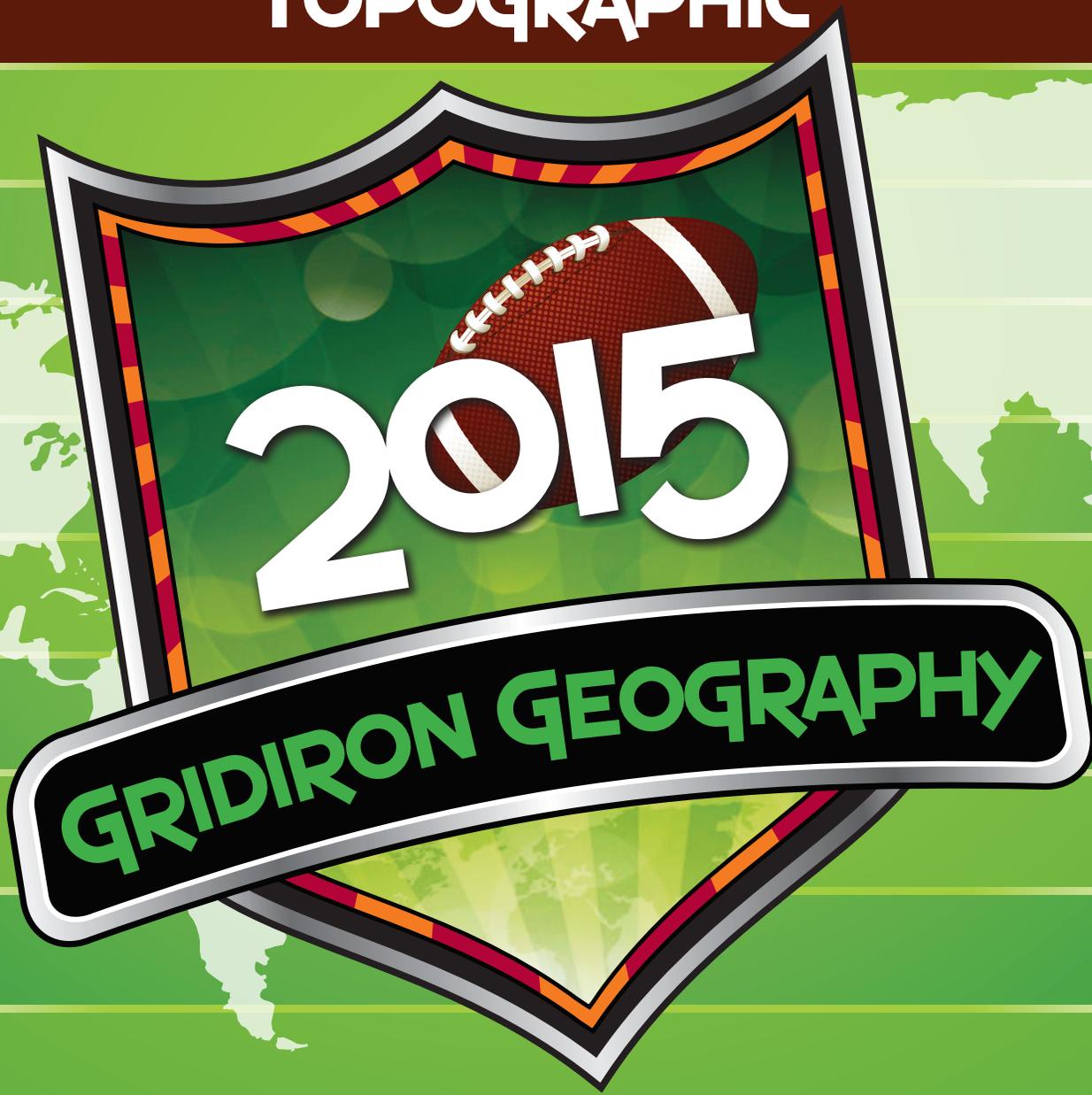


PRESENTED BY

# TOPOGRAPHIC



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# TEACHER'S GUIDE 2015

# WEEK 1 GAMES

Ann Kennedy, OKAGE Teacher Consultant,  
Oklahoma City, OK

## GAME SCHEDULE

Baylor at SMU  
Northern Iowa at Iowa State  
South Dakota State at Kansas

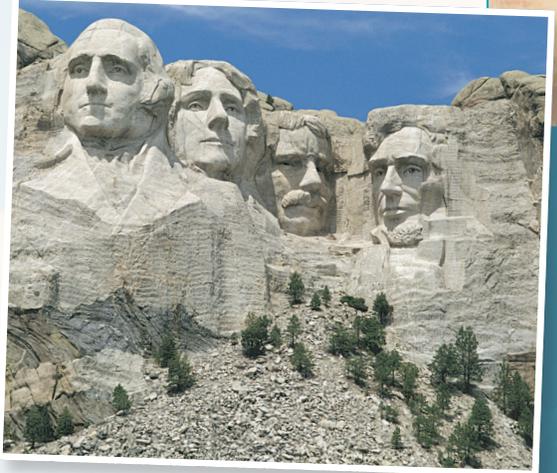
South Dakota at Kansas State  
Akron at Oklahoma  
Oklahoma State at Central Michigan  
Texas at Notre Dame

TCU at Minnesota  
Sam Houston State at Texas Tech  
Georgia Southern at West Virginia

1. A co-champion of the 2014 Big 12 football conference plays the University of Minnesota this week. **Which Big 12 team is this?** The northernmost town in the contiguous United States is Angle Inlet, Minnesota. **What does "contiguous" mean? Using an atlas, a map, or the Internet, identify which Canadian province you would have to pass through to get to Angle Inlet by land. What are the coordinates (latitude and longitude) for Angle Inlet?**
2. The University of Akron will play the Sooners in Norman this week. Akron holds an important place in U.S. history, because the Ohio Women's Rights Convention was held there in 1851. A former slave turned suffragette and abolitionist gave a famous speech critical of those who believed blacks and women were inferior beings. **Who was this famous abolitionist? What was the title of her speech? When and by whom was Akron founded?**
3. Both Kansas State and the University of Kansas will play teams from South Dakota this week. The National Park Service has preserved for future generations two national parks, a national memorial, and a historical trail in South Dakota. **Which national park contains one of the world's largest known fossil beds including fossils of the saber-toothed cat?** Also located in South Dakota are two stretches of the longest river in North

America. **What is the name of this river?** Mount Rushmore National Memorial is located in the Black Hills and features sculpted images of four presidents while celebrating four phases of U.S. history. **Who are they and what are the historical phases?**

4. The geographic center of the 48 contiguous United States is located in one of the states where two Big 12 football games are being played this week. **What is the name of the town and the state where it is located and what are the approximate coordinates?**
5. **Which Big 12 state claims to be the home of the Golden Delicious apple, which it has also named its official state fruit?** This state can also lay claim to the second largest single span steel arch bridge in the Western Hemisphere, and the highest vehicle-carrying bridge in the U.S. **What is the name of the bridge?**



## ➔ OVERTIME ACTIVITY

As cities grow they have to come to terms with parking congestion and impatient drivers. Oklahomans have created two unique ways to deal with these problems. Oklahoma City was the first place ever to have one of these devices used to monitor crowded parking spaces in the downtown area. **What was the device and where was it installed?** A traffic sign commonly seen on roads and highways throughout the U.S. today was invented by an Oklahoma police officer and installed for the first time on the corner of 1st Street and Columbia Avenue in Tulsa in 1950. This sign helps determine the right of way at intersections and regulates merging traffic on highways. **What is this sign and who was its inventor?**

