

**Unit 1**

# **Land from the Sea**



## Word Study

As you read, find the following words. Write the definitions here. If you have trouble finding the words or their definitions, look in the glossary at the back of your workbook.

Continental drift \_\_\_\_\_

Continental plate \_\_\_\_\_

Dormant \_\_\_\_\_

En route \_\_\_\_\_

Erosion (erode) \_\_\_\_\_

Escarpment \_\_\_\_\_

Extinct \_\_\_\_\_

Geology \_\_\_\_\_

Ice age \_\_\_\_\_

*Lingua franca* \_\_\_\_\_

Paleo-Indians \_\_\_\_\_

Pangaea \_\_\_\_\_

Plate tectonics \_\_\_\_\_

Rain shadow \_\_\_\_\_

Reformation \_\_\_\_\_

Renaissance \_\_\_\_\_

Riprap \_\_\_\_\_

Strait \_\_\_\_\_

# Unit 1 Land from the Sea

For this is what the LORD says—he who created the heavens, he is God;  
he who fashioned and made the earth, he founded it;  
he did not create it to be empty,  
but formed it to be inhabited—he says:  
“I am the LORD, and there is no other.” Isaiah 45:18



On the third day, God separated land from water.

## The Third Day

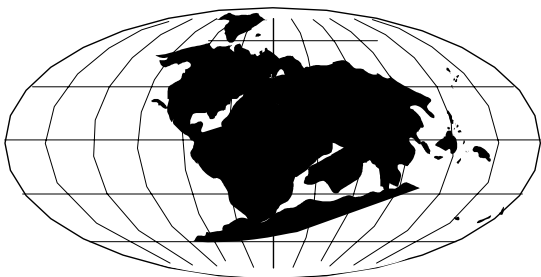
In the beginning of everything we can know or imagine, God spoke our world into existence. Genesis chapter one tells the story. John’s Gospel expands it when he tells us that Christ, the Son, made all things.

Some scientists think the world began with a “big bang.” If so, such a bang did not take place by accident. God spoke and things happened! (See Genesis 1:1-2.) Genesis also tells us that God used a process when He created our world. At first God’s Spirit hovered or brooded like a mother hen over a shapeless mass. Water covered everything. Water vapor and fog filled the atmosphere. Then God began systematically to create order.

On the third day of creation God separated land from water. That act began many changes in our earth’s surface. *Geology* (jee-OL-u-jee) explores what happened when God spoke—and what has continued to happen as a result.

When God separated the land from the water, perhaps all the land was clumped together in one place. Scientists call such a landmass *Pangaea* (pan-JEE-uh). Perhaps the various continents broke off and gradually drifted away from one another. Scientists call this process *continental drift*. Look at a map of the world and you will see that some of the continents look as though they fit together like puzzle pieces.

If the continental drift theory is true, our world may have once looked like this.



## Plate Tectonics

It may have worked this way: A hot mass of melted mineral and rock, or *magma*, forms the center of our world. The surface of this mass has cooled, hardened, and broken into several pieces called plates. Continents ride on the plates and oceans flow over them. Plates drift apart or bump together; the land on top moves with them. This theory is called *plate tectonics* (tek-TAW-niks). According to this theory, Oregon sits on the edge of a *continental plate*. When plates collide, slide under one another, or drift apart many *volcanoes* (vol-KAY-nose) and earthquakes occur. Volcanoes played a major role in shaping Oregon as we know it today.

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Fill in the blanks with the correct answers.

1. On the third day of creation God separated \_\_\_\_\_ from \_\_\_\_\_.

2. Geology is the study of earth's \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.
3. Continental drift happened when land broke loose and \_\_\_\_\_ away from \_\_\_\_\_.
4. According to the \_\_\_\_\_ theory, continents ride on plates. These plates float on \_\_\_\_\_, the earth's molten core.
5. \_\_\_\_\_ played a large part in shaping the land in Oregon.

## Two Islands

Geologists divide Oregon into nine areas, according to the kinds of rocks they find. We begin Oregon's story by discovering some geological facts about our land.

As God worked, interesting things happened. At first ocean waters flowed over much of the area where we now live. Then volcanoes began to erupt and create islands.

As their plates moved, sometimes islands collided with the land. When the islands' plates slid under the continent's plate, the islands became part of the continent. The Klamath Mountains in southwestern Oregon and the Blue Mountains in northeastern Oregon may have once been two such islands. In these two areas, scientists find stone they think is the oldest in Oregon. Pioneer miners found gold in both areas.

In the Blue Mountain region you might wish to see fossils of leaves and animals at the John Day Fossil Beds National Monument. The Klamath Mountain area includes some of the world's most beautiful coastal scenery. Interesting places to see include Cape Blanco (BLAHN-co), the westernmost point in Oregon, Oregon Caves, and upper and lower Table Rocks north of Medford.

## Basin and Range Area—Owyhee Uplands

The Basin and Range area of central and eastern Oregon contains steep-walled valleys that open northward. Warner Valley, Catlow Valley, and the Alvord Desert are such valleys. Water from the Basin and Range area has no direct route to the sea.

During the *ice age*, many lakes covered this area. Abert Lake and Summer Lake remain as fragments of larger lakes. The highest point, Steens Mountain, runs northwesterly for 50 miles. Sheer (e-SCARP-ments), or steep cliffs, carved by *erosion* (e-RO-zyun) and glaciers, rise abruptly from valley floors. (See map on page p. 69)

Owyhee (oh-WIE-hee) uplands occupy Malheur (MAL-hyoor) County and extend into Idaho. Rock formations here resemble those in the Basin and Range territory.

*Indian Sands State Park south of Gold Beach, Oregon  
(photo by Dennis Matchette)*





An obsidian flow inside Newberry Crater (photo by Dennis Matchette)

Scientists often group these two areas together. Interesting places to visit in this part of Oregon include Jordan Craters in Malheur County, Steens Mountain, and Owyhee State Park.

