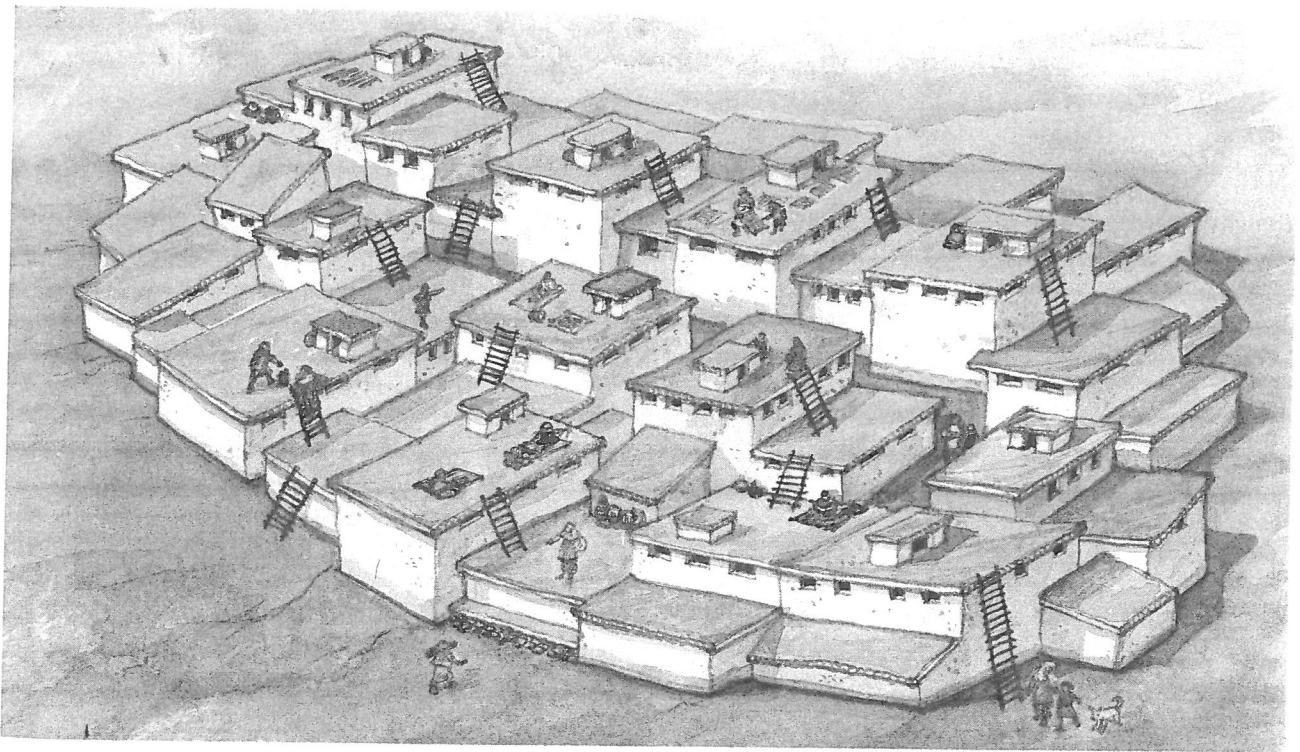
The ability to raise food by farming allowed people to settle in permanent shelters. These structures, in turn, enabled people to form larger communities. In Paleolithic times, small bands of perhaps 20 to 60 people wandered from place to place in search of food. As people began growing food, they settled down near their farms. As a result, towns and villages grew up, like those at Jericho (in present-day Israel) and Catal Hoyuk (Turkey).

Living in communities made it possible for people to organize themselves more **efficiently**. They could divide up the work of producing food and other things they needed. While some people grew crops, others built houses and made tools.

Village dwellers also learned to cooperate to do a task more quickly. For example, toolmakers could share the work of making stone axes and knife blades. By working together, they could make more tools in the same amount of time.

With many of their basic needs now met, people had more time and energy for other activities. They could invent new ways of making their lives more comfortable and much safer. Larger communities could defend themselves more easily against their enemies. The Neolithic town of Jericho, for example, was protected by strong stone walls. All of these changes in farming villages led to growing populations.

Neolithic villages were the first real communities. People were able to cooperate as they worked and defended their homes.





The Granger Collection, New York

People in Neolithic communities had the time and the tools to create works of art.