## 2 GRIDIRON GEOGRAPHY 2015

### WEEK 1: AUGUST 31-SEPTEMBER 6 ANSWERS:

1. TCU plays University of Minnesota this week. Contiguous means that the states are touching or in near proximity and *nearly* touching. Therefore, there are 48 contiguous United States, excluding Alaska and Hawaii. One must drive through the Canadian province of Manitoba to get to Angle. Angle is located at approximately 49°34' N, 95°07' W.  
<http://mentalfloss.com/article/32090/over-borderline-little-bit-minnesota-could-have-gone-canadian>  
<http://dictionary.reference.com/browse/contiguous>  
<http://www.latlong.net/>
2. Sojourner Truth delivered a speech that became known as "Ain't I a Woman?" Irish immigrants who arrived to help build the Ohio and Erie Canal in 1825 were Akron's earliest residents.  
[http://www.ohiohistorycentral.org/w/Sojourner\\_Truth](http://www.ohiohistorycentral.org/w/Sojourner_Truth)  
<http://www.loc.gov/exhibits/odyssey/educate/truth.html>  
[http://www.ohiohistorycentral.org/w/Akron,\\_Ohio](http://www.ohiohistorycentral.org/w/Akron,_Ohio)
3. Fossil remains of ancient mammals such as the rhino, the horse, and the saber-toothed cat can be found in Badlands National Park. Two free flowing stretches of the Missouri River, the longest in North America, make up a national recreational river in South Dakota and Nebraska. Carved into Mount Rushmore are the heads of George Washington, Thomas Jefferson, Theodore Roosevelt, and Abraham Lincoln; they represent the birth, growth, development, and preservation of the country.  
<http://www.nps.gov/state/sd/index.htm>  
<http://www.nps.gov/badl/index.htm>  
<http://www.nps.gov/mnrr/index.htm>  
<https://www.travelsouthdakota.com/explore-with-us/great-8/mount-rushmore>
4. The geographic center of the 48 contiguous United States (excluding Alaska and Hawaii) is located about two miles northwest of Lebanon, Kansas. Its absolute location is about 39°50'N, 98°35'W.  
<http://www.kansastravel.org/geographicalcenter.htm>  
<http://www.roadsideamerica.com/tip/7032>

5. West Virginia is the originator of many vegetable and fruit crops, including the Golden Delicious apple. Crossing more than 800 feet above the river below, the New River Gorge Bridge was built between 1974 and 1977, and is featured on the West Virginia quarter.  
<http://www.wvculture.org/history/goldendelicious02.html>  
[http://www.specialtyproduce.com/produce/Golden\\_Delicious\\_Apples\\_120.php](http://www.specialtyproduce.com/produce/Golden_Delicious_Apples_120.php)  
<http://www.bridgewalk.com/facts-about-the-new-river-gorge-bridge.html>  
<http://www.wvcommerce.org/travel/travelplanner/listing/Bridge-Walk/5677/default.aspx>  
<http://www.theus50.com/westvirginia/quarter.php>

### OVERTIME ANSWER:

The world's first parking meter, known as Park-O-Meter No. 1, was installed on the southeast corner of what was then First Street (now Park Avenue) and Robinson Avenue on July 16, 1935, in Oklahoma City. The original Park-O-Meter is now located in the Oklahoma History Center. Clinton E. Riggs of Tulsa is credited with having invented the "yield" sign.  
<http://www.history.com/this-day-in-history/worlds-first-parking-meter-installed>  
<http://www.roadtrafficsigns.com/a-brief-history-of-the-yield-sign>  
<http://thislandpress.com/12/09/2010/the-father-of-the-yield/>  
<http://archiver.rootsweb.ancestry.com/th/read/RIGGS/1997-10/0877890429>

### TRIVIA ANSWER:

The University of Oklahoma has had five Heisman Trophy winners:  
Sam Bradford, 2008  
Jason White, 2003  
Billy Sims, 1978  
Steve Owens, 1969  
Billy Vessels, 1952

Oklahoma State University has had one:

Barry Sanders, 1988

<http://www.soonersports.com/ViewArticle.dbml?ATCLID=208798465>  
<http://heisman.com/roster.aspx?path=football>

# WEEK 2 GAMES

Joseph Rohr, OKAGE Teacher Consultant,  
Tulsa, OK

## GAME SCHEDULE

Lamar at Baylor  
Iowa at Iowa State  
Memphis at Kansas

Kansas State at Texas-San Antonio  
Oklahoma at Tennessee  
Central Arkansas at Oklahoma State  
Rice at Texas

Stephen F. Austin at TCU  
UTEP at Texas Tech  
Liberty at West Virginia

- The West Virginia Mountaineers meet the Liberty University Flames on the gridiron this week. **Liberty University is located in what city? What historical and geographical significance did this city serve during the Civil War?**



- The Lamar Cardinals "fly" in to Waco to meet the Baylor Bears this week. **Where is Lamar University located? What event happened there in 1901 that forever changed the city's history?**

week. **What are the hometowns of these two universities? What major highways and interstates will Bear fans travel to get to the game? Using a map search engine (e.g., Google Maps or mapquest.com), road maps, or a road atlas, figure the approximate number of miles traveled and travel time one way and round trip using ONLY two (2) highways.**

- One of the Big 12 universities is located in a state that did not have a state flag for many years. Although this state entered the Union in 1846, it did without an official flag until 1921. **Which state is this? What Big 12 university is located there? Write a brief description of the history of this state flag.**



- The Memphis Tigers will be on the prowl for the Kansas Jayhawks in Lawrence. On May 8, 1541, a major geographic feature was "discovered" by an early European explorer around the Memphis area. **Who was this explorer and what feature did he find?**

- The Central Arkansas Bears will come roaring into Oklahoma to play the OSU Cowboys this

## ➔ OVERTIME ACTIVITY

Teachers, divide your students into 10 groups, and assign each group one of the Big 12 teams (e.g., West Virginia Mountaineers). Then, have each group see how many words they can make using three (3) or more letters from the letters of their team. Give them a time limit and a two-minute warning before having each group report the total number of "real" words they found.



## WEEK 2: SEPTEMBER 7-SEPTEMBER 13

- Liberty University is situated in Lynchburg, Virginia, which served as a major rail and canal center, supply depot, and hospital complex for the Confederacy. Produce from the Upper Shenandoah Valley could be shipped there by road or stream and from there to Richmond on the James River Canal, the Southside Railroad, or the O&A Railroad via Charlottesville and Gordonsville. The Southside Railroad linked Richmond with the western Confederacy through its connections with the Virginia & Tennessee Railroad. The Southside Railroad continued to supply Richmond, with interruptions from Federal raiders, until the Battle of Five Forks.  
<http://thomaslegion.net/battleoflynchburg.html>

- Lamar University is located in Beaumont, Texas. On January 10, 1901, the Lucas Gusher on Spindletop Hill exploded, shooting oil hundreds of feet in the air. The explosion was so intense that nine days later the oil column was still gushing nearly 200 feet high, producing around 100,000 barrels a day. The Lucas Gusher dramatically displayed the natural resource that lay below Beaumont. Within a few days of the Lucas Gusher explosion, over 40,000 curious sightseers, speculators and job-seekers descended on Beaumont. Restaurants, hotels, and retail establishments were overwhelmed as the city's population grew from 9,000 in January 1901, to 30,000 in March 1901, leading to a Texas-sized building boom.  
<http://www.beaumontcvb.com/about-beaumont/history/>  
<http://www.spindletop.org/>

- History books will tell you that on May 8, 1541, the Spanish explorer **Hernando de Soto** first came upon the mighty Mississippi River somewhere around the present day city of Memphis, Tennessee.  
<http://www.tnhistoryforkids.org/cities/memphis>  
<http://www.history.com/this-day-in-history/de-soto-reaches-the-mississippi>

- Oklahoma State University is located in Stillwater OK, and Conway AR is home to the University of Central Arkansas. Using only Interstate 40 and US 177, it is about 335 miles and five (5) hours travel time one way, about 670 miles and 10 hours travel time round trip.