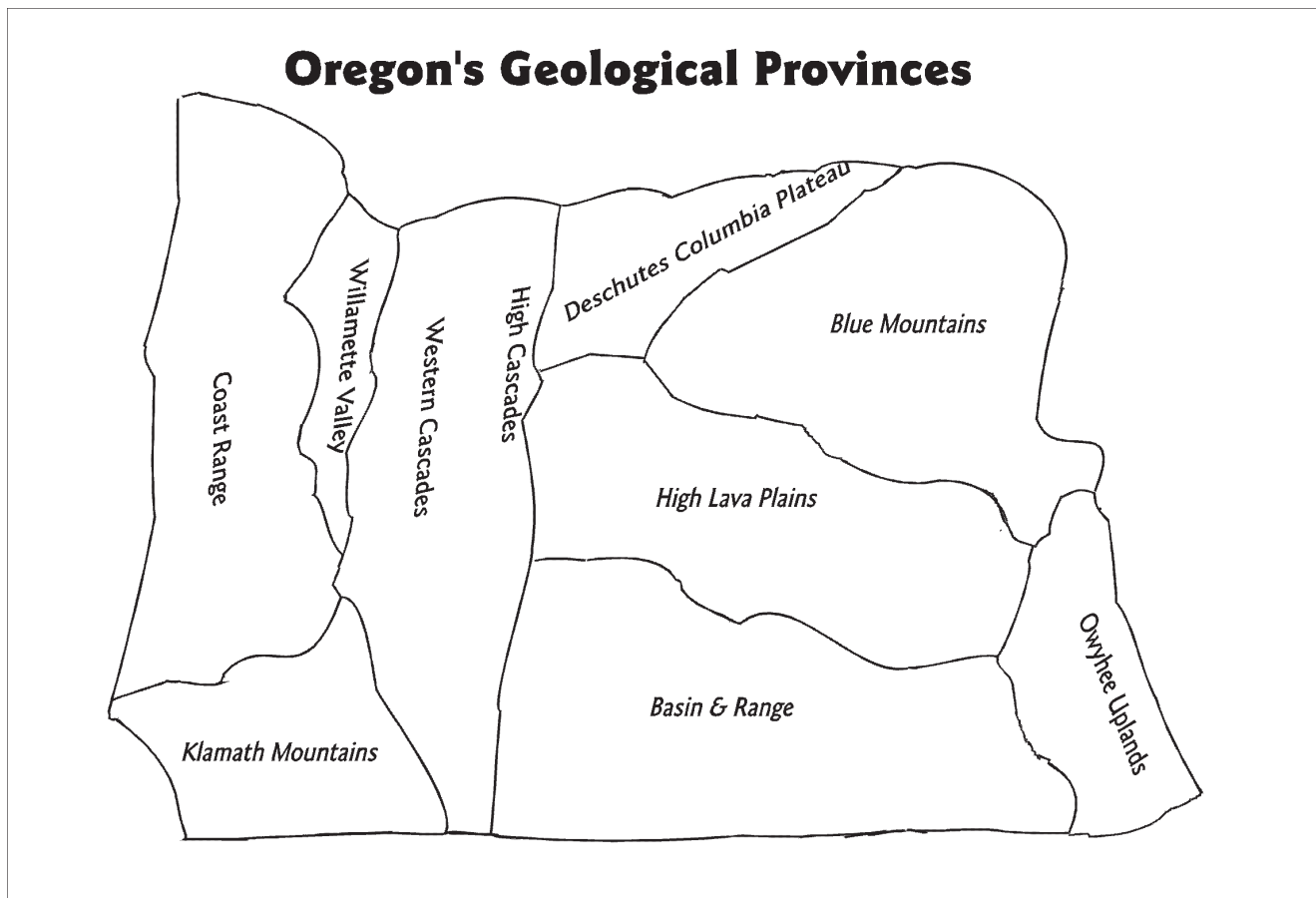
### High Lava Plains

The High Lava Plains lie near Oregon's center. This zone runs from Steens Mountain to Bend. Scientists believe that for thousands of years, volcanoes erupted here almost continuously. Today we find lava everywhere. Little rain falls in this region. This makes the High Lava Plains a good region to see what volcanoes did.

During the ice age, vast lakes covered eastern and central Oregon. One lake extended from near Steens Mountain to the modern-day location of Burns.

Malheur, Harney, and Mud lakes are all that remain of this great lake. They grow and shrink according to rainfall. Around 1930 the lakes nearly dried up during a drought. In 1984, record rainfall flooded the lakes. Today these lakes form part of Malheur National Wildlife Refuge. Fort Rock is an *extinct* volcano found in another dry lake bed near present-day LaPine.

You might enjoy visiting Smith Rock State Park, Fort Rock State Park, or the Newberry Volcanoes National Monument in this region of Oregon.



## Deschutes-Columbia Plateau

Volcanoes also created the area of the Deschutes (Deh-SHOOTS)-Columbia Plateau. This area extends over parts of Oregon, Washington, and Idaho. The Oregon section borders the Columbia River on the north and the Cascade Mountains on the west. Here the Columbia River and the rivers that flow into it have cut deep canyons through the lava of the plateau.

Scientists believe that during the ice age, glaciers may have dammed up a river in what is now Montana. When the ice broke open, floodwaters gushed to the sea, scouring southeastern Washington and Columbia Gorge.

Interesting places to visit include Cove Palisades State Park and the headwaters of the Metolius.



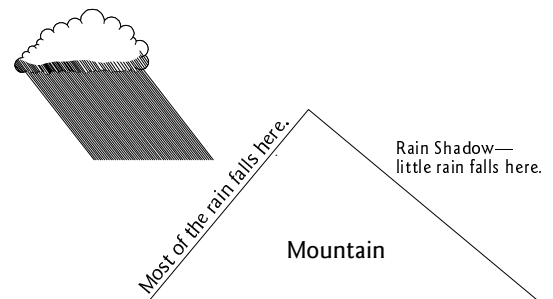
Fort Rock rises abruptly from an ancient lake bed.

### Fill in the blanks with the correct answers.

- \_\_\_\_\_ may have helped form mountain ranges in southwestern Oregon and northeastern Oregon. Scientists believe the \_\_\_\_\_ here are very old.
- Miners found gold in the \_\_\_\_\_ Mountain and \_\_\_\_\_ Mountain areas.
- Many \_\_\_\_\_ once covered parts of central and eastern Oregon.
- Water from the Basin and Range area has no direct route to the \_\_\_\_\_.
- We find the High Lava Plains in \_\_\_\_\_ Oregon.
- \_\_\_\_\_ created the High Lava Plains.
- \_\_\_\_\_ once filled depressions in central and eastern Oregon.
- Malheur and Harney lakes \_\_\_\_\_ when it rains. In times of drought they \_\_\_\_\_.
- \_\_\_\_\_ created the Deschutes-Columbia plateau.
- During the ice age a glacier dam broke, pouring flood waters down \_\_\_\_\_

## Cascade Mountains

Long ago the Oregon coastline lay along the eastern edge of the Willamette Valley. Then, scientists think, separating plates created many volcanoes. Evidence indicates these volcanoes erupted violently and frequently. This created mountains we know today as the Cascades. These mountains gradually tipped westward. Today moist air from the ocean collides with the mountain tops and rains on their western side. Because of this, little rain falls on the eastern side. We call this *rain shadow*. Rain shadow causes the *arid* (or very dry) “eastern Oregon” climate we know today.





These first volcanoes gradually burned themselves out. One extinct (ex-TINCT) volcano, Mount Tabor, is found inside the Portland city limits. Newer mountains cover some extinct volcanoes.

Newer High Cascade volcanoes form a familiar part of the landscape in the Willamette Valley and central Oregon. They include Mount Hood, Mount Jefferson, Three-Fingered Jack, and the Three Sisters. Well-known Washington volcanoes are Mount Rainier and Mount Saint Helens.

On May 18, 1980, Mount Saint Helens erupted with a boom heard hundreds of miles away. Winds carried ash for thousands of miles into the Midwest. Oregon too has volcanoes that could erupt. Scientists class Mount Hood as *dormant* (DOOR-munt). It last erupted in 1865. The South Sister in the Three Sisters group is the youngest volcano of the three. It last erupted about 1,900 years ago. It could erupt again. Mount Mazama (mu-ZAH-ma), the home of Crater Lake, is dormant and could erupt again. Several less-known mountains appear extinct, but scientists are not sure.

To see an active volcano firsthand, you might want to visit the Newberry National Volcanic Monument about ten miles south of Bend. You will find a variety of volcanic formations there. The National Monument has two visitor centers. For more information, contact Deschutes National Forest.

### Willamette Valley

Willamette Valley is Oregon's only natural lowland of any size. It is a part of a larger lowland that reaches north to Puget Sound. At one time what we know as Willamette Valley lay under the ocean. As the ocean retreated, lava covered the valley surface. Later ice age floods scoured the valley. Willamette Valley lies near two moving plates, which means that at some point, a huge earthquake will likely occur.

### The Coast Range

The Coast Range is a belt of moderately high mountains and coastal headlands. It extends southward from the Columbia River about two hundred miles. The highest point, about 4,000 feet, is Mary's Peak near Philomath. These mountains cause some rain shadow effect in the Willamette Valley. A great deal of rain falls on the Willamette Valley, but even more drenches the western side. The coastal mountains rose gradually and they continue to rise as the San Juan Plate slides under the North America Plate.

Cape Blanco rises one inch every three years and Astoria an inch every 36 years. In contrast, Vancouver, Washington, sinks an inch every 40 years, while Seattle sinks an inch each 11 years.

Our coastline is moving east. Each year we lose about two feet of land. Nature causes some of this. Man-made structures also contribute to the change. Offenders include

*Crater Lake came into being when Mount Mazama erupted explosively.*





*riprap*, piers, breakwaters, and poorly constructed jetties. Between 1936 and 1960, Tillamook Spit retreated 50 feet. Cape Meares lost about 320 feet during the same period. It moved back another 75 feet during 1960-61.

