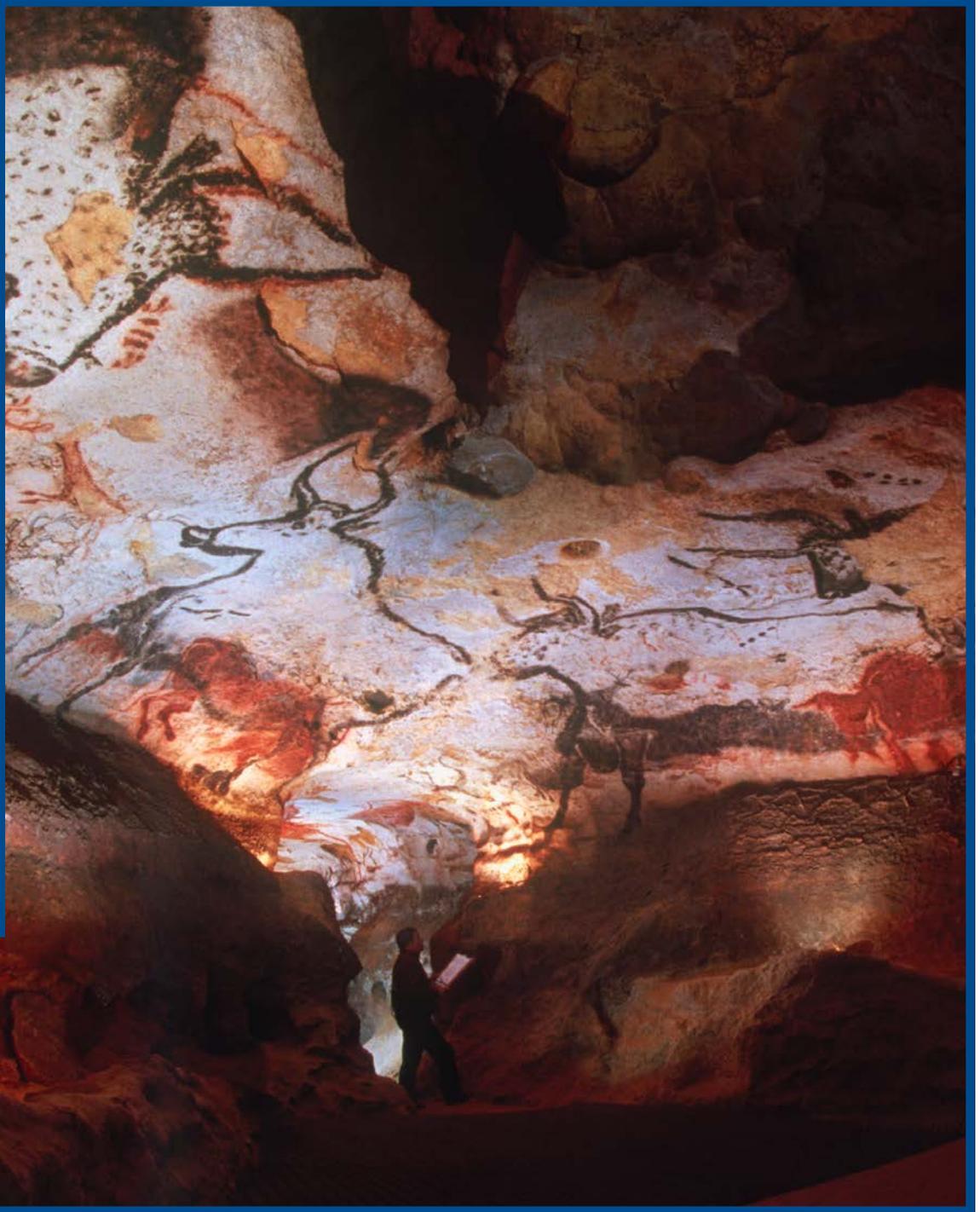


6

History-Social
Science Standard
6.1.2.