<http://go.okstate.edu>

<http://uca.edu>

Using Google Maps—<https://goo.gl/maps/xs4iG>

Using Mapquest—<http://mapq.st/117ncir>

- Iowa did not have a state flag after joining the Union in 1846. When the U.S. participated in the World War I in 1917, Iowa still did not possess a flag. The Iowa National Guardsmen noticed that other state units carried special banners that gave them individual identities. They too felt the need of an appropriate flag to represent themselves. Governor William L. Harding mulled over this proposal and agreed. The Daughters of the American Revolution (D.A.R.) of Iowa set up a flag committee and arranged for a banner designing competition in 1917. The best designer was Mrs. Dixie Cornell Gebhardt who produced the most apt banner. This became the Iowa Regimental Flag, which was later adopted as the state flag on March 29, 1921, by the General Assembly of Iowa. The Big 12 university located in the state is Iowa State University.  
<http://www.mapsofworld.com/usa/state-flags/iowa-flag.html>

## OVERTIME ANSWER:

Answers will vary!

## TRIVIA ANSWER:

There are four land grant colleges in the Big 12: Iowa State University, Kansas State University, Oklahoma State University, and University of West Virginia.

[http://www.higher-ed.org/resources/land\\_grant\\_colleges.htm](http://www.higher-ed.org/resources/land_grant_colleges.htm)

<http://www.aplu.org/members/our-members/>

# WEEK 3 GAMES

Ginny Rohr, OKAGE Teacher Consultant, Tulsa

Iowa State at Toledo Louisiana Tech at Kansas State	Tulsa at Oklahoma UTSA at Oklahoma State California at Texas	SMU at TCU Texas Tech at Arkansas
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**1.** The University of Oklahoma will host the University of Tulsa this week. In 1925, Tulsa's "Father of Route 66" was named to lead the creation of a national highway system from Chicago to Los Angeles. **What is his name? Identify the eight states through which Route 66 passes. What interstate highways parallel and have largely replaced Route 66 in Oklahoma? Name the three time zones that the highway crosses.**



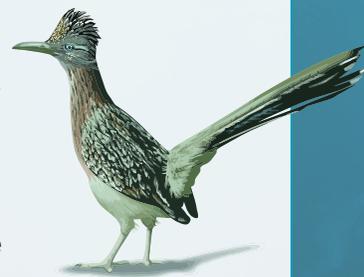
**2.** The University of Toledo will host Iowa State in the Glass Bowl stadium named in honor of Toledo's primary industry. Known as "The Glass Capital of the World," **name some of its early glass companies and products. By what Depression Era organization was the Glass Bowl originally built?**

**3.** This week the Kansas State Wildcats will host the Louisiana Tech Bulldogs. **In what towns are the two schools located? What is the relative location of each school to the other? What are their absolute locations?**

**4.** The University of California at Berkeley plays the University of Texas at Austin this week. In the face of California's most severe drought on record, Gov. Jerry Brown issued an executive order that called for a 25%

reduction in water use. **What restrictions did this order place on the public? View the U.S. Drought Monitor map, <http://droughtmonitor.unl.edu/>, to compare and contrast California's and Texas's current conditions. What were their conditions three months ago?**

**5.** UTSA will travel to Stillwater this week. **Using state highway maps or the Internet, determine on what interstate highway Roadrunner fans will probably drive? How many miles? If the average speed is 60 miles per hour, about how long will it take to make the trip?**



## ➔ OVERTIME ACTIVITY



Three Oklahoma schools will be on the gridiron this week. Oklahoma's own Woody Guthrie is one of America's most influential folksingers. **Sing and/or play an instrument along with his most famous song, "This Land Is Your Land" <http://www.pbs.org/wnet/americanmasters/this-land/sheet-music-and-lyrics/>.** You can also click the link "See & Hear the Latest Video Uploads" to join people singing it across the USA!

**Locate the geographical locations or terms mentioned in Guthrie's song on a U.S. map.**

## 4 GRIDIRON GEOGRAPHY 2015

### WEEK 3: SEPTEMBER 14-SEPTEMBER 20

1. Cyrus Stevens Avery received the honorary title of the "Father of Route 66" because of his advocacy of building good roads in the early 20th century. In Oklahoma, I-44 and I-40 handle most of the traffic that used to travel Route 66. Route 66 passes through the states of Illinois, Missouri, Kansas, Oklahoma, Texas, New Mexico, Arizona, and California. The three time zones are Central, Mountain, and Pacific.

- <http://www.osu-tulsa.okstate.edu/library/images/CA3.gif>
- [https://www.osu-tulsa.okstate.edu/library/Father\\_of\\_Route\\_66\\_Biography.htm](https://www.osu-tulsa.okstate.edu/library/Father_of_Route_66_Biography.htm)
- <http://www.route66university.com/maps/oklahoma.php>
- <http://ncppt.nps.gov/rt66/>
- <http://www.historic66.com/>
- <http://www.worldatlas.com/webimage/countrys/namerica/usstates/timezone.htm>

2. The Libbey Glass Company began when the New England Glass Company moved to Toledo from East Cambridge, Massachusetts, in 1887 and changed the name in 1892, specializing in glass tableware.

Edward Libbey's greatest achievements in the glass industry were a result of his support of the inventions of Michael J. Owens, who developed the technologies to automate the manufacture of electric light bulbs, kerosene lamp fonts, bottles, and window glass.

In 1930, the Libbey-Owens flat-glass operation merged with the Edward Ford Plate Glass Company. The Libbey-Owens-Ford Company became a major producer of flat glass for the automotive and building products industries.

In 1936, the first building to be completely covered in glass was constructed in Toledo: a building for the Owens-Illinois Glass Company and a milestone in architectural design.

The original Glass Bowl was built in 1936 by the Works Progress Administration (WPA) which provided jobs for thousands of unemployed during the Great Depression.

- <http://www.utrockets.com/ViewArticle.dbml?ATCLID=1255490>
- <http://www.toledomuseum.org/glass-pavilion/glass-at-tma/the-glass-city/>
- [https://www.utoledo.edu/library/canaday/HTML\\_findingaids/MSS-066.html](https://www.utoledo.edu/library/canaday/HTML_findingaids/MSS-066.html)

3. Manhattan is the home of Kansas State University, while Louisiana Tech is located in Ruston, Louisiana. Relatively speaking, Manhattan is located northwest of Ruston; Ruston is southeast of Manhattan.

Absolute locations:

	<a href="http://citylatitudelongitude.com/">http://citylatitudelongitude.com/</a>	<a href="https://www.maptechnica.com">https://www.maptechnica.com</a>
Manhattan, KS	39.19 N, 96.58 W	39.17, -96.60
Ruston, LA	32.52 N, 92.64 W	32.52, -92.62

- <http://citylatitudelongitude.com/>
- <http://citylatitudelongitude.com/KS/Manhattan.htm>
- <http://citylatitudelongitude.com/LA/Ruston.htm>

<https://www.maptechnica.com/>

<https://www.maptechnica.com/us-city-area-map/city/Manhattan/state/KS/city-id/2044250>

<https://www.maptechnica.com/us-city-area-map/city/Ruston/state/LA/cityid/2266655>

4. Californians cannot wash sidewalks and driveways or use hoses without shut-off nozzles to wash cars, among other restrictions.

Answers on drought conditions will vary since the data below were collected in July and weather conditions may have changed between then and mid September.

Current map (mid July, 2015):

Most of California in shades of red - extreme to exceptional drought.

Small section in central Texas in yellow - abnormally dry.

Map three months ago (mid April, 2015):

California – mostly extreme to exceptional drought.

Large portions of Texas were also experiencing moderate to exceptional drought.

[http://www.cpuc.ca.gov/PUC/Water/Drought\\_Information.htm](http://www.cpuc.ca.gov/PUC/Water/Drought_Information.htm)

<http://droughtmonitor.unl.edu/Home/RegionalDroughtMonitor.aspx?south>

<http://droughtmonitor.unl.edu/Home/RegionalDroughtMonitor.aspx?west>

5. UTSA is the University of Texas at San Antonio. Travelling from San Antonio to Stillwater, most drivers would take I-35 north (about 493 miles) to the exit onto Oklahoma highway 51; this would result in a total of about 525 miles or about 8 hours and 45 minutes of travel time.