Along the coast, wet weather triggers huge landslides. Between 1940 and 1943 in Newport, a large block slid seaward taking 15 houses. This created a wide opening that separated pavement and water mains. Today the sea attacks and erodes the other side of this mass. Another landslide occurred at Ecola State Park in 1961. A 125-acre area slid down at a rate of about three feet per day. In fall 1997 the sea destroyed 200 feet of jetty on the north side of the Columbia and eroded away a parking lot at Fort Canby State Park in Washington.

Interesting places to visit include Oregon Dunes National Recreation Area, the Three Capes (Kiwanda, Lookout, and Meares), the Devil's Elbow, Devil's Churn, and Devil's Punchbowl (Otter Rock), and Mary's Peak.



*Winter storms scour the beaches of Fort Stevens State Park and reveal the skeleton of the Peter Iredale, Oregon's most famous shipwreck. (photo by Dennis Matchette)*

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**Fill in the blanks with the correct answers.**

1. The Willamette Valley is a \_\_\_\_\_.
  2. \_\_\_\_\_ grew into the Cascade Mountains.
  3. The Cascades have a \_\_\_\_\_ on the eastern side.
  4. Rain shadows cause \_\_\_\_\_ climate.
  5. Oregon volcanoes that could erupt again include \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.
  6. Three volcanoes you can see from central Oregon and the Willamette Valley include \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.
  7. What city has an extinct volcano within its city limits? \_\_\_\_\_
  8. Crater Lake lies at the top of Mount \_\_\_\_\_.
  9. Wet weather triggers \_\_\_\_\_ along the Oregon coast.
  10. Oregon loses about \_\_\_\_\_ feet of land each year.
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**Summary**

Our world began when God spoke it into existence. On the third day of creation, God separated land from water. Some scientists believe that at first, all the continents were one landmass. They call this Pangaea. Some scientists believe earth's land sits on large plates that float on earth's molten core. This theory is called plate tectonics.



*Lava flow in Newberry National Volcanic Monument (photo by Dennis Matchette)*

Geology is the science that studies earth's origin, history, and structure. Geologists divide Oregon into nine areas. We find Oregon's oldest rocks in the Blue Mountain and Klamath Mountain areas. These areas also contain gold.

Volcanoes played a large part in forming Oregon's topography. During the ice age, large lakes covered much of eastern Oregon.

The Cascade Mountains keep much rain from falling on their eastern side. In the Cascades, several dormant volcanoes could erupt again. These volcanoes include: Mount Hood, the South Sister (in the Three Sisters), and Mount Mazama, which holds Crater Lake. Mount Tabor City Park in Portland is built on an extinct volcano.

At one time the eastern side of Willamette Valley was the coastline. Now the Willamette Valley lies between the Cascade Mountains and the Coast Range, which is still rising in the west. Oregon's coastline moves about two feet east each year. Mary's Peak is the Coast Range's highest peak.

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## What Have You Learned?

Write the correct letter in the blanks.

- On the third day God \_\_\_\_\_.  
(a) created plants (b) separated land and water (c) lit the stars
- Geologists study \_\_\_\_\_.  
(a) people (b) ancient animals (c) rocks and the earth's structure
- \_\_\_\_\_ played a major part in creating the land of Oregon.  
(a) Volcanoes (b) Hurricanes (c) People
- Oregon's coast is moving \_\_\_\_\_ at the rate of about \_\_\_\_\_ feet a year.  
(a) east (b) west (c) north (d) south (e) 10 (f) 6 (g) 2
- Volcanoes that have not erupted for a long time, but still could are called \_\_\_\_\_.  
(a) active (b) extinct (c) dormant
- \_\_\_\_\_ lies on top of Mount Mazama.  
(a) Abert Lake (b) Crater Lake (c) Malheur Lake
- \_\_\_\_\_ is the highest mountain in the Coast Range.  
(a) Green Peak (b) Mary's Peak (c) Mount Jefferson
- \_\_\_\_\_ is not in the Cascade Range.  
(a) Mary's Peak (b) Mount Saint Helens (c) Three Fingered Jack
- \_\_\_\_\_ keep(s) much rain from falling east of the Cascade Mountains.  
(a) Desert conditions (b) Hot weather (c) Rain shadow
- In western Oregon wet weather causes \_\_\_\_\_.  
(a) earthquakes (b) landslides (c) mountains to rise
- If the \_\_\_\_\_ theory is true, continents float on plates.  
(a) continental drift (b) plate tectonics (c) relativity
- Some people believe at first all the land was in one place. Scientists call this continent \_\_\_\_\_.  
(a) Atlantis (b) Panacea (c) Pangaea

13. Long ago many lakes covered \_\_\_\_\_.  
 (a) the Cascade Mountains (b) eastern Oregon (c) the Oregon coast
14. During the ice age \_\_\_\_\_ scoured the Willamette Valley.  
 (a) floods (b) volcanoes (c) hunters

**Match the words with their definitions:**

15. \_\_\_ Geology                    a. the theory that the earth's crust is made of semi-rigid plates
16. \_\_\_ Magma                    b. earth's molten core
17. \_\_\_ Pangaea                    c. science that studies earth's origin, history and structure
18. \_\_\_ Plate tectonics            d. a single huge continent that broke apart
19. \_\_\_ Dormant                    e. the "dry" side of a mountain range
20. \_\_\_ Rain shadow                f. not active

## Oregon—Land of Immigrants

God put the Garden of Eden in an area known as the "Fertile Crescent." We know it today as the Middle East. Here Adam and Eve lived with their descendants. From there, people traveled into other parts of the world. *Anthropologists* (an-throw-POLL-u-jists—scientists who study people) agree that every people group in the Americas came here from somewhere else. Early travelers probably followed game or looked for areas where they could harvest roots and berries.

### Paleo-Indians

Where did the first Americans come from? Anthropologists have suggestions, although they do not all agree. Most believe that the first Americans crossed from Asia to America on a land bridge where the Bering Strait is today. During the most recent ice age much of the world's

## How Old Is It?

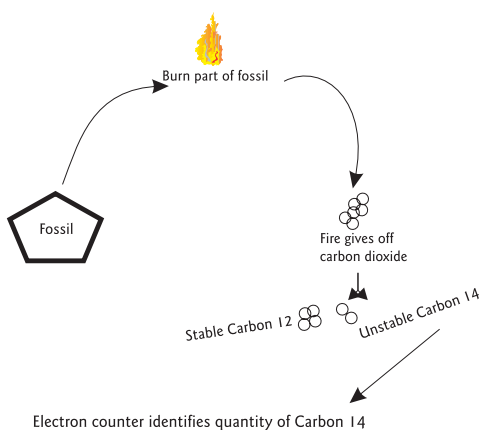


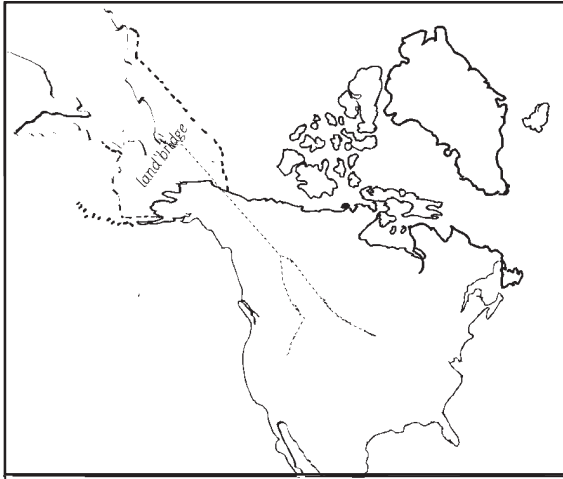
Diagram description: The diagram shows a cycle starting with a fossil (represented by a pentagon). An arrow labeled 'Burn part of fossil' points to a flame. From the flame, an arrow labeled 'Fire gives off carbon dioxide' points to two types of carbon dioxide molecules: 'Stable Carbon 12' (two circles) and 'Unstable Carbon 14' (one circle and one square). An arrow from the 'Unstable Carbon 14' points to the text 'Electron counter identifies quantity of Carbon 14'.