3.6 Developing New Jobs

Having a stable food supply allowed people to develop new kinds of jobs. In Paleolithic times, people's main job was finding enough food to survive. With farms providing steadier supplies of food, Neolithic people could develop more specialized skills.

A good example is the town of Catal Hoyuk, which dates back to about 6000 B.C.E. Historians believe that the townspeople of Catal Hoyuk worked in a variety of jobs. Besides farmers, there were weavers, basket makers, toolmakers, and traders.

Focusing on one job at a time gave people the opportunity to improve the ways they worked. In Catal Hoyuk, farmers learned how to grow more than 14 kinds of food plants. Clothing makers developed a way to spin and weave. They wove natural fibers such as wool and linen into comfortable cloth. In some regions, people mined flint so that stoneworkers could create sharper tools.

Neolithic people didn't merely want to survive. They wanted to make themselves, and their surroundings, more beautiful. They decorated their pottery and baskets with geometric shapes. Stoneworkers learned to polish stones to make shiny jewelry and mirrors. House builders added special rooms to honor the gods and goddesses they believed in.

One effect of the development of different jobs was to inspire workers to improve their skills. This led to newer and better ways of doing things. And different jobs added much greater variety to community life.

3.7 Beginning to Trade

Another **major** change introduced in Neolithic times was the growth of **trade**. Paleolithic hunter-gatherers rarely traded with other groups. They were mostly concerned with the **animals**, **plants**, and other **resources** they found nearby. As people settled in towns and villages, trade became a more common activity.

Usually, people trade to get resources they do not have in their own area. As Neolithic people became more skilled in their crafts, they wanted materials that would improve the strength and beauty of the things they made. Getting those resources became the job of traders.

Traders often traveled hundreds of miles in search of these materials. They crossed mountains on foot, rode donkeys across deserts, and sailed the Mediterranean Sea on ships.

What kinds of things were traders looking for? Popular items included **flint** and **obsidian**. Obsidian is a black glass found at volcanic mountains. Craftspersons used it to make knife blades, arrowheads, and mirrors. People also traded for “beauty products” like shell ornaments and a red ore called *hematite*. Women rubbed hematite on their lips and cheeks to make them redder.

The growth of trade allowed people to make use of more resources. It also brought them into contact with people from distant places. These contacts helped spread ideas and knowledge throughout the ancient world.

trade the business of buying and selling or exchanging items

resource something that can be used to fulfill a need



This hand ax is made from obsidian. Neolithic traders in the Mediterranean region prized this resource. It was found mostly in the area that is now Turkey.

Chapter Summary

In this chapter, you learned how the development of farming changed people's lives between the Paleolithic Age and the Neolithic Age.

A Stable Food Supply During the Paleolithic Age, people lived as nomads, obtaining their food by hunting animals and gathering plants. Gradually, people discovered they could grow crops and domesticate animals. These two developments are called agriculture. Agriculture marked the beginning of the Neolithic Age.

Shelters and Communities As people began to farm, they built permanent shelters and formed communities. Towns and villages grew up near farms.

Jobs and Trade Living in communities allowed people to improve how they lived and worked. They created new jobs and traded for the resources they needed.

Chapter 4

The Rise of Sumerian City-States

How did geographic challenges lead to the rise of city-states in Mesopotamia?

4.1 Introduction

Early people who lived 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.

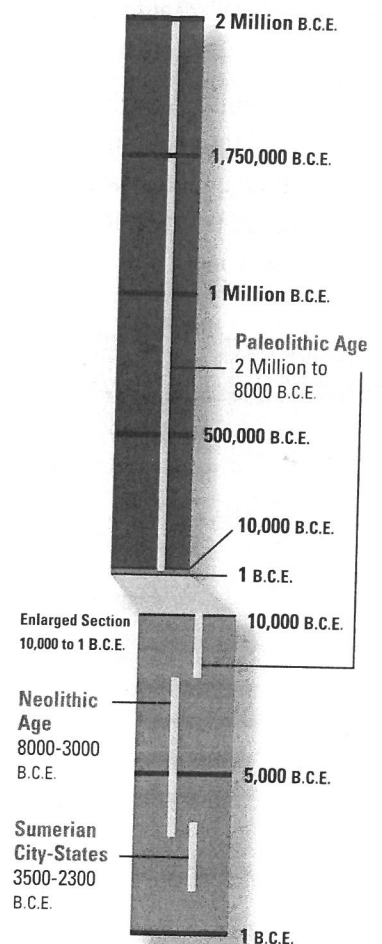
These villages were located in a land of rolling hills and low plains called Mesopotamia (meh-suh-puh-TAY-mee-uh). This land is in modern-day Iraq. *Mesopotamia* is a Greek word that means the "land between the rivers." The two main rivers of the Fertile Crescent are the Tigris (TIE-gruhs) River and 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.