<https://goo.gl/maps/r6PrD>

<http://www.okladot.state.ok.us/Maps/state/index.htm>

<http://www.txdot.gov/inside-txdot/forms-publications/maps.html>

### OVERTIME ANSWER:

Here are places and terms used in "This Land Is Your Land": land, California, New York island, red wood forest, Gulf Stream waters, highway, skyway, valley, sands, deserts, sun, wheat fields, dust clouds, and fog.

<http://www.pbs.org/wnet/americanmasters/this-land/sheet-music-and-lyrics/>

<http://www.pbs.org/wnet/americanmasters/this-land/videos/>

<https://youtu.be/wxiMrvDbq3s>

<http://www.loc.gov/collections/woody-guthrie-correspondence-from-1940-to-1950/about-this-collection/>

<http://woodyguthriecenter.org/>

### TRIVIA ANSWERS:

The University of Tulsa football teams played in five (5) consecutive post-season bowl games: the 1942 Sun Bowl, the 1943 Sugar Bowl, the 1944 Sugar Bowl, the 1945 Orange Bowl, and the 1946 Oil Bowl.

<http://experientetulsaathletics.com/sports/football/tradition/>

# WEEK 4 GAMES

Rob Miles, OKAGE Teacher Consultant,  
Putnam City Schools, Oklahoma City

**GAME SCHEDULE**

Rice at Baylor Kansas at Rutgers	Oklahoma State at Texas TCU at Texas Tech	Maryland at West Virginia
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**1.** This week the Maryland Terrapins travel to Morgantown to play the West Virginia Mountaineers. Maryland is one of the original 13 colonies and one of the oldest states; West Virginia was created during the Civil War and is one

of the younger states. **Using an almanac, encyclopedia, the Internet, or another resource, find the following facts about both states: state capital, state song, state flower, and at least one famous person from that state.**



**what town is at about the halfway point?**

**4.** The Rice Owls will fly into Waco to take on the Baylor Bears this week. Rice University is located in Houston, a major port city in the United States, thanks to its proximity to four large bays. **What are the**

**names of these bays?** A long, narrow island separates Houston from a large oceanic feature. **What is the name of that island and what is the large body of water to the southeast of the island?**

**5.** The five games played by Big 12 teams this week will occur in two time zones. **What time zones are these, and which games will be played in which zone?**

**2.** Rivers have always played a very important part in the growth of cities. All five of the cities hosting Big 12 football games this week have rivers running through them. **Name the five cities and their rivers.**

**3.** Texas Tech and Texas Christian University will face off this week in Lubbock. **On what two major highways will TCU fans travel for the majority of their trip and how long will it take them to get there if they travel at 70 miles an hour? Which cardinal direction will they travel for most of the trip? If the Horned Frogs' fans leave early and want to stop for breakfast,**

## ➔ OVERTIME ACTIVITY

Fans of the Kansas Jayhawks will travel to New Jersey this week. Kansas and New Jersey are very different states in many ways. **Using data from the U.S. Census bureau and the Internet, find the following for both states: land area (in square miles); total population; percentage of population that lives in urban areas; farmland (in acres); the number of farms; and the average size of those farms. Write the facts you find on a T-chart or other graphic organizer. Using this information, calculate population density (the number of people per square mile) and answer the following questions:**

**Which state has more land?**

**Which state has more people?**

**Which state has more farmland? How many farms does each state have? What is the average size of the farms in each state?**

**Which state has a higher percentage of people living in cities?**

**Which state has more people per square mile?**

**What do these differences in land use tell you about Kansas and New Jersey?**

### WEEK 4: SEPTEMBER 21-SEPTEMBER 27

	Maryland	West Virginia
Capital	Annapolis	Charleston
Song	Maryland, My Maryland	The West Virginia Hills & 2 others
Flower	Black-eyed Susan	Great Laurel
Famous Person	Frederick Douglass John Wilkes Booth Babe Ruth others	Stonewall Jackson Mary Lou Retton Chuck Yeager others

<http://www.50states.com/maryland.htm>  
<http://www.50states.com/wvirgini.htm>

- 2.** Piscataway, NJ, home of Rutgers University – Raritan River  
Morgantown, WV, home of West Virginia University – Monongahela River  
Austin, TX, home of University of Texas – Colorado River  
Lubbock, TX, home of Texas Tech University – North Fork Double Mountain Fork Brazos River  
Waco, TX, home of Baylor University – Brazos River  
For Piscataway: <https://goo.gl/maps/M472F>  
For Morgantown: <https://goo.gl/maps/ekjJC>  
For Austin: <https://goo.gl/maps/A2yh6>  
For Lubbock: <https://goo.gl/maps/EAUvV>  
For Waco: <https://goo.gl/maps/ZpbDW>

- 3.** Most of travel takes place on Interstate 20 and U.S. 84. The trip should take approximately 4 hours and 30 minutes. Most of the drive is to the west and, depending on which measurement the student uses, the actual halfway point is Tye, Texas, a small town just west of Abilene, Texas (<- 158 miles, 156 miles ->). Abilene is close to half way if you choose to accept it as an answer.  
<https://goo.gl/DMpqFc>

- 4.** The four bays that handle most of Houston's port traffic are Trinity, Galveston, East, and West Bays. Galveston Island separates the bays from the Gulf of Mexico.

<https://goo.gl/maps/WL1MH>

- 5.** The Kansas-Rutgers and West Virginia-Maryland games will be played in the Eastern Time Zone. The Central Time Zone will host the Oklahoma State-Texas, Texas Tech-Texas Christian, and Baylor-Rice games.

[http://www.nationsonline.org/oneworld/map/US-timezone\\_map.htm](http://www.nationsonline.org/oneworld/map/US-timezone_map.htm)

### OVERTIME ANSWERS:

	Kansas	New Jersey
Land area	81,815	7,417
Total population	2,853,118	8,791,894
Farmland	46,000,000 acres	1,000,000 acres
# of Farms	66,000	10,000
Farm size	705 acres	71 acres
Urban population %	74.2%	94.68%
Population Density	34.9	1,195.5

Overtime Answers will vary depending on what conclusions students may draw from differences in land use in Kansas and New Jersey.

<http://www.ipl.org/div/stateknow/popchart.html>

### TRIVIA ANSWERS:

Rutgers University was chartered in 1766 (21 years before New Jersey became a state) as Queen's College, an all-male school, in New Brunswick, New Jersey. Today Rutgers has additional campuses in Newark and Camden.

<http://www.rutgers.edu/about/about-university>  
<http://www.rutgers.edu/about/history>

# WEEK 5 GAMES

Jeffrey M. Widener, GIS Librarian,  
The University of Oklahoma, Norman

## GAME SCHEDULE

Texas Tech vs. Baylor (Arlington)  
Kansas at Iowa State

Kansas State at Oklahoma State  
West Virginia at Oklahoma

Texas at TCU

**1.** The Kansas Jayhawks travel to Ames, Iowa, to take on the Cyclones. These two states are named after Native American tribes: the Kaw (Kansa or Kanza) Nation and the Iowas (or Bah Kho-Je). Both tribes were forcibly resettled by the federal government. **Where are the tribal headquarters for these two tribes today? Determine where the Kaw Nation and Iowas originally settled. Using a good road atlas or Google Maps, estimate how far these tribal members are from their original homelands.**



a garden that honors Ada Lois Sipuel Fisher. **Who was Ada Lois Sipuel Fisher? What is her significance in Oklahoma and United States history?**

**3.** The Kansas State Wildcats will try to catch the Oklahoma State Cowboys in Stillwater this week. Kansas and Oklahoma share a similar colonial legacy. **Which foreign powers have previously controlled the present day areas of both Kansas and Oklahoma?**

**4.** The Texas Longhorns will generally follow the old Chisholm Trail as they make their way from Austin to Fort Worth to take on the Horned Frogs of Texas Christian University. While the Chisholm Trail was traveled by cattle, the new Chisholm Trail Parkway caters to motorists. **Do an Internet search for "Chisholm Trail Parkway." What is it, and what alternative does it give to commuters?**