Paleolithic People: Adapting to Change

California Education and the Environment Initiative

Approved by the California State Board of Education, 2010

The Education and the Environment Initiative Curriculum is a cooperative endeavor of the following entities:

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California Natural Resources Agency
California State Board of Education
California Department of Education
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Office of Education and the Environment

1001 I Street • Sacramento, California 95814 • (916) 341-6769
<http://www.CaliforniaEEI.org>

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California Connections: Waves of Migration



Humans have been migrating across the globe for tens of thousands of years. Some people migrate to a place for a short time. They may move somewhere for a winter or summer season. Others move somewhere once and stay. Still others migrate many times during their lives.

If you live in California today, chances are that you, your parents, or your grandparents were born somewhere else. Your family may have migrated here from another state or another country. They may have come here in the 1950s, 1960s, 1970s, or even more recently.

In 2008, there were more people living in California than in any other state. Our state has many different kinds of people. It is the most diverse population in the country. There are over 200 languages spoken and read by the people who live here. Some of these languages are very old. They were the first languages used by the California Indians, who still speak them today.

Migration Mysteries

When did people first migrate to our state? Where did they come from? Who were they? Scientists look for these answers by studying bones and objects that people used long ago. They try to learn as much as they can from the past to solve the mystery of who the first Californians were, and how they came to live here.

We know now that the first humans lived in Africa. Many thousands of years ago, they began to migrate. They first moved into Asia around 50,000–75,000 years ago. Later, some groups of people moved to the Middle East and settled there. Other groups kept moving. Some of these people made it to Australia. Five thousand years later, people settled in Europe and Siberia. When did people first come to the Americas? How did they get here? No one knows for sure.



Sign at border welcoming drivers to California



Sailing out of San Francisco

For many years, scientists thought there was only one way that humans could have reached the Americas; by walking from Asia across a bridge of land. This “bridge” appeared about 13,000 years ago. It formed when there were many glaciers, and the sea level was low. It was so low that new land was uncovered. This land connected Asia to Alaska at a place now known as the Bering Strait. After making the crossing, humans moved south. They hunted new animals and gathered strange new plants. Over the years, they populated many new areas.

Reading the Fossil Record

In the last few years, scientists have begun to tell a new migration story. Fossil evidence shows that humans were living in the Americas earlier than first thought. Scientists recently found ancient human bones in Chile. Their discovery showed that humans were in South America around the same time the land bridge appeared. How could the people walk from the

Bering Strait to Chile so fast? This is one of the questions scientists could not answer. They began to wonder if humans migrated in boats, as well as on foot.

Are California Indians related to these early travelers? Did they migrate to California from Asia? There is some evidence that they did, but no one really knows. When the Russians and Spanish arrived on the West coast almost 500 years ago, they were greeted by diverse groups of people. These people had been living in California for thousands of years. They spoke many different languages that could be traced to an ancient past.

A few people from Spain settled in California in the 1700s. Some of them lived and worked in the Spanish missions. Others worked in and around the Spanish forts. Mexico gained independence from Spain in the early 1800s. After that, many Mexican and United States citizens migrated to California. They built large ranchos and farms. These people ranched and farmed the beautiful coastal areas and fertile inland valleys.



Abandoned farm, Owens Valley, California

The United States entered the Great Depression in the 1930s, when the stock market and the economy “crashed.” One-third of all Americans could not find work. Farmers in the middle of the country also struggled. It was hard to make a living. In certain areas, crops withered and nothing new would grow. Soil dried and blew away in dangerous dust storms.

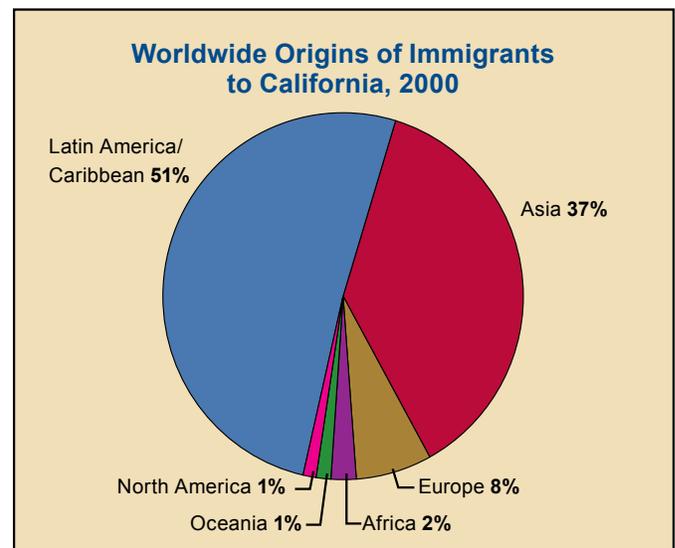
The first large wave of migration to California happened in 1849 and 1850. These were the years of the Gold Rush. Thousands of people came to California from other parts of the country and from all over the world. Most of them wanted to find gold. Others came to start businesses. Still others came to build roads and towns. Most of these people stayed and made California their permanent home.

