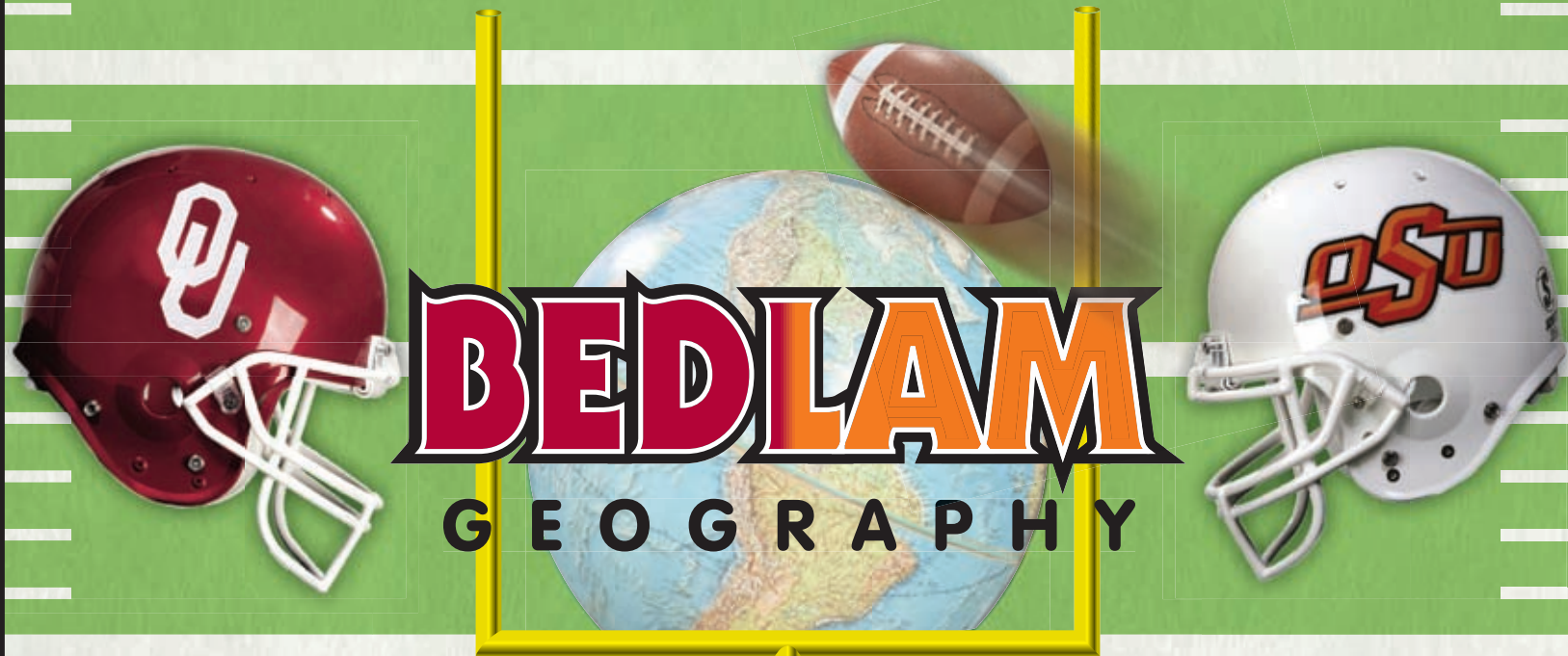


TEACHER'S GUIDE



This educational program brought to you by:

TOPOGRAPHIC
ONE MAN'S VISION • 50 YEARS OF SURVEYING EXCELLENCE



THE OKLAHOMAN

Week One

Questions

- 1.** Claremore, Oklahoma, 148 miles from Norman
- 2.** Cascade Mountain Range
- 3.** Strait of Juan de Fuca
- 4.** Pony Express
- 5.** Big Bend National Park

Trivia:

University of Missouri located in Columbia equidistant between Kansas City and St. Louis



Week Two

Questions

- 1.** Gulf of Mexico
- 2.** North is the most likely answer and should be accepted but north/northwest is most accurate.
- 3.** Houston, because the Johnson Space Center of the National Aeronautics and Space Administration is located there.
- 4.** Ohio River
- 5.** Southwest

Trivia:

Houston is home to most of the major oil and natural gas corporations.