About 50 years ago an American chemist discovered an accurate way to find out how old something is. It works like this:

Some of the carbon in carbon dioxide is radioactive carbon 14. Plants absorb it. Animals eat plants, and carbon 14 reaches their bodies too.

When plants and animals die, their bodies begin to lose carbon 14. Scientists measure the carbon 14 in an object and compare that quantity with the carbon 14 in a similar living object.

Many archeologists do not trust carbon 14 dating alone. Errors as great as 2,000 to 5,000 years can occur. However, carbon 14 dating is a useful tool.



This map shows the land bridge and the route Paleo Indians probably followed into North America.

water froze into ice. Sea level dropped as much as 300 feet. When that happened, the area around the Bering Strait became a broad ice-free plain. Scientists call it *Beringia*. Animals wandered from Asia to America (and from America to Asia) across this plain. Where animals went, hungry human hunters followed.

Anthropologists call these first Americans *Paleo-Indians* (PAY-lee-oh). When they came, ice covered much of North America. These first Americans missed Oregon. They probably traveled south inland near the Rocky Mountains. Over thousands of years they moved farther south and east, as far as South America, learning new ways of living.

The first Oregonians probably crossed the Rocky Mountains in the Snake River area and settled in Oregon long before the time of Christ. The first people known in Oregon lived and worked in caves near Silver Lake and in south central Oregon. In a cave near Fort Rock, scientists in 1938 discovered what they believe was a sandal factory. We know that people probably lived in eastern Oregon by 10,000 years ago. In those days, eastern Oregon had a moister, warmer climate, and there were many lakes.

In 1998 scientists announced they had discovered an ancient house near Newberry Crater. They believe ash buried this house when Mount Mazama erupted. Probably Paleo-Indians lived here in summer while they hunted and gathered food.

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### Fill in the blanks with the right word.

1. Anthropologists study \_\_\_\_\_.
  2. \_\_\_\_\_ were the first Americans.
  3. The ancient land bridge between Asia and Alaska is called \_\_\_\_\_.
  4. Scientists found a \_\_\_\_\_ near Fort Rock.
  5. Scientists also found a \_\_\_\_\_ near Newberry Crater.
  6. A strait is \_\_\_\_\_ between two \_\_\_\_\_.
  7. Measuring radioactive carbon helps us know \_\_\_\_\_ something is.
- 

### Oregonians Our Ancestors Met

Perhaps as late as A.D. 1400, people from the north settled along the coast. Other groups traveled south and settled around Tillamook. Each group spoke a different language. Still later, Chinook-speaking Indians traveled west down the Columbia River to the ocean, settling as they went.

Most Oregon natives had little tribal government. Small bands governed themselves. However, people visited and traded with other bands. They lived by hunting, fishing, and gathering berries and roots. They had

no gardens, although in southwest Oregon, people sometimes planted tobacco. Oregonians did not have horses until the 1700s and early 1800s.

Many groups had huge feasts called potlatches. The person who gave the feast gave away many valuable gifts. This made him important. Guests would then try to give even bigger parties with better gifts.

Trading became important to the Indians along the coast and the Columbia River. To communicate, they developed a *lingua franca* (LING-gwuh FRANG-kuh) or a language all could speak and understand. European traders called it Chinook Jargon. The Jargon used about 500 words and had very simple grammar. In the beginning, words came from the Chinook language and other native languages. After white fur traders came, English and French words also found their way into Chinook Jargon.

Missionaries used Chinook Jargon to teach the Indians about God. They prepared a book of simple hymns using Chinook Jargon. Indians sang the hymn below to the tune of "Jesus Loves Me." Can you find a word that came from English? (Hint: Indians had trouble pronouncing the letter R.)



Chinook woman with flattened head  
(drawing by Mike Comfort)

Native Americans who used Chinook Jargon sang this song to the tune of "Jesus Loves Me."

v. 1	Kwanesum Jesus hias skookum, (repeat twice) Kahkwa yaka papeh wawa—	Always Jesus is very strong  So his paper (the Bible) says—
<i>Chorus</i>		
	Dalate, naqwitka— (repeat twice) Kahkwa yaka papeh wawa.	Truly yes—  So his paper says.
v. 2	Jesus kumtuks nika Tumtum, Kahkwa, etc.	Jesus knows my mind, So, etc.
<i>Chorus</i>		
v. 3	Jesus nanitch konoway kah Kahkwa, etc.	Jesus sees everywhere, So, etc.
<i>Chorus</i>		

**Fill in the blanks with the correct word.**

1. *Lingua franca* means \_\_\_\_\_.
2. Most Oregon Indians had little tribal \_\_\_\_\_.
3. Northwest Indians developed \_\_\_\_\_, a *lingua franca*, so they could communicate.
4. Oregon Indians did not plant \_\_\_\_\_. Instead they \_\_\_\_\_ and \_\_\_\_\_.

## Discovering Oregon

5. Native Americans in Oregon did not have horses until during the \_\_\_\_\_.
6. Chinook-speaking river Native Americans were \_\_\_\_\_ to come to Oregon.
7. \_\_\_\_\_ became important to the Native Americans along the Oregon coast.
8. Native Americans on the coast gave great feasts called \_\_\_\_\_.

### Coastal Peoples

The peoples along the coast lived in similar ways. They had wood houses and built dugout canoes. Most of them wore basket hats. Women wore aprons and men breechcloths made from grass. In winter people had capes to keep off the rain.

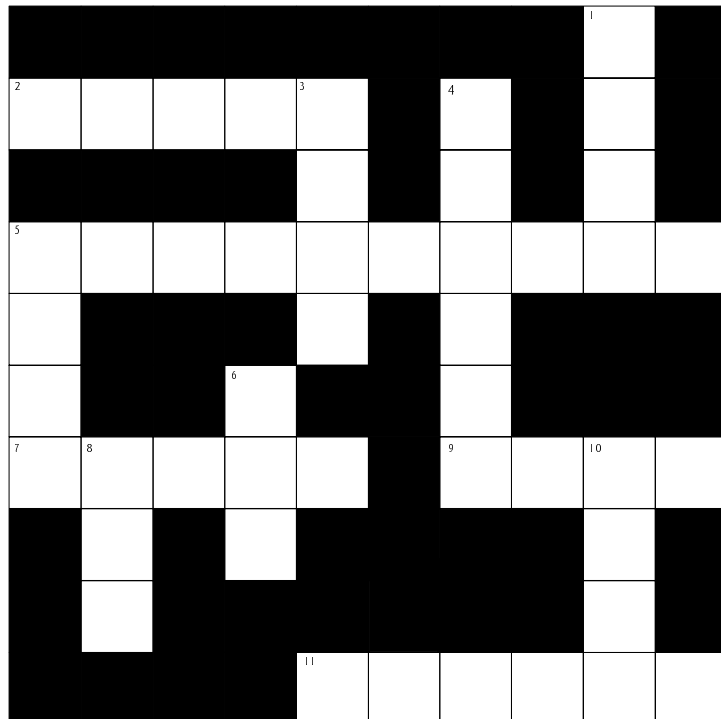
All depended on the sea for food. Bands located permanent villages near the mouth of a river where they