◀ These ruins in the Syrian Desert reveal an ancient Sumerian walled city.

From Caves to City-States



Mesopotamia in ancient times, the geographic area located between the Tigris and Euphrates rivers

Tigris River one of the two largest rivers in Southwest Asia that flow from the mountains in Turkey to the Persian Gulf

Euphrates River one of the two largest rivers in Southwest Asia that flow from mountains in Turkey to the Persian Gulf

Geographic features such as the climate, the Zagros Mountains, and the Tigris and Euphrates rivers affected where people settled in Mesopotamia.

4.2 Mesopotamia: A Difficult Environment

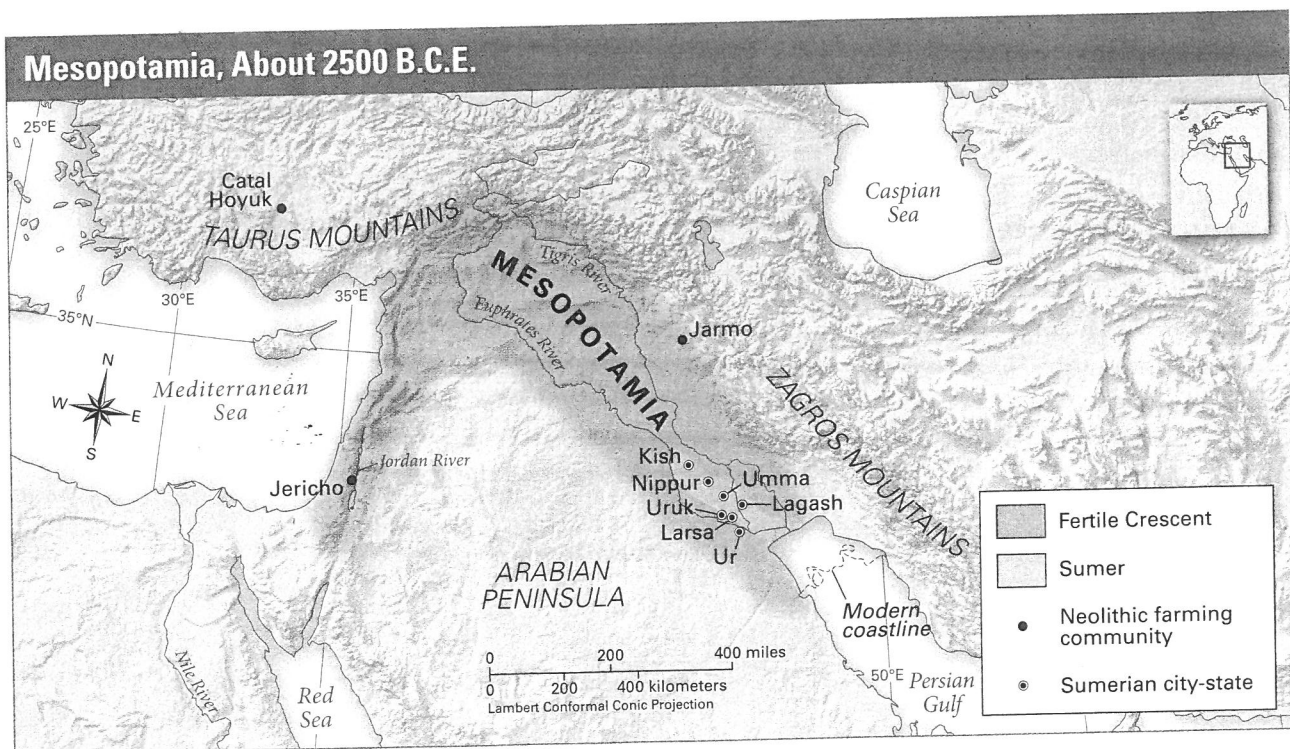
It was not easy to live in the part of the Fertile Crescent called **Mesopotamia**. The northern part was hilly and received rain. The southern part had low plains, or flat land. The sun beat down fiercely on the plains between the **Tigris River** and the **Euphrates River**. There was little rain. 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.