Tech Raiders will be played at AT&T Stadium in Arlington, Texas. While these two teams battle each year, battles over water occur in this state every day as its population increases. Using the Internet, research Lake Alan Henry and the John T. Montford Dam. **When were the dam and reservoir constructed? Who was John T. Montford? What is Lake Alan Henry for? How is water transported to Lubbock? Discuss the consequences and benefits of damming rivers.**



**5.** The game between the Baylor Bears and the Texas

**2.** The West Virginia Mountaineers play the Oklahoma Sooners in Norman's "Palace on the Prairie" this week. Fans visiting OU's Norman campus might follow a footpath to



### ➔ OVERTIME ACTIVITY

October 3rd is National Techies Day. It was created in 1999 to raise awareness about careers in technology. **Take some time to search the Internet for careers that incorporate geography and geospatial technology.**

## 6 GRIDIRON GEOGRAPHY 2015

### WEEK 5: SEPTEMBER 28-OCTOBER 4

1. The Kaw Nation headquarters are in Kaw City, Oklahoma, and the Iowas headquarters are in Perkins, Oklahoma. The Iowas tribe was split-up during relocations, and there is also an Iowas headquarters in White Cloud, Kansas, for the Iowas Tribe of Kansas and Nebraska.

The Iowas in Oklahoma are 500-600 miles from their original homeland. The tribe in Kansas and Nebraska is about 250-300 miles from their original homeland. The Kaw Nation is about 200-300 miles from the lands they originally inhabited.

Blue Clark, *Indian Tribes of Oklahoma: A Guide* (Norman: University of Oklahoma Press, 2009), 159-72

<http://bahkhoje.com>

<http://iowatribeofkansasantnebraska.com/>

[http://kawnation.com/?page\\_id=72](http://kawnation.com/?page_id=72)

2. Ada Lois Sipuel Fisher, born in Chickasha, Oklahoma, attended Langston University, graduating with a degree in English. Upon completion of that degree, Fisher wanted to attend law school, so she applied to the University of Oklahoma. OU President George Lynn Cross, said there was no academic reason not to admit her; however, Oklahoma's laws prohibited whites and blacks from attending classes together, so her application was rejected because Fisher was an African American. Fisher hired lawyers, including Thurgood Marshall (who later became a U.S. Supreme Court justice) and her case made it to the U.S. Supreme Court. After three years of litigation, Fisher was admitted to OU and became the first African American woman to attend an all-white law school in the South, though she was forced to sit in the back of the room behind a row of empty seats and a wooden railing with a sign designated "colored," separating her from the rest of her classmates. She went on to graduate, and became a prominent figure in the Civil Rights movement and a role model for African Americans. In 1992 she was appointed to serve on the Board of Regents of the University of Oklahoma, the group that had rejected her law school application in 1946.

<http://www.okhistory.org/kids/crintegration>

<http://www.okhistory.org/publications/enc/entry.php?entry=FI009>

3. The European powers of Spain and France, for short periods of time, controlled the area of Kansas and Oklahoma before the Louisiana Purchase of 1803.

<https://history.state.gov/milestones/1801-1829/louisiana-purchase>

4. Opening partially in mid-2014, the Chisholm Trail Parkway is a north/south, "cashless" toll road that is located west of downtown Fort Worth. This means that the vehicle must have a "TollTag" (similar to Oklahoma's PikePass) to pay the toll, as there are no gates where a driver can pay cash to use the road. The Chisholm Trail Parkway gives commuters another option instead of traveling on the much busier Interstate 35W.

<https://www.ntta.org/roadsprojects/projprog/ChisholmTrail/Pages/default.aspx>

5. Planning for the dam began in the 1960s. The permit to build the dam, however, wasn't granted until the 1980s. Construction began in 1991 and took two years to finish. John T. Montford is a former Texas Senator (1983-1996) who helped pass legislation in Washington, D.C., to create the project. The lake was created as a "tertiary drinking water supply" to help relieve water pressure from Lubbock's population growth and to provide another source of water besides the Ogallala Aquifer to farmers in the largest cotton growing region in the U.S. Three pumping stations force water into a 65 mile-long pipeline from the lake to the City of Lubbock. The water is then mixed with one of the city's wells so that it can be treated to become safe for drinking.

Discussing the consequences and benefits of damming rivers will require some extra research. A good resource is the third source, an article in *Texas Parks & Wildlife*, July 2004.

<http://www.mylubbock.us/departamental-websites/departments/lake-alan-henry/about-us>

<https://www.ci.lubbock.tx.us/docs/default-source/storm-water-management/lubbock's-water-project-moves-forward.pdf?sfvrsn=0>

[https://www.tpwmagazine.com/archive/2004/jul/ed\\_8/](https://www.tpwmagazine.com/archive/2004/jul/ed_8/)

### OVERTIME ANSWER:

Answers will vary.

<http://nationaldaycalendar.com/national-techies-day-october-3/>

### TRIVIA ANSWER:

The state is Iowa. The Missouri/Big Sioux River forms the western border while the Mississippi River makes up the eastern border.

<http://www.history.com/topics/us-states/iowa>

# WEEK 6 GAMES

Heather Braucher, OKAGE Teacher Consultant,  
Claremore, OK

**GAME SCHEDULE**

Baylor at Kansas Iowa State at Texas Tech	Oklahoma vs. Texas (Dallas) Oklahoma State at West Virginia	TCU at Kansas State
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**1.** This week the annual Red River Rivalry takes place. **What two Big 12 teams will face off for this game? Historically, the Red River has been claimed by what nations besides the U.S.?**

**2.** Players and fans of the Oklahoma State Cowboys will travel this week to Morgantown, WV, which lies next to the Monongahela River. **This river eventually joins with the Alleghany River to form what major river? Also, the confluence of these rivers is in what steel producing city in Pennsylvania?**



The Monongahela River has been modified by the U.S. Army Corps of Engineers so that it is deep enough for tow boats and barges to navigate. **Name a major river in Oklahoma**

**that has also been modified like the Monongahela.**

**3.** Manhattan, home of Kansas State University, and Fort Worth, home of Texas Christian University, are significantly different sized cities. **Use <http://www.city-data.com/> to look up the population and land area of each city. What is the population and land area of**

**each city? Next, divide the number of people by the land area in square miles to get the approximate population density for each city. Which city is more densely populated? What issues can arise from a**

**densely populated city?**

**4.** Iowa State fans who decide to drive to Lubbock to watch their team play Texas Tech must travel about 925 miles. **If they use a portion of Interstate 70,**

**Cyclones players and fans will pass through the home of what other Big 12 team that will be hosting another Texas team this week? What is the visiting Texas team?**



**5.** Thousands of Sooner fans will drive south using Interstate 35 to watch the Oklahoma Sooners play the Texas Longhorns at Cotton Bowl Stadium this week. On the route the fans will drive fairly close to several large lakes. **Use the Internet (e.g., Google Maps or Mapquest) or a highway atlas and follow the route to locate and name these lakes. Which lakes are manmade? What two major rivers in Oklahoma meander along I-35, in Oklahoma?**



## ➔ OVERTIME ACTIVITY

The controversial Keystone XL Pipeline project involves building a 1,179 mile pipeline from Hardisty, Alberta, Canada, to Steele City, Nebraska. **Visit <http://keystone-xl.com/> to determine the route. What U.S. states will the Keystone XL pipeline run through if it is completed as planned? What economic benefits may result from the pipeline's construction? What are the possible environmental effects?**

### WEEK 6: OCTOBER 5-OCTOBER 11

**1.** In one of the oldest contests in college football, the Oklahoma Sooners and the Texas Longhorns will meet in the Cotton Bowl in Dallas, Texas, in the "Red River Rivalry." At various times, Spain, France, Mexico, and the Republic of Texas have maintained their ownership of the lands bordered by the Red River.