Overtime Activity:

Cinnamon, cocoa, allspice and cumin



Week Three

Questions

- 1.** Source is Columbia Lake in British Columbia, Canada, and the mouth is the Pacific Ocean between the states of Washington and Oregon.
- 2.** A sound is a long wide inlet of the ocean into the land. Long Island Sound in New York City is another famous sound.
- 3.** Temperate and tropical. Temperate rain forests are made up of evergreen conifers; the broad leaf trees are deciduous, not evergreen. Tropical rain forests resemble most people's ideas of a jungle with vines and climbing plants; the most common trees are broad leaf evergreen. The Olympic rain forest is temperate.
- 4.** The Gateway Arch; St. Louis was the starting point for many pioneers heading west.
- 5.** Oklahoma: Black Mesa in the most western part of

Oklahoma and it is 4,973 ft. in elevation. Missouri: Taum Sauk Mt. in the south eastern part of the state is 1,772 ft. in elevation.

Trivia:

Tom Sawyer and Huckleberry Finn. The author was Mark Twain, the pen name of Samuel L. Clemens. Hannibal, Missouri, recently experienced flooding of the Mississippi River.

Overtime Activity:

Totem poles were used as a means of communicating stories, myths and legends. The totem pole is an arrangement of symbols or memory devices in a sequence created for the purpose of recalling a story or event. The eagle is thought to be one the strongest of all the creatures. Because he has the largest wings and the sharpest eyes, he is believed to rule the sky and control everything below. He can cause storms, make lightning and thunder. The raven also ranks high on the totem, overseeing humans and creatures below. Because of his strong beak, creatures fear him. Humans seldom saw the wolf because he attacked at night. He would steal fish and food and was in competition with other creatures. Totem poles are still being made in Washington and Alaska.

Week Four

Questions

Kansas- Verdigris
River at 679 feet

Colorado- Arikaree
River at 3,315 feet

Texas- Gulf of Mexico at 0 feet

Iowa- Mississippi River at 480 feet

Missouri- Saint Francis
River at 230 feet

Texas- 268,601 square
miles (2nd largest US state)

Colorado- 103,730 square
miles (8th largest US state)

Kansas- 82,282 square miles
(15th largest US state)

Missouri- 69,898 square miles
(21st largest US state)

Iowa- 56,276 square miles
(26th largest US state)

Kansas- Topeka

Colorado- Denver

Texas- Austin

Iowa- Des Moines

Missouri- Jefferson City

The famous railroad is
named after Topeka, KS.

Texas is covered by the
most water. Colorado has
the least surface water.

Mining

Trivia:

Massachusetts was home to
John Adams, John Quincy
Adams and John F. Kennedy

Overtime Activity:

The most common mineral
mined in West Virginia is coal.
Colorado is known for mining
coal, uranium, gypsum, marble
and more due to its complex
geologic infrastructure.



Week Five

Questions

- 1.** Texas Christian University
- 2.** Turkey
- 3.** The Ragin' Cajuns of University of Louisiana - Lafayette
- 4.** Lincoln, Nebraska, with its location in the center of the continent, has greater extremes with normal highs of 84°-June, 89°-July, 87°-August, and normal lows of 26°-December, 11°-January and 17°-February. Blacksburg, Virginia, is located closer to the ocean, which moderates its temperature range.
- 5.** The Chisholm Trail, used primarily from about 1866 to about 1884.

Trivia:

Florida State University

Overtime Activity:

Teams are Air Force, Brigham Young University, Colorado State, New Mexico, San Diego State, University of Nevada, Las Vegas, Utah and Wyoming. Most of this area was part of the Mexican Cession in 1848.



Week Six

Questions

1. A pass being thrown at 2:00 pm could be viewed by a fan in New York at 3:00 pm. The time zones in the contiguous United States are Eastern, Central, Mountain and Pacific.

2. The correct answer is A. Fans traveling from Austin, Texas, to Bolder, Colorado, are traveling the farthest at 1,083 miles. It is 436 miles from Texas A&M to Oklahoma State, and 670 miles from Texas Tech to Kansas State.

3. US Highways ending in odd numbers usually travel north and south. US Highways ending in even numbers usually travel east and west.

4. The Chisholm Trail was 1,200 miles long. It went as far south as Brownsville, Texas, and as far north as Abilene, Kansas.

From Kansas the cattle were transported by rail to Northern and Eastern markets where beef was in high demand.



5. International cities with similar longitude include: Mexico City at 99 degrees West; Winnipeg, Canada, at 97 degrees West; and Veracruz, Mexico, at 96 degrees West.