### Chinook-English Glossary

<b>Ahnkuttie</b>	formerly, ago
<b>Alki</b>	soon
<b>Ats</b>	younger sister
<b>Chako</b>	come
<b>Enati</b>	across
<b>Halo</b>	not, none
<b>Hyak</b>	swift, fast, hurry
<b>Ikpoioie</b>	to shut
<b>Illahee</b>	land
<b>Klahowya</b>	hello
<b>Kwatah</b>	quarter
<b>Lolo</b>	to carry
<b>Moosmoos</b>	cattle
<b>Nem</b>	name
<b>Papeh</b>	paper
<b>Pelton</b>	a fool, insane
<b>Saghalie</b>	above, up
<b>Sikhs</b>	a friend
<b>Pusspuss</b>	cat
<b>Skookum</b>	strong
<b>Tahmanawis</b>	magic, the spirits
<b>Tillikum</b>	people, relations
<b>Tyee</b>	chief

### Crossword Clues

- | Across             | Down                   |
|--------------------|------------------------|
| 2. You write on it | 1. Before long         |
| 5. Spirits         | 3. Speedy              |
| 7. Across          | 4. One fourth          |
| 9. A negative      | 5. Chief, leader       |
| 11. Foolish person | 6. Little sister       |
|                    | 8. What you are called |
|                    | 10. To carry           |





could fish for salmon during the spring and fall salmon runs. Many of these Indians placed great emphasis on social class. Leaders came from among the wealthy. The upper classes flattened their babies' heads. Owning slaves indicated wealth and brought prestige to the owner.

Coastal Indians built houses of planks. In the north, plank roofs slanted only one way. In the south, houses had two-pitched roofs and gables. On the outside these houses resembled the houses Europeans built.

Builders dug a hole for the floor, then set frame poles in the depression. This helped keep the houses warm in winter and cool in summer. In the north, people built lodges as long as 100 feet. A row of fire pits ran down the middle. Usually two families shared a fire pit. Sometimes 50 or more people lived in one lodge.

Indians along the coast and in the Willamette Valley liked to gamble. They also played a stick and ball game they called shimmy. Sometimes people in the bands along the Siletz River gambled away everything they owned.



*Native American women wove beautiful baskets.*

### **River Indians**

Indians along the Columbia River spoke Chinook. Chinook speakers lived from the mouth of the Columbia as far inland as The Dalles. These Indians traveled by dugout canoe. Like the coast Indians, they built wooden lodges. Salmon runs provided their most important food source. Families inherited rights to good river fishing spots. In the fall, most river bands traveled to the area of Sauvie Island where they dug wapato (WAH-puh-toe) roots for winter food.

These Indians traded slaves as well as salmon with other groups. A Wasco (WAHsco) village near The Dalles became an important trading center for Indians in Oregon and Washington. Wascos traded horses as well as slaves and salmon. Upper-class river Indians flattened their babies' heads. Slaves and the lower classes did not.

### **Valley People**

Skilled hunters lived in the Willamette Valley. Most of these Kalapuyan bands lived along small streams where salmon did not run. They too built wood lodges. The people hunted deer, bear, and waterfowl with bows and arrows. They dug roots and gathered berries. Their women made fine baskets.

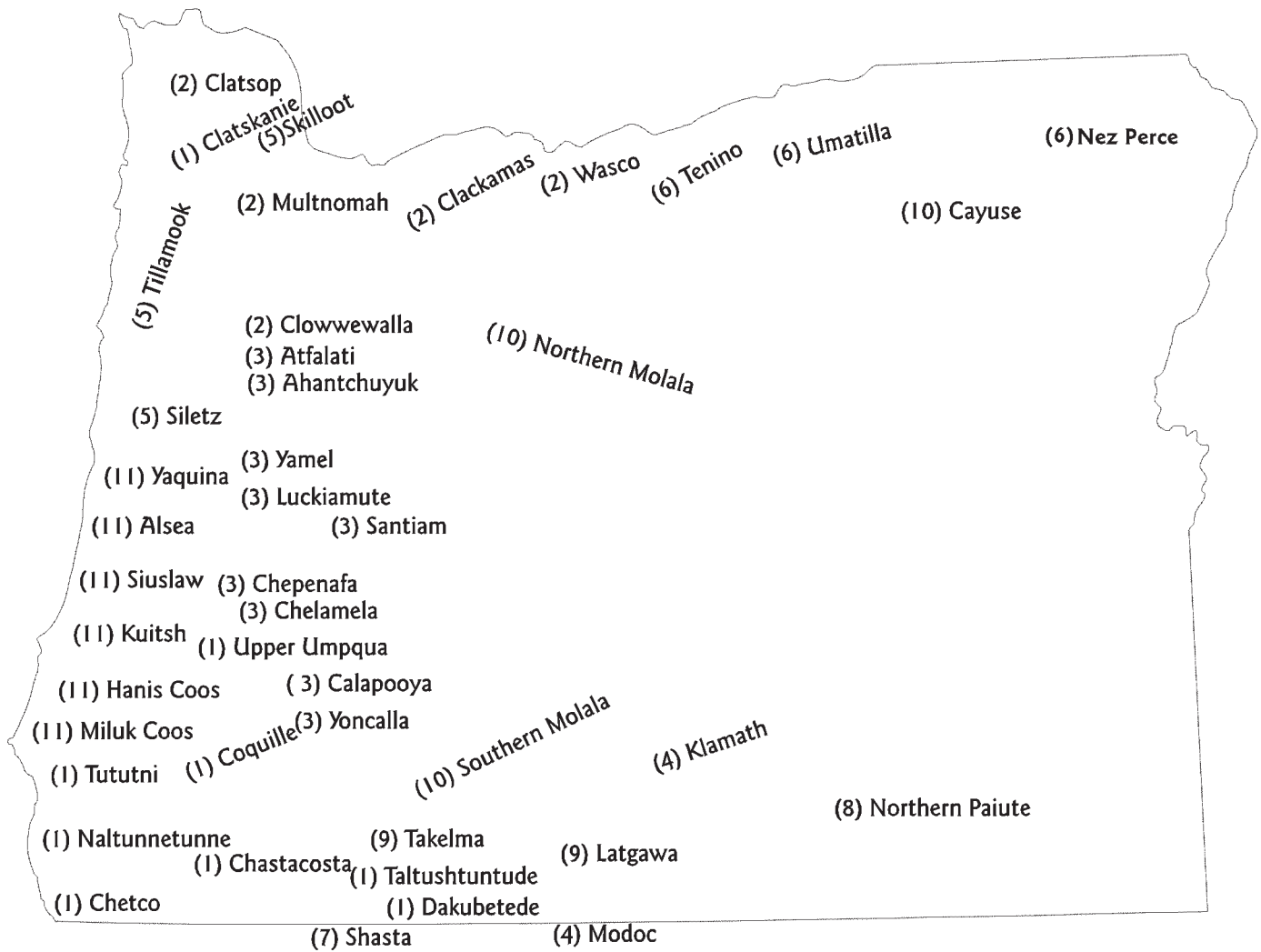
Most of the Indians living between the Columbia and the Rogue played shimmy, a game similar to field hockey. Sometimes several groups gathered for tournaments. Men often gambled on the results of these games.

### **Peoples of Eastern Oregon**

Some people called the Northern Paiutes (PIE-oots) "Digger Indians" to distinguish them from horse Indians. Paiutes lived in northwestern Nevada, southwestern Idaho, eastern California, and central and southeastern Oregon.



## Oregon Indian Tribes and Bands



### Indian Language Groups Found in Oregon

- (1) Athapascan
- (2) Chinookan
- (3) Kalapuyan
- (4) Lutuamian
- (5) Salishan
- (6) Shahaptian
- (7) Shastan
- (8) Shoshonean
- (9) Takilman
- (10) Waiilatpuan
- (11) Yakonan

Northern Paiutes wore scanty clothing of brush and bark. They eked out a living by migrating to mountains for nuts and berries, then returning to valleys for roots and fish. Bands called themselves by the name of the food they usually gathered. In early days Paiutes could not defend themselves well against enemies. Other Indians displaced them from along the Columbia.