The plains of the Midwest became known as the “Dust Bowl.”

When the farmers and others who could not find work heard about life in California, they wanted to move. Almost 400,000 people from the Midwest and eastern United States left their homes during that time. They came to work in the orchards and fields. This was the second big wave of migration to California.

Moving to the Golden State

After California became part of the United States in 1850, people from Asia again migrated to the west coast of North America. Some had come during the Gold Rush, but most came during the 1860’s. They were looking for jobs and to start their own businesses. Many of these people worked in mines, for railroad companies, and in the agricultural industry. Others worked in the fishing industry. In the cities, many Chinese and Japanese people owned shops, restaurants, and hotels.





Chinese immigrants arriving in San Francisco, 1877

In the 1940s, World War II brought more people to California. The government built several military bases throughout the state. Soldiers came from all over the country. They trained and lived on the bases. Some of them brought their families with them. California companies also were also busy during the war. Thousands of women and men came to work in factories that built ships, weapons, and manufactured supplies for the troops.

By that time, the entertainment business had also made its home in California. Actors, musicians, and comics migrated to Hollywood. They hoped to be “discovered” and to become stars in film and television, or as recording artists. Of course, all of these entertainers did not become famous. Many of them found other jobs, bought homes, and made new lives in our state.

Endless Waves

Migration has continued—non-stop—since World War II. More than two million people have moved to California in the last ten years alone. People came to design and build rockets for the aerospace industry. They came to design software or to build computers. Some came to drill for oil or gas; others to find new forms of energy from the Sun and wind. Some people came to build houses and schools. Many people came to work in agriculture. People came to California for every reason you can imagine. They migrated here, and most of them stayed.

California’s climate, rich soil, vast forests, mineral deposits, grasslands, and stunning natural beauty have drawn humans to this land for thousands of years. People will continue to migrate here, and to enjoy the state’s rich natural resources. In a way, California’s people have also become an important resource. Our combined experience, knowledge, and wisdom are worth more than gold. This valuable diversity can help us meet challenges and seize opportunities, now and in the future.

Paleolithic Events Timeline

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Key: MYA = million years ago, BCE = before the common era, CE = common era

Geological (Earth) Events	Anthropological (Human) Events
<p>1.8 MYA – The Pleistocene epoch begins.</p> <p>450,000 BCE–200,000 BCE – During several warm periods at least two massive floods and rising sea levels cut the British Isles off from the European continent.</p> <p>186,000 BCE – The polar ice advances about this time.</p> <p>125,000 BCE–90,000 BCE – A long period of warming takes place. Severe droughts affect areas of eastern Africa over this period.</p> <p>74,000 BCE – A major volcanic eruption occurs in Sumatra, causing global temperatures to drop; an ice age follows.</p> <p>48,000 BCE–44,000 BCE – In Australia, about 85% of the land-dwelling animals over 100 pounds go extinct. Some 55 species die off including the 230-pound flightless “thunder bird” called <i>Genyornis</i>.</p>	<p>2.5 MYA – The Paleolithic period begins. <i>Homo habilis</i>, living in eastern Africa, make the first stone tools.</p> <p>1.7 MYA–420,000 BCE – Several migrations of early humans out of Africa to Asia and Europe took place over this period (<i>Homo erectus</i>).</p> <p>300,000–125,000 BCE – <i>Homo neanderthalensis</i> migrate all across Europe, the Middle East, and western and central Asia, but not into present-day Britain.</p> <p>150,000 BCE–80,000 BCE – A large migration of humans (<i>Homo sapiens</i>) from Africa to the Middle East, Asia, and Europe took place over this period. They meet Neanderthal peoples already living in these areas.</p> <p>70,000 BCE – Human population shrinks—possibly below 2,000—in eastern Africa.</p> <p>65,000 BCE – <i>Homo sapiens</i> continue to migrate out of Africa and settle along the coast of the Indian subcontinent and Southeast Asia.</p> <p>60,000 BCE – Humans are living on the British Isles.</p> <p>53,000 BCE–50,000 BCE – Humans migrate to Australia. It is believed that they came in boats from Indonesia and southern China.</p>