Trivia:

The Texas Longhorns. Spanish explorers left cattle behind when they returned to Spain in order to provide food for future colonists.

Overtime Activity:

Railroad traffic is increasing because of the high cost of fuel. Rail is an efficient way to transport goods and people.

Week Seven

Questions

1. Texas is bordered by Oklahoma, New Mexico, Louisiana and Arkansas. Missouri is bordered by Iowa, Nebraska, Kansas, Oklahoma, Arkansas, Tennessee, Kentucky and Illinois.

2. The rivers that border Texas are the Red River and the Rio Grande. The rivers that border Missouri are the Mississippi River, Missouri River, Saint Francis.

3. Ozark Plateau

4. Ogallala Aquifer

5. Southeastern Missouri

Trivia:

The most destructive tornado on record occurred in Annapolis, Missouri. In 3 hours, it tore through the town on March 18, 1925, leaving a 980-foot wide trail of demolished buildings, uprooted trees and overturned cars. It left 823 people dead and almost 3,000 injured.

[Source: www.50states.com]



Week Eight

Questions

- 1.** They will cross the Red River upon entering Oklahoma. Fans will cross the Washita, Canadian, North Canadian, Deep Fork and Cimarron Rivers on their way to Stillwater.
- 2.** Oklahoma Agriculture and Mechanical College
- 3.** Cotton, corn, oats, wheat and alfalfa.
- 4.** Texas, New Mexico, Colorado and Kansas
- 5.** The Santa Fe Railroad



Trivia:

In 1905, Arthur M. Alden, a history and physiology student, wrote the lyrics to the university's "Boomer Sooner", borrowing the tune from Yale's "Boola-Boola" but improvising on the words. A year later an addition was made to it from North Carolina's "I'm a Tarheel Born" and the two were combined to form the battle song used today. [Source: "<http://www.visit.ou.edu>"]



Week Nine

Questions

1. Red River (Oklahoma on the north), the Sabine River (Arkansas and Louisiana on the east) and the Rio Grande (the Republic of Mexico on the south)

2. 268,601 sq. miles; second in size to Alaska

3. The sky blue field was the color of the flag carried by Choctaw soldiers during the Civil War; stars on the shield represent stars in the sky and symbolize a higher purpose; and both the pipe or calumet and the olive branch are symbols of peace.

4. A plain is a more general term, meaning an extensive area of land that is generally flat, and usually treeless. Plains, however, can be humid and often forested, semiarid and grass-covered,

and even arid. A prairie is a more specific term; it is a type of plain. Prairies are generally grasslands, with very few trees.

5. 11,611 miles
[Source: Oklahoma Water Resources Board]

Trivia:

The source of the Rio Grande is in the Rio Grande National Forest in Colorado, and its mouth is in Brownsville, Texas, where it empties into the Gulf of Mexico.

Overtime Activity:

An aquifer is a saturated underground rock layer with enough available water that can be pumped out or can flow from the ground as a spring or a well. Much of the Southwest and the Great Plains have droughts, making surface water scarce. The Ogallala Aquifer in western Oklahoma is the state's largest groundwater basin.

Week Ten

Questions

- 1.** Colorado, Kansas and Missouri
- 2.** Tornado Alley
- 3.** Flint Hills
- 4.** The University of Kansas at Lawrence and Kansas State University at Manhattan are located 81

miles apart. The Wildcats will travel Southeast from Manhattan to reach Lawrence.

- 5.** Possible answers: Brownsville, Corpus Christi, Galveston, Port Lavaca and Texas City

Trivia:

The University of Texas is the site of the Lyndon B. Johnson (LBJ) Library and Texas A&M University is the site of the George H. W. Bush Library.



Week Eleven

Questions

1. Oklahoma State University. Frank Eaton was the real name of "Pistol Pete", who's caricature has been the official OSU mascot since 1958. At the age of fifteen, Eaton decided to visit Fort Gibson, Oklahoma, a cavalry fort, to learn more about handling a gun. Although too young to join the army, he outshot everyone at the fort and competed with the cavalry's best marksmen, beating them each time. After many competitions, the fort's commanding officer, Colonel Copinger, gave Frank a marksmanship badge and a new nickname. From that day forward, Frank would be known as "Pistol Pete."

2. Austin, Texas, is home to the Colorado River.

3. The Cornhuskers. The strange phenomenon is corn crop circles, which are

flattened, geometric patterns in fields of standing grain.