<https://tshaonline.org/handbook/online/articles/hcr05>  
[https://en.wikipedia.org/wiki/United\\_States\\_territorial\\_acquisitions\\_-\\_media/File:Non-Native-American-Nations-Territorial-Claims-over-NAFTA-countries-1750-2008.gif](https://en.wikipedia.org/wiki/United_States_territorial_acquisitions_-_media/File:Non-Native-American-Nations-Territorial-Claims-over-NAFTA-countries-1750-2008.gif)

**2.** The Alleghany River flows into the Ohio River near Pittsburgh, Pennsylvania. The Arkansas River in eastern Oklahoma has been modified to form the McClellan-Kerr Navigation System from the Port of Catoosa through Arkansas to the Mississippi River.

[https://en.wikipedia.org/wiki/Monongahela\\_River\\_-\\_media/File:Monongahela\\_River.png](https://en.wikipedia.org/wiki/Monongahela_River_-_media/File:Monongahela_River.png)  
<http://www.aopoa.net/maps.html>

**3.** Manhattan, Kansas, has a population of 56,000 living in 15 square miles, while Fort Worth, Texas, has 792,000 people and 292 square miles. Thus, the population density for Manhattan is about 3,700 people per square mile and Fort Worth is about 2,700 people per square mile. The more densely populated an area, the more concern there is for improved city infrastructure, such as roads and highways, public transportation, sanitation, police and fire protection, schools, public housing, etc.

<http://www.city-data.com/city/Manhattan-Kansas.html>  
<http://www.city-data.com/city/Fort-Worth-Texas.html>

**4.** I-70 passes through Lawrence, Kansas, home of the University of Kansas Jayhawks, who will play host to the Baylor University Bears.  
<https://goo.gl/maps/FQyih>

**5.** All the lakes between Norman, Oklahoma, and Dallas, Texas, are manmade lakes. These include the Lake of the Arbuckles, Lake Murray, Lake Texoma, Lake Ray Roberts, Lewisville Lake, and Grapevine Lake. The two rivers in Oklahoma that are fairly near I-35 are the Canadian River and the Washita River.  
<https://goo.gl/maps/8wxf3>

#### OVERTIME ANSWER:

The planned route of the Keystone XL pipeline is through Montana, South Dakota, and Nebraska. Answers will vary on the economic benefits and/or environmental effects of the completed pipeline. The NPR source below gives what is probably the least biased views of the impact of the Keystone XL pipeline.

<http://www.transcanada.com/keystone.html>  
<http://keystone-xl.com/>  
<http://www.nrdc.org/energy/keystone-pipeline/>  
<https://stateimpact.npr.org/texas/tag/keystone-xl-pipeline/>

#### TRIVIA ANSWER:

21-year-old Elvis Presley performed a concert during the Texas State Fair in 1956.

[http://www.fairpark.org/index.php?option=com\\_content&view=article&id=178](http://www.fairpark.org/index.php?option=com_content&view=article&id=178)  
<http://www.elvis-history-blog.com/elvis-dallas-56.html>

# WEEK 7 GAMES

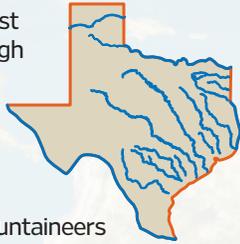
Annie Elsberry, OKAGE Teacher Consultant,  
Pawhuska, OK

## GAME SCHEDULE

West Virginia at Baylor  
Oklahoma at Kansas State

Texas Tech at Kansas  
TCU at Iowa State

1. The longest river contained almost entirely in Texas meanders through Baylor University's hometown. **Name this town? What is the name of the river? Identify its source, mouth, and length.**



2. This week the West Virginia Mountaineers will travel to Waco, Texas to take on the Baylor Bears. The watershed of one of the rivers in Texas begins in the Caprock Escarpment in the High Plains. **What is an escarpment? How is an escarpment formed and what famous landmark on the United States-Canada border is an example of this?**

3. Two Big 12 football games this week will be played in Kansas as home games for the Jayhawks and the Wildcats. **In what county is each of these located and what is the county seat?**



4. Iowa State has a home game this week. Most states share borders with two or three states. Iowa is bordered by six states. **Name those six states, list their capital cities, and the current governor of each. What other Big 12 state is also bordered by six states?**

### ➔ OVERTIME ACTIVITY

Land grant colleges are institutions of higher learning that were established under the Morrill Act of 1862. These universities were to teach "agriculture and mechanical arts" to meet the nation's needs for scientifically trained technicians and agriculturalists. Military training was required to be included in the curriculum. **Find this week's list of the college football "AP Top Twenty Teams." Which of these are land grant colleges/universities?**



### WEEK 7: OCTOBER 12-OCTOBER 18

1. The Brazos River flows through Waco, the town where Baylor is located. The source of the Brazos River is in Blackwater Draw, New Mexico, and it empties into the Gulf of Mexico after traveling 1,280 miles.  
<http://www.mapsofworld.com/usa/states/texas/texas-river-map.html>  
<http://waterschool.brazos.org/category/Brazos-River.aspx>
2. An escarpment is an area of earth where the elevation changes suddenly. An escarpment is usually formed by erosion or faulting. The Niagara Falls is an example of an escarpment formed by erosion.  
<http://education.nationalgeographic.com/encyclopedia/escarpment/>  
<http://www.brazos.org/crpFacts.asp>  
<http://www.niagarafrontier.com/origins.html>
3. The University of Kansas is located in Lawrence, the county seat of Douglas County. Manhattan, the home of Kansas State University, is the county seat of Riley County.  
<http://geology.com/county-map/kansas.shtml>  
<http://www.mapsofworld.com/usa/states/kansas/kansas-county-map.html>

4. Iowa shares borders with Minnesota, Missouri, Wisconsin, Illinois, South Dakota, and Nebraska. Their capitals are St. Paul, Minnesota; Jefferson City, Missouri; Madison, Wisconsin; Springfield, Illinois; Pierre, South Dakota; and Lincoln, Nebraska. The governors are Mark Dayton (Minnesota), Jay Nixon (Missouri), Scott Walker (Wisconsin), Bruce Rauner (Illinois), Dennis Daugaard (South Dakota) and Pete Ricketts (Nebraska). Oklahoma is the other Big 12 state that has six bordering states: Kansas, Missouri, Arkansas, Texas, New Mexico, and Colorado.  
[http://www.netstate.com/states/geography/ia\\_geography.htm](http://www.netstate.com/states/geography/ia_geography.htm)  
<https://www.multistate.com/state-resources/governors-legislatures>  
[http://www.netstate.com/states/geography/ok\\_geography.htm](http://www.netstate.com/states/geography/ok_geography.htm)

### OVERTIME ANSWER:

Answers will vary by week.

[http://www.higher-ed.org/resources/land\\_grant\\_colleges.htm](http://www.higher-ed.org/resources/land_grant_colleges.htm)

### TRIVIA ANSWER

West Virginia joined the Big 12 in 2012, leaving the Big East Conference.