Paleolithic Events Timeline

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Geological (Earth) Events	Anthropological (Human) Events
<p>43,000 BCE – Two different species of mammoth go extinct about this time.</p> <p>30,000 BCE – The last major glacial period in the Pleistocene begins and lasts almost 10,000 years.</p> <p>18,000 BCE – Glaciation during the last Ice Age reaches its maximum. A mile-high glacier covers the area of present-day Connecticut; on present-day Manhattan Island, the ice is a half-mile thick. Ice covers most of North America and northern Europe. In the Southern Hemisphere, there is ice in Australia, New Zealand, and southern South America. Sea levels fall by 350 feet.</p> <p>16,000 BCE – The glaciers in North America from present-day New Jersey to present-day Seattle begin to recede.</p>	<p>40,000 BCE – The earliest evidence of humans using personal ornaments (jewelry) appears about this time.</p> <p>38,000 BCE – Humans migrate to Europe from central Asia and the Middle East, in two waves that began about this time.</p> <p>35,000 BCE – The Late Paleolithic period begins. Humans create symbols of themselves and the animals around them (art) and record time.</p> <p>31,000 BCE – Humans are making regular trips to the islands in Southeast Asia. Humans are living in South America (present-day Chile).</p> <p>28,000 BCE – Humans are living in Siberia, 300 miles north of the Arctic Circle.</p> <p>22,000 BCE–18,000 BCE – People cross the Atlantic from the Iberian peninsula and settle in eastern North America.</p> <p>19,000 BCE–16,000 BCE – Humans are living in the areas of present-day Pennsylvania, Virginia, and South Carolina on the East Coast of North America.</p> <p>16,000 BCE – Humans cross the Bering Land Bridge for the first time, and move south.</p>

Paleolithic Events Timeline

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Geological (Earth) Events	Anthropological (Human) Events
<p>15,000 BCE – The coast of present-day San Francisco extends out six miles past the Farallon Islands. The northern Channel Islands off present-day Santa Barbara are connected with one another, but not with mainland of present-day California.</p> <p>12,000 BCE–11,000 BCE – Glacial melting raises the sea levels 300 feet, flooding the lands between present-day Alaska and Siberia, putting the land bridge under the Bering Sea. Earth warms and temperate forests appear.</p> <p>11,000 BCE – Wildfires break out across the present-day United States and Canada after an extraterrestrial object, roughly a kilometer across, grazes Earth.</p> <p>10,900 BCE – A mass extinction of large animals occurs in present-day North America, including the mastodon, the mammoth, and the saber-toothed cat.</p> <p>10,700 BCE – Melting glaciers in present-day northeastern Canada put 2,000 cubic miles of fresh water in the Atlantic. The temperature of the water in the North Atlantic drops, and as a result, the temperatures in Greenland drop by 18° F.</p> <p>10,500 BCE – The climate of Earth abruptly warms by another 20° F or more. The ice all over the world melts down rapidly.</p> <p>8,000 BCE – The Holocene epoch begins.</p>	<p>15,000 BCE – Humans are now living on every continent except Antarctica.</p> <p>13,000 BCE – Another migration of humans occurs from present-day Siberia, over the Bering Land Bridge, and then southward into the Americas.</p> <p>12,000 BCE–10,000 BCE – Humans are living in the midwestern part of North America, possibly the descendants of ice age hunters who populated the eastern coast of North America then migrated west.</p> <p>9,000 BCE – The Neolithic period, or New Stone Age, begins. Humans begin to practice agriculture. The world’s human population reaches 5 million at this time.</p>