4. Juarez, Mexico.

Juarez, with a population of 1,500,000, is larger than El Paso, with a population just over 700,000.

5. Rice. In the southern United States, rice has been grown in southern Arkansas, Louisiana and east Texas since the mid 1800s.

Trivia:

The capitol building in Austin, Texas stands seven feet higher than that of the nation's capitol in Washington, D.C.

Overtime Activity:

To date, approximately 12,000 crop circles have been discovered in sites across the world, from locations such as the former Soviet Union, the UK and Japan, as well as the U.S. and Canada.



Week Twelve

Questions

1. Rocky Mountain National Park

2. In Boulder the elevation is 5,430 feet above sea level. "High Altitude" is considered any place above 5,280 feet. At these altitudes the human body is trying to function with air that has low oxygen density. This means there is less oxygen available for the lungs to gather from the surrounding air to fuel the body's work. Symptoms while taking part in activities (including football) include rapid heart rate, headache, nasal congestion, coughing and easy fatigue.

3. Colorado and Kansas share a border.

4. The Great Western Trail (also known as the Texas Cattle Trail and the Dodge City Trail) took cattle from near Bandera, Texas, to Ogallala, Nebraska.

5. From College Station, home of the Texas Aggies, to Waco, Texas, is 92 miles. From Lincoln, home of the Nebraska Cornhuskers, to Manhattan, Kansas, is just a bit farther at 136 miles.

Trivia:

The Barbed Wire Museum is located in La Crosse, Kansas.

Overtime Activity:

Answers will vary depending on the city that is chosen. Latitude and longitude can be found in many sources including atlases, gazetteers and online.



Week Thirteen

Questions

1. Limestone is a sedimentary rock. It is partially soluble. Over the course of many years, erosion has caused the rock to form the castle-like shape it currently has.

[Source: <http://www.washburn.edu/cas/art/cyoho/archive/KStravel/bigrocks/castle.html>]

2. Although tornadoes occur in many parts of the world, these destructive forces of nature are found most frequently in the United States east of the Rocky Mountains during the spring and summer months. [Source: <http://www.nssl.noaa.gov/edu/safety/tornadoguide.html>.]

3. The rose rock. Kansas and Egypt. [Source: <http://www.shopoklahoma.com/lakethun.htm>]

4. 343 miles

5. 200 manmade lakes. Lake Eufaula is 102,400 acres.

Trivia:

Texas Tech. According to the legend, the stone was discovered by a group of petroleum engineers while they were on a field trip. After doing tests it was discovered that the stone was a piece of the original Blarney Stone. The stone now lies on a stand in front of the old Electrical Engineering Building. It is said that seniors who kiss the Blarney Stone upon graduation will receive the gift of eloquent speech.

[Source: <http://www.ttu.edu/traditions/blarney.php>]



Week Fourteen

Questions

- 1.** The highest point is Black Mesa at 4,973 feet above sea level; the lowest point is near Little River at 1,296 feet above sea level.
- 2.** Stillwater is in Payne County, named for David L. Payne, Boomer leader and Norman is in Cleveland County, named for President Grover Cleveland.
- 3.** Lawrence, home of the University of Kansas
- 4.** Arrowhead Stadium in Kansas City
- 5.** Baylor – Waco is on the Brazos; Texas Tech – Lubbock is on the Double Mountain Fork; Texas – Austin is on the Colorado; Texas A&M – College Station is on the Brazos.

Trivia:

Stillwater, home of OSU

Overtime Activity:

Lincoln is Nebraska's capital;
Austin is the capital of Texas.

To the north – Ames,
Iowa, at 42° N, 94° W

To the east – Columbia,
Missouri, at 39° N, 92° W

To the south – Austin,
Texas, at 30° N, 98° W

To the west – Boulder,
Colorado, at 36° N, 115°W





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TOPOGRAPHIC

ONE MAN'S VISION - 50 YEARS OF SURVEYING EXCELLENCE

With the objective of providing specialized surveying and mapping services to the oil industry, John F. Keating founded Topographic in Duncan, Oklahoma. The year was 1958, a time when Mr. Keating operated on a shoestring, often using temporary crewmen. He purchased aerial photography of the areas in which he was working to help him in the field as well as provide a background for his survey plats. Soon, oil companies began to expect the aerial photos with their well location plats. That was just the beginning of innovative services and products that have helped Topographic become Oklahoma's leading surveying company for the oil and gas industry.

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