Umatilla (YOO-muh-till-uh) and Tenino (Te-NIE-no) Indians lived along the Columbia. Their life was much like their neighbors downstream. On what is now the Oregon side they had villages near The Dalles and on the John Day River. These Indians fished and dug various roots. They built their homes of poles covered with mats. Like other interior Indians they used sweat lodges. They obtained horses in late eighteenth century.

The Cayuse (KIE-oose) and Nez Perce (Nez Purse) were horse Indians. The Cayuse claimed a large portion of eastern Oregon. The Nez Perce lived in Wallowa Valley and in Idaho. After they obtained horses, these Indians traveled widely. In summer they crossed the Rocky Mountains to hunt buffalo with the Plains Indians.

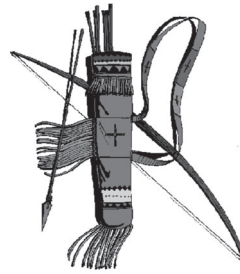
These “horse Indians” borrowed ideas about government and clothing from Plains Indians.

### Southeastern Oregon

Klamath and Modoc Indians lived along the current California-Oregon border around Klamath Lake. They hunted with bows and used harpoons to fish. They also gathered seeds of a water lily they called *wocus*.

These people built their homes by excavating (EX-kuh-vay-ting) a deep hole. They made a pole framework over the top and covered the framework with earth.

Klamaths and Modocs wore skirts and aprons made of plant fiber, basket hats, and woven fiber sandals. In winter they added leggings and padded their sandals with grass for warmth. Sometimes they raided neighboring tribes and captured slaves to sell to Indians from the Columbia River and the coast. In summer the slave traders traveled to The Dalles and traded their captives for horses, buffalo skins, and dried salmon.



Many of the tribes in Oregon hunted with bows and arrows.

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### Fill in the blanks with the correct word.

1. Many Indian groups came to trade at \_\_\_\_\_.
2. Valley Indians were skilled \_\_\_\_\_.
3. \_\_\_\_\_ and \_\_\_\_\_ were horse Indians. They hunted \_\_\_\_\_ on the Great Plains each summer.
4. Horse Indians borrowed ideas and customs from \_\_\_\_\_.

## Discovering Oregon

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- \_\_\_\_\_ or “Digger” Indians lived on nuts, berries, roots, and fish.
  - \_\_\_\_\_ and \_\_\_\_\_ lived in southeastern Oregon.
  - Klamaths and Modocs captured and traded \_\_\_\_\_ to obtain things they needed.
- 

Native Americans learned to use horses from Spanish explorers. Horses reached Oregon during the 1700s.



### Summary

Anthropologists study human beings. They believe the first Americans crossed from Siberia over a land bridge they call Beringia. Scientists refer to the first people known in America as Paleo-Indians. Carbon 14 dating is a useful tool in determining the age of fossils and bones.

The first Oregon Indians probably came west across the Rocky Mountains and settled near the Snake River. Coastal Indians came later, around A.D. 1400.

Chinook speakers came last, working their way westward down the Columbia River to the coast. These Oregon Indians spoke many languages. They developed Chinook Jargon as a *lingua franca*.

Indians of several cultures lived in Oregon. “Horse” Indians, the Nez Perce and Cayuse, lived in eastern Oregon. Paiutes or “Digger” Indians also made the desert their home. These people traveled constantly, seeking food. Chinook-speaking river Indians fished and traded from The Dalles to Astoria. Skilled hunters inhabited interior valleys of western Oregon. Coastal Indians lived in various styles of plank lodges all along the coast. Much of their food came from the sea.

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## What Have You Learned?

Write the correct letter in the blanks.

- Missionaries used \_\_\_ to communicate with Native Americans.  
(a) Chinook Jargon (b) Pidgin English (c) sign language
- Indians got their food by \_\_\_\_\_.  
(a) farming (b) hunting and gathering (c) stealing
- Native Americans gathered at The Dalles to \_\_\_\_\_.  
(a) trade (b) tell stories (c) dance
- Klamaths and Modocs traded \_\_\_ for salmon.  
(a) baskets (b) furs (c) slaves
- \_\_\_\_\_ wandered over a wide area looking for food.  
(a) Chinook (b) Klamaths (c) Paiutes
- The peoples along the coast went to sea in \_\_\_\_\_.  
(a) canoes (b) kayaks (c) schooners
- \_\_\_\_\_ was very important to the people living along the coast and the Columbia River.  
(a) Perch (b) Salmon (c) Trout

8. \_\_\_\_\_ study people.  
(a) Anthropologists (b) Botanists (c) Geologists
9. The first Americans probably crossed from Asia on a \_\_\_\_\_ we call Beringia.  
(a) canoe (b) ferry (c) land bridge
10. Scientists discovered a \_\_\_\_\_ near Fort Rock.  
(a) buried house (b) food cache (c) sandal factory
11. In the Willamette Valley the people were skilled \_\_\_\_\_.  
(a) blanket makers (b) fishermen (c) hunters
12. People along the Columbia, and some people along the coast \_\_\_\_\_ their babies' heads.  
(a) protected (b) flattened (c) covered
13. The \_\_\_\_\_ dug deep holes and built their houses in them.  
(a) Cayuse (b) Klamath (c) Nez Perce
14. Horse Indians such as the \_\_\_\_\_ and \_\_\_\_\_ crossed the Rockies to hunt buffalo.  
(a) Cayuse (b) Chinook (c) Klamath (d) Nez Perce
15. People along the coast built \_\_\_\_\_ of planks.  
(a) weapons (b) sea-going canoes (c) houses
16. Scientists test for radio carbon by \_\_\_\_\_ a small piece of a substance.  
(a) analyzing (b) burning (c) smashing
17. Chinook Jargon was \_\_\_\_\_.  
(a) a tribal language (b) invented by European traders (c) a *lingua franca*

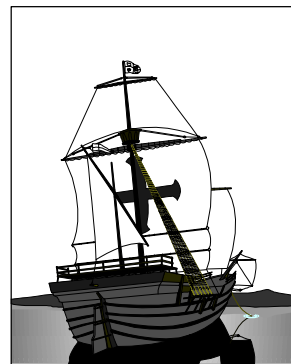
**Circle the correct answer or answers.**

18. Paleo-Indians were (Indians with light skins, the first people to live in North America, a fierce mountain tribe).
19. Coastal Indians ate much (salmon, seaweed, trout) along with other creatures from the sea.
20. "Digger Indians," or (Sioux, Paiutes, Modocs), lived by scrounging for berries and roots.
21. Indians from many places in Oregon Country used (Chinook Jargon, French, Pidgin English) when they traded.
22. The peoples of (eastern Oregon, western Oregon) wore basket hats.

## Strangers from the Sea

Columbus wanted to sail to India. When his ships landed in the Caribbean, he thought he had reached the East Indies. Explorers who followed Columbus soon discovered his error. The continents that came to be called Americas lay between them and India. At first these explorers had no idea how wide these continents were. They expected to find a way to sail through or between them.

For more than 300 years, explorers believed that somewhere to the north they would find a clear sea passage



*The Santa Maria, shown in this drawing, was one of Columbus's three ships.*

Columbus's idea of the world



World as it really is



to the Indies and the spices they wanted to buy. They began to search for it. The “Northwest Passage,” as they called it, eluded them. But the search led many of them to new discoveries.

### Early Explorers

Three changes in Europe helped set the stage for exploring. The first was the *Renaissance* (*REN-uh- ZAHNCE*), the rebirth of classical learning.

The *Reformation* (Reff-or-MAY-shun) begun by Martin Luther in 1517 also contributed to the restlessness of the times. England became a Protestant nation while Spain remained Catholic. This added a religious side to their rivalry.

The third factor was commercial change. During the late Middle Ages, wars and disease had depressed the economy. As it improved during the 1400s, more people could afford luxuries such as spices from the East Indies. The invention of movable type meant more and cheaper books. Thus, more people knew about new discoveries.