[http://espn.go.com/college-football/story/\\_/id/7575097/west-virginia-mountaineers-sever-ties-big-east-conference-join-big-12-july-ncaa-college-football](http://espn.go.com/college-football/story/_/id/7575097/west-virginia-mountaineers-sever-ties-big-east-conference-join-big-12-july-ncaa-college-football)

# WEEK 8 GAMES

Denise Aguilar, OKAGE Teacher Consultant,  
Central Middle School, Lawton, OK

## GAME SCHEDULE

Iowa State at Baylor  
Kansas at Oklahoma State

Kansas State at Texas  
Texas Tech at Oklahoma

**1.** Kansas State University has its main campus in Manhattan, Kansas. K-State has two other campuses in the state located in Salina and Olathe. **From Manhattan, what general direction would you go to reach each campus, and what Interstate highways would you take to get there?**

**2.** Although Will Rogers was a native Oklahoman, a statue of Rogers on his horse, Soapsuds, sits on this Big 12 university campus outside of his home state; it was donated by Amon G. Carter, longtime friend of Rogers. **Where can a visitor see Will Rogers and Soapsuds riding into the western sunset?**



**3.** The original campus of this Big 12 school was built on 200 acres of prairie donated by four homesteaders. The college's first students attended classes in the local Congregational Church, and the first six graduates received diplomas in 1896. Today this university graduates nearly 5,000 students annually. **Name this Big 12 University.**

**4.** The lyrics of the fight song for this Big 12 University were written in 1905 by student Arthur M. Alden; the melody, however, was borrowed and adapted. It is actually a "mash-up" of songs used for many years by two other



universities. **What Big 12 school is this? From what two schools did the melody come? What are the names of the songs of those two schools?**



**5.** Reflecting its agricultural region, Iowa State University was founded in 1858, but with an entirely different name. **What was ISU's original name? By what other name was this college known?**



### ➔ OVERTIME ACTIVITY

Using a road atlas of the United States or an online highway map, determine which Interstate highways run through or close to each Big 12 university. Working with a partner, create an "Interstate Map of Big 12 Universities" on a blank map of the United States. Draw the identified Interstates on the map and place each Big 12 university in its proper location in one of the school colors. Which Interstate highway has the most Big 12 schools located on or near it? How many schools are there? Here's a good source for printable maps: <http://www.onlineatlas.us/united-states-map.htm>

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### WEEK 8: OCTOBER 19-OCTOBER 25

- To reach Salina from Manhattan, you would travel generally southwest on Kansas highway 18 and Interstate 70. To drive to Olathe, you would travel south on Kansas highway 177 and then generally east on Interstate 70.  
<https://goo.gl/maps/d9JRG>  
<https://goo.gl/maps/lc9hd>
- The statue of Will Rogers sitting astride Soapsuds is at the entrance to Texas Tech University in Lubbock, Texas.  
<http://www.ttu.edu/traditions/rogers.php>
- Located in the Unassigned Lands that was opened to white settlement by the Land Run of 1889, Oklahoma Agricultural and Mechanical College, now Oklahoma State University, was founded in 1890.  
<http://www.news.okstate.edu/fast-facts/1334-university-history>
- The University of Oklahoma's fight song is called "Boomer Sooner," with its melody coming from Yale University's "Boola-Boola" and "I'm a Tar Heel Born" from the University of North Carolina.  
[http://www.ou.edu/web/about\\_ou/tradition.html](http://www.ou.edu/web/about_ou/tradition.html)
- Iowa Agricultural College and Model Farm was the first name of ISU, which later became known as Iowa State College of Agricultural and Mechanic Arts (1898) and then Iowa State University of Science and Technology (1959).  
<http://www.iastate.edu/~isu150/history/history.html>

### OVERTIME ANSWER:

There is a total of 10 teams in the Big 12 Conference. These Big 12 teams are located on or closest to Interstate 35:

- Baylor
- Iowa State
- Oklahoma
- Oklahoma State
- Texas
- Texas Christian

Closest to Interstate 70 are Kansas and Kansas State. Two Interstate highways intersect near the University of West Virginia: I-68 and I-79.

<http://www.onlineatlas.us/interstate-highways.htm>

### TRIVIA ANSWER:

The Kansas Jayhawks were defeated by the Georgia Tech Yellow Jackets by a score of 20-14 in the Orange Bowl.

<http://kuhistory.com/articles/orange-you-just-crushed/>

# WEEK 9 GAMES

Ginny Rohr, OKAGE Teacher  
Consultant, Tulsa, OK

## GAME SCHEDULE

West Virginia at TCU  
Oklahoma at Kansas

Oklahoma State at Texas Tech  
Texas at Iowa State

1. The Texas Christian University Horned Frogs are actually named after a lizard. **To explain the TCU mascot, research the scientific name of this reptile and its Greek and Latin meaning.** In nature, a horned frog has the bizarre ability to squirt a liquid from its eyes to as much as three feet away. **What is it? Why?**



2. The University of Oklahoma is the only Big 12 university to house a National Weather Center. Tours can be scheduled at its state of the art center on the Norman campus. Also located there is the National Severe Storms Laboratory—**what does it do? Using their website, <http://www.weather.gov/>, chart the current weather for each of the cities where a Big 12 game is to be played this week. What is the forecast for game day? List what fans may need to take to the game (e.g., coat, hat, raingear, or sunglasses).**
3. After a tough battle on the gridiron, football players may want to relax at a nearby lake. **Using an atlas or the Internet, locate and name the lake(s) close to each of the Big 12 universities hosting a game this week. What direction is each lake from the stadium?**
4. There are railroads in the hometowns of both the Oklahoma State Cowboys and the Oklahoma Sooners. **Using**

**the Oklahoma State Railroad Map (available free from the Oklahoma Department of Transportation) or the Internet, locate and name the rail systems that serve each of these hometowns. How many miles of track does each company operate in Oklahoma?**



5. Kansas State University's main campus is located in Manhattan. **The university also has campuses in what two other Kansas towns? Besides its main campus in Stillwater, where else does Oklahoma State University have campuses?**

### ➔ OVERTIME ACTIVITY

Agriculture is very important in all the states playing this week. Vegetable oil is one of the many products made from crops grown in the Big 12 states. Try this amazing science experiment that resembles an old Lava Lamp!

#### Materials:

Clear container (e.g., plastic water bottle)  
Vegetable oil  
Fizzy tablet (e.g., Alka-Seltzer tablet)  
Food coloring  
Flashlight (optional)

#### Directions:

Pour vegetable oil in container about 2/3 full.  
Pour water in the rest of the bottle to about an inch from the top.  
Add about 5 drops of food coloring to darken the water.  
Break the tablet into small pieces.

**Drop one of the pieces of fizzy tablet into the oil and water mixture. What happens?**

**Continue to add another piece of tablet when the bubbling stops.**

**Turn off the room lights and observe with your flashlight. (optional)**

**How does the Lava Lamp work? Explain. What happens when oil spills into a river or ocean?**



Photo by Ginny Rohr

## GRIDIRON GEOGRAPHY 2015

### WEEK 9: OCTOBER 26-NOVEMBER 1

1. The scientific name for this Texas reptile is *Phrynosoma cornutum*; in Greek, *phrynos* means “a toad” and *soma* means “body.” In Latin, *cornutus* means “horned.”  
  
As a defensive mechanism, “ominous squirting blood emanates from ducts in the corners of [the horned frog’s] eyes” and can travel a distance of up to four feet. It is meant to confuse would-be predators, but also contains a chemical that is noxious to dogs, wolves, and coyotes.  
<http://www.admissions.tcu.edu/fun-stuff/what-is-a-horned-frog>  
<http://animals.nationalgeographic.com/animals/reptiles/horned-toad/>
2. The National Severe Storms Laboratory serves the nation by working to improve the leadtime and accuracy of severe weather warnings and forecasts in order to save lives and reduce property damage. NSSL scientists are committed to their mission to understand the causes of severe weather and explore new ways to use weather information to assist National Weather Service forecasters and federal, university and private sector partners.  
  
For the remainder of the questions, go to <http://www.weather.gov/> and type in the name of the city hosting each Big 12 game. Answers will vary.  
<http://www.nssl.noaa.gov/>  
<http://www.weather.gov/>
3. From the Amon G. Carter Stadium at TCU, Benbrook Lake is to southwest; Lake Arlington is east of the stadium. From Memorial Stadium at the University of Kansas, Clinton Lake is to the southwest; Perry Lake is northwest of the stadium. From Jones AT&T Stadium, at Texas Tech, Maxey Lake is to the southwest; Dunbar Historical Lake is southeast of the stadium.  
  