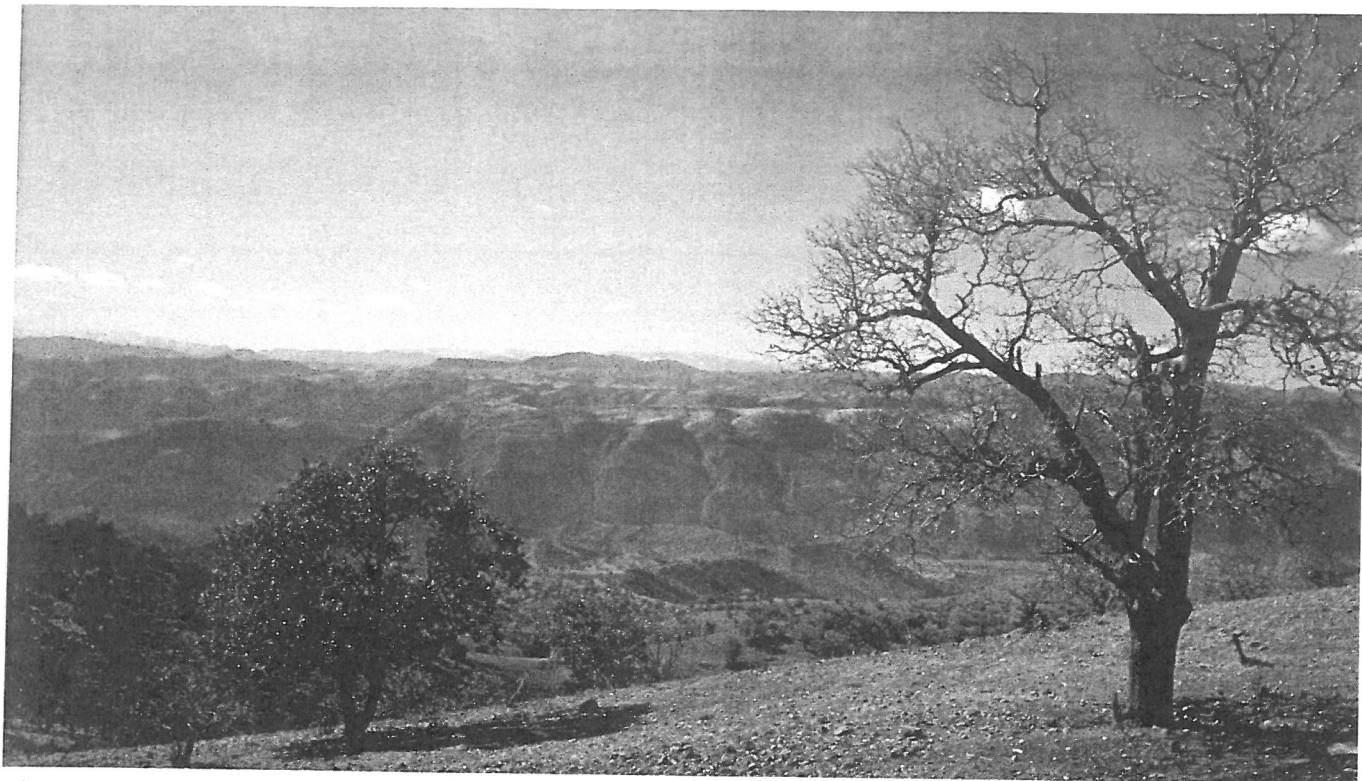
On the plains, building **materials** were difficult to find. There were plenty of reeds (weeds that grow near rivers). But there were few trees to provide wood. Even stones were scarce. And there were few natural barriers to keep out enemies.

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.





4.3 Food Shortages in the Hills

In Neolithic times, people in some areas of the world began farming. One of the areas that had good conditions for growing crops was the rolling foothills of the Zagros (ZAH-grihs) Mountains in northern Mesopotamia.

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.