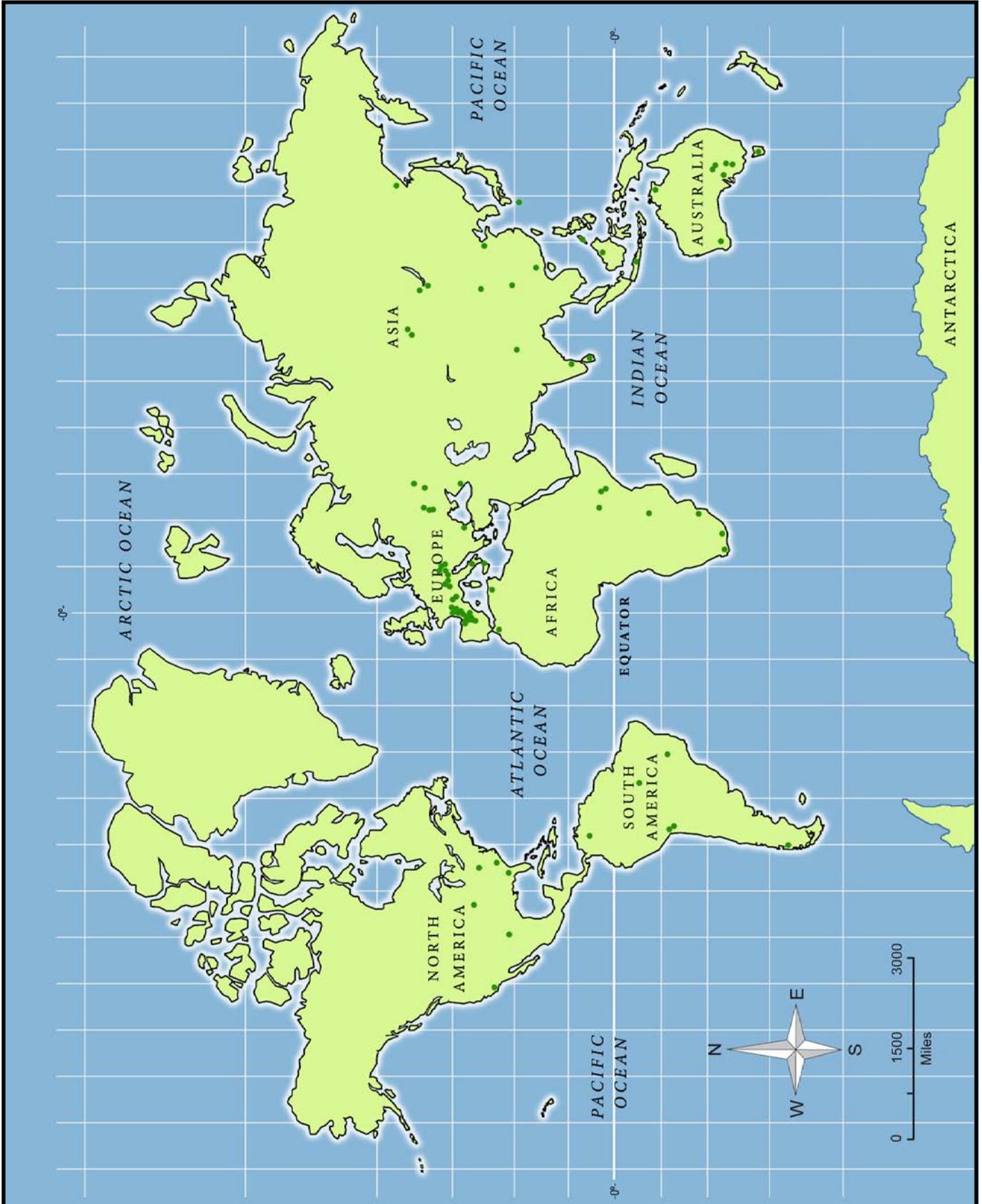
Early/Lower Paleolithic Settlements

Lesson 2



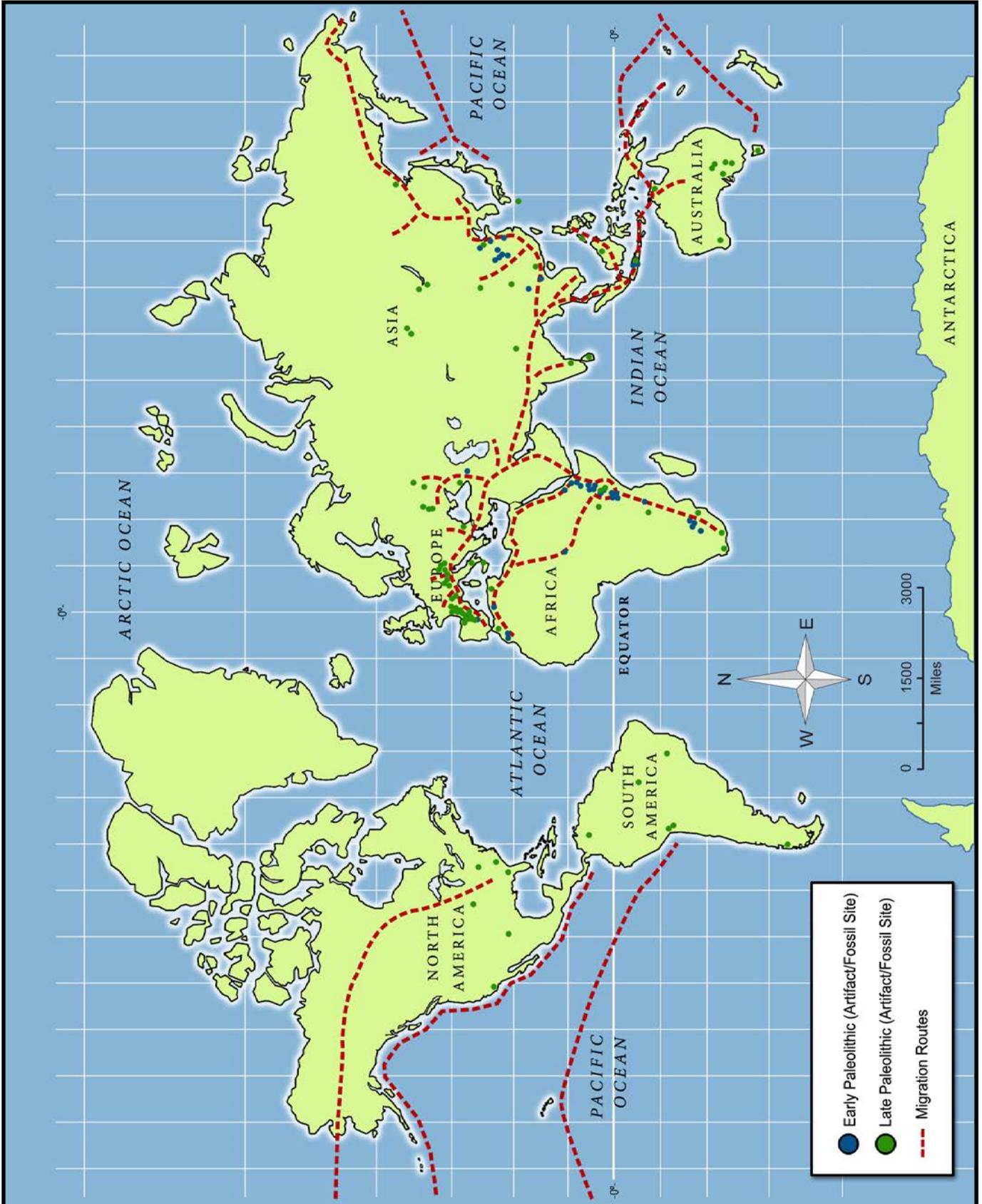
Late/Upper Paleolithic Settlements

Lesson 2



Paleolithic Migration Routes and Settlements

Lesson 2



Late Paleolithic People of East Africa



Location: Wadi Kubbania (modern day Egypt, at Aswan)

Dates: approximately 17,000–15,000 years ago

During the Late Paleolithic, sand from the Egyptian deserts created large sand dunes. In the area of Wadi Kubbania, water from the Nile River flooded the area. The sand dunes trapped the water from the river, along with fish and plants, creating a lake.

The people of this area lived in two places depending on the season. They lived either at the top of the sand dunes, or in the bottom of the lake once it had dried up. When the water from the Nile River filled up the lake, the people moved to the top of the sand dunes. The Nile River floods every year around September. The lake bed would be almost dry around February.