By the 1540s Spain had conquered the Aztec and Inca Empires. They began to search for the mythical *El Dorado* (El dor-AH-do, the golden one) and golden cities they called “the seven cities of Cibola.” Everywhere they went they claimed the land and its riches for God and their king.

In 1542 Bartolomé Ferrelo sailed north from Mexico, exploring the coast of California for such cities. Historians believe he may have reached what is now the coast of southern Oregon. Today a cape in Curry County, Cape Ferrelo, bears his name. Ferrelo saw no sign of rich civilizations, so he returned home.

More than 30 years passed before any other European explorers sailed so far north. During those years, England’s Queen Elizabeth I gave Francis Drake permission to capture Spanish treasure—and to keep some of it for himself.

In 1579, Francis Drake, his ships loaded with Spanish treasure, set out to find the “Northwest Passage.” Likely he traveled as far as present-day Coos Bay. Drake decided the Northwest Passage didn’t exist. He turned around and took another way back to England.

In 1603 Spaniards Sebastián Vizcaíno and Martín D’Aguilar sailed up the Pacific Coast from California. They hoped to find harbors where Spanish ships *en route* to the Philippines could take refuge.

Discouraged by winds, coastal currents, and Oregon rain, Vizcaíno returned to California. D’Aguilar, in another ship, sighted land and named it Cape Blanco. Today we know Cape Blanco in Curry County as the westernmost point in Oregon. D’Aguilar also sighted a river at the place where Captain Robert Gray later discovered the Columbia River.

**Fill in the blanks with the correct answers.**

1. When Columbus reached America he thought he was in \_\_\_\_\_.
2. The \_\_\_\_\_ and \_\_\_\_\_ helped people wish to explore.
3. \_\_\_\_\_ was the first to sail along the Oregon coast.
4. \_\_\_\_\_ came next.
5. Ferrelo was a \_\_\_\_\_ explorer, while Drake was \_\_\_\_\_.
6. \_\_\_\_\_ and \_\_\_\_\_ sailed along Oregon in the early 1600s.
7. Explorers looked for a \_\_\_\_\_ that would let them sail through the continent.

**More Explorers**

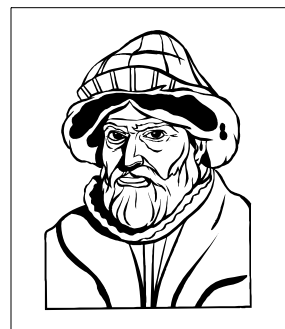
More than 100 years passed. In 1724 Peter the Great of Russia sent Vitus Bering on an expedition to eastern Siberia to find out whether Asia and America were connected by land. Bering returned six years later with the news that water separated the two continents. In 1741 Bering was ship-wrecked and died off the coast of Alaska.

By 1743 Russian fur trappers were working on the east coast of Siberia and they had established settlements in Alaska. They took the furs to China and sold them. These Russian trappers worried the Spaniards, who claimed the whole West Coast of North America.

Once again Spain sent explorers. In 1774, Juan Perez sailed north. In the northern waters, a canoe carrying natives approached the ship. The sailors persuaded them to come close by offering beads, biscuits, and handkerchiefs. The natives accepted gifts the seamen threw them, but did not come on board.

Several Europeans had now seen Oregon, but so far as we know, no white man had landed there. The following year two Spaniards, Bruno Heceta and Juan Francisco Bodega y Quadra, changed that. On July 14, 1775, Quinault Indians slaughtered several members of their party in the surf as they attempted to land in what is now northern Washington. Eventually Heceta landed, planted a flag, and claimed the land for Spain.

The Bodega y Quadra party also spotted a large bay. Heceta believed it was “the mouth of a great river or of some passage to another sea.”<sup>1</sup> Perhaps Heceta suspected they had found the opening to the Northwest Passage. However, the expedition passed by without discovering or naming the Columbia River. Heceta Head near Florence carries Heceta’s name today. Although Spain claimed Oregon, it never tried to colonize it or to initiate trade.



*Peter the Great of Russia did much to develop his country, especially its naval power.*

**Fill in the blanks with the correct words.**

1. \_\_\_\_\_ of Russia sent \_\_\_\_\_ to explore.
  2. He wanted to know whether land connected \_\_\_\_\_ and \_\_\_\_\_.
  3. \_\_\_\_\_ sailed north to counteract Russian claims in 1774.
  4. The first European to land in Oregon was \_\_\_\_\_.
  5. \_\_\_\_\_ never tried to \_\_\_\_\_ Oregon or initiated trade there.
  6. \_\_\_\_\_ thought he saw the mouth of a great river, but he did not explore further.
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**Furry Fortunes**

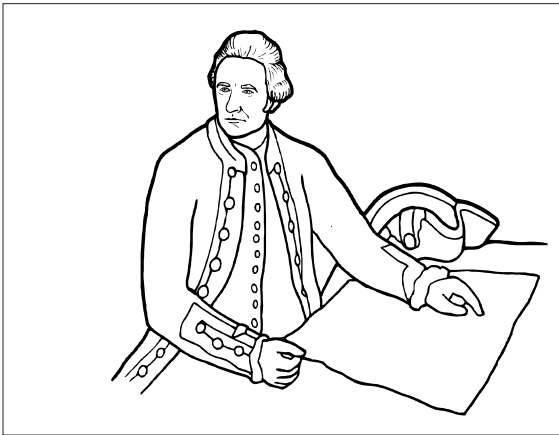
On a March day in 1778, Chief Maquinna, who lived near Nootka Harbor (Vancouver Island, B.C.), saw a strange sight. A European sailing ship lay offshore. He told his people to “go out...and try to understand what these people wanted and what they are after.”

That day Captain James Cook, the famous British captain, wrote in his log:

“A great many canoes filled with the Natives were about the ships all day, and a trade commenced betwixt us and them, which was carried on with the Strictest honesty on both sides.”

Cook’s party bought various furs including those of the sea otter. That night, Indian canoes clustered around Cook’s ship, singing. The seamen responded by playing music on the fife and drum and French horns. Cook spent a month on Vancouver Island, making friends with the Indians and trading for furs. When he left, John MacKay, the ship’s doctor, remained with the Indians.

Cook’s visit to the Nootka marked the beginning of European influence on coastal Indians. On his way home, Cook died in the Hawaiian Islands. The crew continued to Macao in China. The Chinese bought their sea otter pelts for \$10,000. With that sale, Oregon became a potential source of income for those English and Americans brave enough to reach it.



*Captain James Cook*

**Fill in the blanks with the correct words.**

1. Captain Cook’s men traded with the Indians for \_\_\_\_\_.
  2. Cook’s visit to the Northwest was the beginning of European influence on the \_\_\_\_\_.
  3. Cook’s men sold their furs for high prices in \_\_\_\_\_.
  4. Cook’s visit told Europeans Oregon could be \_\_\_\_\_.
- 
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## Summary

The Renaissance, Reformation, and trading competition of the sixteenth century made people want to explore. Early explorers came to the Pacific Northwest seeking the Northwest Passage. By the 1500s, Catholic Spaniards had taken great riches from the Aztec and Inca empires. They then sailed north along the Pacific Coast. Bartolomé Ferrello first sailed off the Oregon Coast in 1542.

In 1579, Francis Drake probably reached the area opposite Coos Bay. When he did not find the Northwest Passage, he left. Two more Spanish sailors, Sebastián Vizcaíno and Martín D’Aguilar, visited Oregon waters in 1603. D’Aguilar named Cape Blanco, the westernmost point in modern-day Oregon.

Peter the Great sent Vitus Bering to explore in 1724. After Russian trappers settled in Alaska, the Spanish sent new expeditions. In 1774 Juan Perez sailed the entire coast as far as the Canada-Alaska border. The following year, Bruno Heceta and Juan Francisco Bodega y Quadra landed on the coast of modern-day Washington. Heceta also recorded the “mouth of some great river or some passage to another sea,” but he explored no farther.