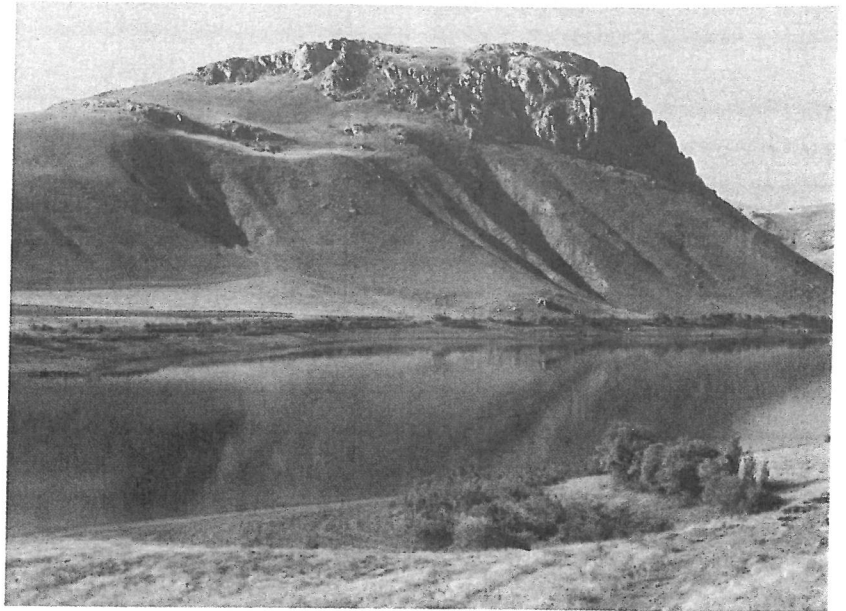
Yet, the plains held promise, too. In the spring, both of the rivers flooded, bringing precious water to the land. Perhaps farms could be successful there.

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.

The Zagros foothills were an ideal place to farm.

Sumer an area in southern Mesopotamia, where cities first appeared

The Euphrates is the longest river in Southwest Asia.



4.4 An 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.

irrigation a means of supplying land with water

levee a wall of earth built to prevent a river from flooding its banks

4.5 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.

silt fine particles of rock

The Euphrates River still irrigates fields in Iraq today.





A stele (STEE-lee) is an upright slab of stone inscribed with letters and pictures to depict important events. This part of the Stele of the Vultures, which was found in Iraq, shows an attacking army.

city-state an early city that was like a small, independent country with its own laws and government

4.6 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.

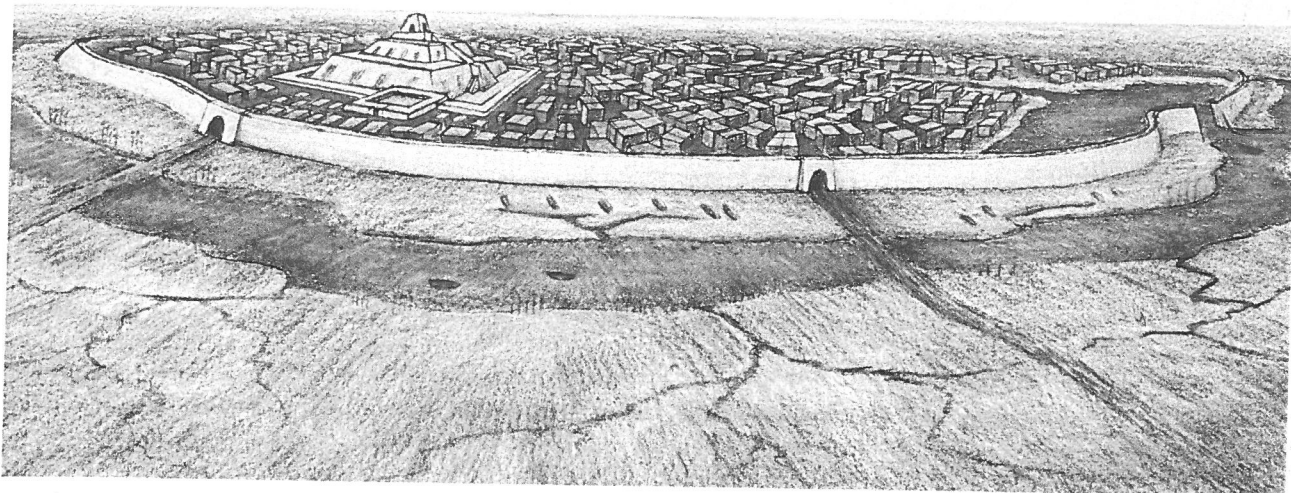
The Sumerians looked for ways to protect their cities from neighboring communities. The plains provided no natural barriers. There were no mountain ranges or rushing rivers to keep out enemies. The Sumerians began to build strong walls around their cities. They constructed the walls out of mud bricks 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.

4.7 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.

A Sumerian city-state was like a tiny country. Its surrounding walls helped protect the city against enemies.

Chapter Summary

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 the 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.