The people of Wadi Kubbania adapted to this flooding cycle by moving from the lake bed to the sand every year, which means they did

not build permanent houses and had different food sources throughout the year.

When the lake was full, it had many fish in it, including catfish. The catfish were trapped in this lake, so the people harvested them easily. Archaeologists have found evidence that the people stored fish by drying them so they could eat them later. Birds were also available to the people of this area. In the winter, they migrated away from the drying lake. The people of Wadi Kubbania used snares, a kind of trap, to hunt them.



Hartebeest, gazelles, and zebras in East Africa

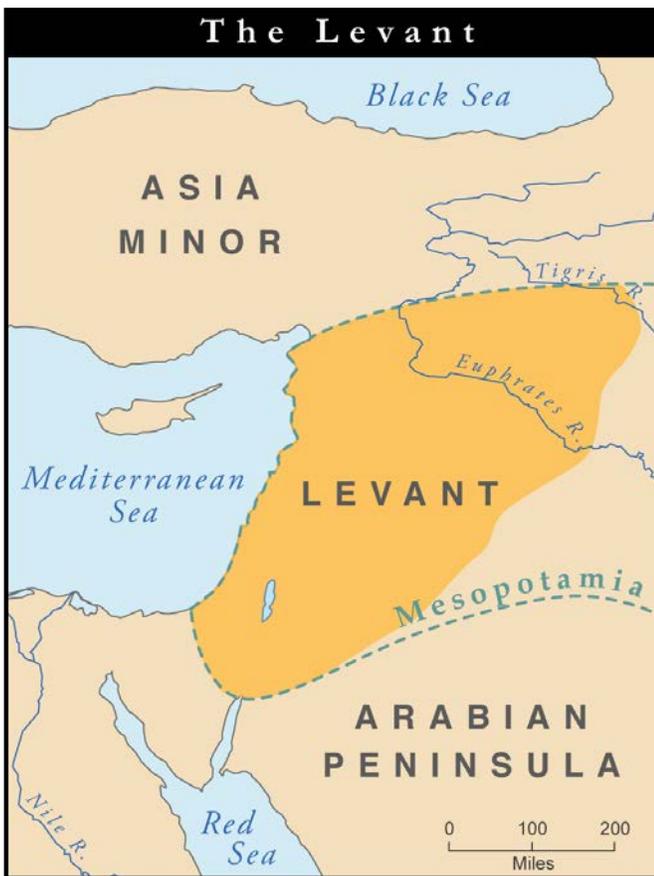
In the late winter, spring, and early summer, the people moved to the dried lake bed, where they would often find large animals who had come there looking for water. Archaeologists have found remains of hartebeest, auroch, and gazelle in the dry lakebed. Some bones of hippopotamus have been found as well!

The people also gathered plants from their surrounding areas once covered by the lake's water. They ate a lot of tubers, which are plant parts like potatoes, that grow underground. Other plants gathered and used by the people of Wadi Kubaniya were chamomile (we use it to make tea now), purple nut grass, and fruits from palm trees (which we call "dates" today). Many of these plants were ground up

or prepared. Archeologists have found many grinding stones in this area. The stones were used to crush the plants before eating.

The people in this area created their stone tools from chert, a stone found in this region. Chert is a hard, sedimentary rock with a waxy texture. It forms in the deep sea where deposits of tiny shells come together under a lot of pressure. If hit with enough force, chert breaks into large, flat flakes, which are perfect for cutting and scraping. Another interesting thing about chert is that when hit against steel, chert gives off sparks which can be used to start fires. Some of the tools these people made were used for hunting and fishing. Other tools were used for collecting and grinding up plants.

Late Paleolithic People of the Middle East



Location: The Levant (modern day Lebanon, Israel, Palestine, Syria, and Jordan)

Dates: approximately 12,000–10,200 years ago

The people that settled in the Levant region had a relatively “mild” climate all year round. The area was a Mediterranean woodland (oak, pine, and pistachio trees). In the high mountains were subalpine forests. More fossils of plants were found in this area than in other areas.

Scientific evidence indicates that during this period the Levant region was rich in natural resources. Archaeologists, therefore, think that the people who lived in this area only needed to travel short distances to find food, water and the other resources that they needed. So, unlike other cultures of the Late Paleolithic, these people were relatively sedentary—which means they did not move as much during the year as the people of other regions.