Captain James Cook (1778) spent a month at Nootka Sound (Vancouver Island, B.C.). When his men discovered the value of Northwest furs, a new era began in Oregon history.

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## What Have You Learned?

Write the letter or letters of the correct answer in the blanks below.

- When Columbus reached the New World he thought he had reached \_\_\_\_\_.  
(a) America (b) China (c) the East Indies
- Early explorers looked for a “Northwest Passage” because they wanted a short route to \_\_\_\_\_.  
(a) Burma (b) India (c) Pakistan
- \_\_\_\_\_ sailors were the first to see the Oregon coast.  
(a) Spanish (b) Russian (c) English
- Spaniards sailed along the Northwest coast in the eighteenth century looking for cities of \_\_\_\_\_.  
(a) fur (b) gold (c) platinum
- \_\_\_\_\_ was the first European to sail up the Pacific coast to Oregon waters.  
(a) Captain Cook (b) Francis Drake (c) Bartolomé Ferrello
- A(n) \_\_\_\_\_ in southern Oregon carries the name of Bartolomé Ferrello, a Spanish explorer in 1542.  
(a) cape (b) island (c) mountain
- \_\_\_\_\_ stole treasure from the Spanish.  
(a) Charles Barkley (b) Captain Cook (c) Francis Drake
- Martín D’Aguilar sailed north with \_\_\_\_\_.  
(a) Bodega y Quadra (b) Heceta (c) Vizcaíno
- D’Aguilar gave Cape \_\_\_\_\_ the name it bears today. Today it is the westernmost point of \_\_\_\_\_.  
(a) Blanco (b) Ferrello (c) Perpetua (d) British Columbia (e) Oregon (f) Washington

## Discovering Oregon

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10. The \_\_\_\_\_ were the first Europeans to land in the Pacific Northwest.  
(a) English (b) Russians (c) Spanish
  11. Bruno Heceta failed to discover \_\_\_\_\_.  
(a) northern Washington (b) the Columbia River (c) the Oregon coast
  12. Spain claimed Oregon, but she never tried to \_\_\_\_\_.  
(a) colonize it (b) keep others out (c) draw maps and charts
  13. Early explorers wanted to find \_\_\_\_\_.  
(a) good fishing (b) the Northwest Passage (c) a place to settle
  14. Captain Cook's crew sold \_\_\_\_\_ when they reached China.  
(a) fish (b) tea (c) furs
  15. Peter the Great of \_\_\_\_\_ sent Bering to explore.  
(a) England (b) Russia (c) Spain
  16. Beside each explorer's name write the name of the country that sent him. Choose from England, Spain, or Russia.
    - a. Bartolomé Ferrello \_\_\_\_\_
    - b. Francis Drake \_\_\_\_\_
    - c. Martín D'Aguilar \_\_\_\_\_
    - d. Vitus Bering \_\_\_\_\_
    - e. Bruno Heceta \_\_\_\_\_
    - f. James Cook \_\_\_\_\_
    - g. Juan Perez \_\_\_\_\_
- 

### Notes

<sup>1</sup>"Oregon," *Microsoft® Encarta® 97 Encyclopedia*. © 1993-1996 Microsoft Corporation. All rights reserved.

# Self Test

Write the correct letter or letters in the blanks below.

1. \_\_\_\_\_ was the first European to sail along Oregon's coast.  
(a) Bodega y Quadra (b) Ferrelo (c) Heceta
2. The earth's molten core is called \_\_\_\_\_.  
(a) geology (b) lava (c) magma
3. The first Europeans to see Oregon were \_\_\_\_\_.  
(a) Spanish (b) Russian (c) English
4. Crater Lake sits on top of \_\_\_\_\_.  
(a) Mount Adams (b) Mount Mazama (c) Mount Jefferson
5. Coastal peoples went to sea in \_\_\_\_\_.  
(a) log rafts (b) skin-covered canoes (c) dugout canoes
6. Early explorers sought \_\_\_\_\_.  
(a) the Northwest Passage (b) their fortunes (c) new fishing grounds
7. \_\_\_\_\_ played a large part in forming Oregon as we know it.  
(a) Drought (b) Volcanoes (c) Winds
8. According to the continental drift theory, continents ride on \_\_\_\_\_.  
(a) plates (b) underground lakes (c) oceans
9. The Spanish sailed north looking for \_\_\_\_\_.  
(a) food (b) furs (c) gold
10. Scientists use \_\_\_\_\_ to determine how old things are.  
(a) H<sub>2</sub>O (b) carbon 14 (c) microscopes
11. The first European to land in Oregon was from \_\_\_\_\_.  
(a) England (b) Russia (c) Spain
12. Oregon's coastline is moving \_\_\_\_\_.  
(a) north (b) south (c) east (d) west
13. The Chinese bought \_\_\_\_\_ from Captain Cook's crew.  
(a) fish (b) furs (c) tea
14. Native peoples got their food by \_\_\_\_\_.  
(a) hunting and gathering (b) raiding other tribes (c) gardening
15. The Renaissance and \_\_\_\_\_ helped make people want to explore.  
(a) Queen Elizabeth I (b) economic changes (c) Columbus
16. Wet weather causes \_\_\_\_\_ in western Oregon.  
(a) rising mountains (b) landslides (c) rain shadow
17. Horse Indians such as the \_\_\_\_\_ and \_\_\_\_\_ crossed the Rockies to hunt buffalo.  
(a) Tillamook (b) Cayuse (c) Paiute (d) Modoc (e) Nez Perce

## Discovering Oregon

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18. Peoples along the Columbia and the coast depended on \_\_\_\_ for food.  
(a) buffalo jerky (b) salmon (c) traders
19. The first people to live in North America are called \_\_\_\_\_.  
(a) aborigines (b) cave men (c) Paleo Indians
20. \_\_\_\_ thought he saw the mouth of a great river.  
(a) Ferrelo (b) Heceta (c) Meares
21. The Dalles was a \_\_\_\_\_.  
(a) trading center (b) winter village (c) fishing hole
22. People along the Columbia, and some people along the coast \_\_\_\_ their babies' heads.  
(a) protected (b) flattened (c) covered
23. The first Americans crossed from Asia on a land bridge scientists call \_\_\_\_\_.  
(a) Alcan Trail (b) Beringia (c) Klondike
24. Klamaths and Modocs traded slaves for \_\_\_\_\_.  
(a) salmon (b) canoes (c) roots
25. Peter the Great sent \_\_\_\_ to explore.  
(a) Vitus Bering (b) Alexander Glassenov (c) Columbus
26. Anthropologists study \_\_\_\_\_.  
(a) people (b) ancient ruins (c) animal fossils
27. Ancient people had a sandal factory near  
(a) Newberry Crater (b) Malheur Lake (c) Fort Rock
28. D'Aguiar named \_\_\_\_, the westernmost point in Oregon.  
(a) Cape Blanco (b) Cape Ferrelo (c) Cape Perpetua
29. \_\_\_\_ scoured the Willamette Valley during the ice age.  
(a) Hunters (b) Floods (c) Winds

### Match the words below to their definitions.

- |                                |  |
|--------------------------------|--|
| 30. Beringia _____             | a. language used to make trading easier between people who speak different languages |
| 31. Dormant _____              | b. the single massive continent that some believe broke into our continents today    |
| 32. Geology _____              | c. the theory that the earth's crust is made of semi-rigid plates                    |
| 33. <i>Lingua franca</i> _____ | d. the "dry" side of a mountain range  |
| 34. Magma _____                | e. science that studies earth's origin, history, and structure                       |
| 35. Pangaea _____              | f. not active  |
| 36. Plate tectonics _____      | g. the land bridge that scientists believe once connected Asia and North America     |
| 37. Rain shadow _____          | h. earth's hot and melted core   |