The people in the Levant made stone tools out of flint, a stone that they could find in large quantities in the local area. The people of this region built shelters with stone walls. Roofs were most likely made of mud or thatch (made of plant stems). Groups of families may have lived together in groups of huts.

Most of the people lived near the Euphrates River. The people probably used fish nets and fish hooks to catch fish from the river. Along



Prehistoric stone spear heads

the floodplain lived pig, deer, and aurochs (wild cattle). All of these were used as food sources. Nearby was a woodland area, where people could hunt gazelle and onager. Archaeologists have found many spears with stone spear heads. These were tools used by these people to hunt. Gazelles migrated through the Levant in large numbers in April and May. The people built walled structures with one door, similar to the “corrals” we use today. As a herd of gazelle migrated through, people drove the animals toward the walled areas and forced them inside the structure, making them easier to hunt. People probably dried and smoked or salted the meat and stored it for later use.

The people of the Levant had access to wild wheat, rye, and barley growing in this area. Archaeologists think the people ate more wheat and rye than barley. This may have been because barley grains are harder to remove from the husk of the plant.

Archaeologists have found stone grinding tools that might have been used to pound seeds. There is evidence that these people used small earthen pits to store seeds to eat at a later date. Other plant remains found at this site include plants from the marsh areas around the Euphrates River, grapes, lentils, and hackberries.

The people gathered seeds April through July, fruits from September through October, tubers (like potatoes) throughout the year, and leaves and stems in the spring and summer. They probably hunted animals all year round.

This culture really benefitted from the mild climate year round. It is in this area that archeologists think the first agricultural (farming) communities began in the Neolithic period.



Wild wheat

Late Paleolithic People of Eastern Europe



Location: The Ukraine (modern day Poland, Romania, Belarus, and the country of the Ukraine)

Dates: approximately 15,000 years ago

The Ukraine was very close to enormous ice sheets, so, the climate was extremely cold all year long. Stone breaks easily in very cold temperatures, so these people made tools out of bone, ivory (from mammoth tusks), and antlers of animals, such as deer. The people also used animal hair and skin (hides) to make tools.

About 20,000 years ago, the people of the Ukraine began to make tools to make other tools. For example, they made tools that would straighten pieces of wood and ivory. This helped them make spears that flew straight. These spears made it easier to hunt large animals from a distance.

Archaeologists think that the Ukrainian Paleolithic people might have used skis, snowshoes, and even sleds. They used these to move over the snow and transport food they had hunted or gathered. They hunted small animals, like rabbits, with traps and snares. Paleolithic people in the Ukraine had

natural “freezers” to store their food! They could bury food in the ground to preserve it for later.

Archaeologists have found stones in this area that are sharpened on one side. They were probably used as knives to carve meat and remove animal skins. Scientists have also found awls, used to make a hole in hides (animal skin). They have even found bone and ivory needles for sewing hides into clothing. The earliest arrow points have been found in this area by archaeologists, meaning the Ukraine people were the first ones to develop a new hunting weapon—the bow and arrow.

Late Paleolithic People of Eastern Europe

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Since the Ukraine was very cold, the people relied on fire and clothing made from hides and fur to keep them warm. They built their homes out of bones and hides. This was because very little wood was available. Why? Trees cannot grow in such cold temperatures. In the winter, the people used these shelters and hunted large animals, such as reindeer, musk ox, mammoth, and woolly rhinoceros. In the spring and summer, they probably migrated. They may have followed the animals that migrated north, such as the reindeer.

Over thousands of years, the people of the Ukraine had adapted to dealing with the cold climate. They lived in river valleys on slopes facing south. South-facing slopes receive more sunlight than slopes facing north. Trees could grow and water flowed in these warmer areas. The people could gather nuts, berries, fungi, seeds, fish, and waterfowl, such as ducks. In the later Ukrainian cultures, archaeologists have found bone harpoons and fish hooks used to catch fish. Bison bones have been found at the bottom of steep cliffs. Archaeologists believe the hunters' technique was to drive the animals over the edge to their deaths. Then the meat, hide, and bones of the animals were harvested by other clan members who were waiting at the bottom of the cliffs.



Magdalenean Era needles and awls



Woolly mammoth



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