From Jack Trice Stadium at Iowa State, Lake LaVerne is to the northwest; Lake Chasey is southeast of the stadium.  
<https://goo.gl/maps/UFlpE>  
<https://goo.gl/maps/AY7Y2>  
<https://goo.gl/maps/eUgon>  
<https://goo.gl/maps/440BN>

4. In Norman, the BNSF (Burlington Northern Santa Fe) Railway runs just east of the main campus and operates about 1475 miles of track. In Stillwater, the SLWC (Stillwater Central) Railroad is a spur that connects the city with the BNSF Railway at Pawnee; SLWC operates about 240 miles of track.  
[http://www.okladot.state.ok.us/Maps/railroad/2014-2015/map\\_rail\\_2014-2015.pdf](http://www.okladot.state.ok.us/Maps/railroad/2014-2015/map_rail_2014-2015.pdf)
5. The four colleges that joined to form the Big 12 were Baylor, Texas, Texas A&M, and Texas Tech. They joined Colorado, Iowa State, Kansas, Kansas State, Missouri, Nebraska, Oklahoma, and Oklahoma State to form the Big 12.  
<http://bigeightsports.com/>  
<http://basketball.about.com/od/teamsandconferences/a/Big12.htm>  
<https://ink.niche.com/real-reason-behind-big-12-conference/>

#### OVERTIME ANSWER:

Oil and water do not mix. Food coloring only mixes with water. The oil floats on the surface of water. The water is heavier or denser than the oil. The fizzy tablet reacts with the water producing carbon dioxide gas. These CO2 bubbles attach to colored water particles causing them to float to the surface. When a bubble pops, the color globs sink back to the bottom of the bottle. In a river or the ocean, oil spreads across the water surface. It can be very harmful to fish, birds, mammals, and the natural habitat.

<http://humantouchofchemistry.com/why-oil-and-water-do-not-mix.htm>  
[http://www.alkaseltzer.com/as/student\\_experiment4.html](http://www.alkaseltzer.com/as/student_experiment4.html)  
<http://response.restoration.noaa.gov/training-and-education/education-students-and-teachers/how-do-spills-happen.html>

#### TRIVIA ANSWER:

Under Coach Charles B. “Bud” Wilkinson’s leadership, the Oklahoma Sooners won 47 consecutive victories on the gridiron during the 1953-1957 seasons.

[http://www.soonersports.com/ViewArticle.dbml?&DB\\_OEM\\_ID=31000&ATCLID=208798684](http://www.soonersports.com/ViewArticle.dbml?&DB_OEM_ID=31000&ATCLID=208798684)

# WEEK 10 GAMES

Annie Elsberry, OKAGE Teacher Consultant,  
Pawhuska, OK

## GAME SCHEDULE

Baylor at Kansas State  
Iowa State at Oklahoma

Kansas at Texas  
Texas Tech at West Virginia

TCU at Oklahoma State

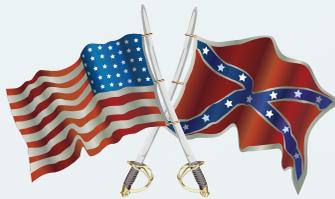
**1.** Iowa is home to some of the country's most fertile topsoil. Much of this land is found in the "young drift plains." **In what part of Iowa are these plains and how were they formed? What is the number one crop grown in Iowa?**



**2.** When Texas Christian University fans visit Oklahoma State this week, they may want to come early to visit the world's largest natural gypsum cave open to the public. **What is the name of**

**this cave, and in what town and county is it located? Using a highway map or the Internet, find the shortest and quickest route from Stillwater to the cave.**

**3.** The United States is observing the 150th anniversary of the "bloodiest war" in its history: the Civil War. **How many states with Big 12 teams sided with the Union? How many with the Confederacy? Which states were they? Which state with Big 12 teams today did not take sides? Why?**



**4.** It is unusual for two people born in the same state to run for the highest office in the land in the same year, but that happened in



1924. Two West Virginians ran for President that year. **Who were they and what parties did they represent?**

**Who ultimately won the 1924 election?**

**5.** Oklahoma has three sites administered by the National Park Service. **What was the only national park established in Oklahoma, when was it established, and where is it located? By what name is it known today? Between what two ecosystems is it located? What are the other two National Park Service sites in Oklahoma?**



### ➔ OVERTIME ACTIVITY

Using the map at <http://americancivilwar.com/statepic/oklahoma.html>, locate the seven sites of major Civil War battles in Indian Territory. List the battle, when it was fought, commanding officers on each side, and the outcome for each battle. Which battle site is closest to Oklahoma State University? Between June of 1862 and the war's end in 1865, there were at least 28 battles or skirmishes in Indian Territory. Read more about them here: <http://okcivilwar.org/sites/oklahoma>

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### WEEK 10: NOVEMBER 2-NOVEMBER 8

- The young drift plains are found in northern and central Iowa. They were formed by clay, sand, gravel, and rocks, together called "drift," that was left by glaciers during the Ice Age more than 12,000 years ago. This fertile soil is perfect for growing corn, Iowa's number one crop.  
[http://www.netstate.com/states/geography/ia\\_geography.htm](http://www.netstate.com/states/geography/ia_geography.htm)
- Alabaster Caverns State Park is located near Freedom, Oklahoma, in Woods County. To get there from Stillwater by the shortest and quickest route, drive west on Oklahoma highway 51, then go north on Interstate 35. Take the U.S. 412 west to Mooreland. At Mooreland, go north on Oklahoma highway 50 towards Freedom. Finally, turn east on Oklahoma highway 50A. The state park will be 0.6 miles on your left.  
<http://www.travelok.com/listings/view.profile/id.110>  
[http://www.travelok.com/article\\_page/western-oklahomas-state-park-treasures](http://www.travelok.com/article_page/western-oklahomas-state-park-treasures)  
<https://goo.gl/maps/sL0I2>
- The states of Kansas and Iowa remained loyal to the Union, while Texas seceded and joined the Confederacy. West Virginia withdrew from Virginia and was admitted to the Union in 1863. Oklahoma would not become a state until 1907, although members of the Five Tribes in Indian Territory fought on both sides.  
<http://www.nps.gov/civilwar/facts.htm>  
<http://www.okcivilwar.org/history/civil-war-in-indian-territory>
- John W. Davis, born in Clarksburg, was nominated by the Democratic Party. John Zahnd, born in Doolittle's Mill, was the candidate of the Independent Party. Ultimately, however, the election was won by Calvin Coolidge, Republican from Vermont, who had become president at the death of Warren G. Harding in 1923.  
[http://www.wvculture.org/history/trivia/quiz.aspx?Quiz=Quiz\\_001](http://www.wvculture.org/history/trivia/quiz.aspx?Quiz=Quiz_001)  
<http://bioguide.congress.gov/scripts/biodisplay.pl?index=d000121>  
<http://www.ourcampaigns.com/CandidateDetail.html?CandidateID=58852>  
[http://www.270towin.com/1924\\_Election/](http://www.270towin.com/1924_Election/)
- Platt National Park was established in 1904 near Sulphur, Oklahoma. Its name was changed to the Chickasaw National Recreational Area in 1976 when Platt was combined with the Lake of the Arbuckles. The original park is located in a transition zone between the Eastern deciduous forest and the Western prairie. The other two sites administered by the National Park Service are Washita Battlefield National Historic Site and the Oklahoma City National Memorial.

- [http://www.nps.gov/chic/learn/historyculture/remembers\\_platt-np.htm](http://www.nps.gov/chic/learn/historyculture/remembers_platt-np.htm)
- <http://www.nps.gov/chic/learn/nature/naturalfeaturesandecosystems.htm>
- <http://www.nps.gov/waba/index.htm>
- <http://www.nps.gov/okci/index.htm>

### OVERTIME ANSWER:

Battle	Commander	Commander
Round Mountain, Nov. 19, 1861	Chief Opothleyahola (Creek/Seminole Unionists)	Col. Douglas H. Cooper (C)*
Chusto-Talasa/Caving Banks, Dec. 9, 1861	Chief Opothleyahola (Creek/Seminole Unionists)	Col. Douglas H. Cooper (C)*
Chustenahlah, Dec. 26, 1861	Chief Opothleyahola (Creek/Seminole Unionists)	Col. James McQueen McIntosh (C)*
Old Fort Wayne/Beaty's Prairie, Oct. 22, 1862	Brig Gen James G. Blunt (U)*	Col. Douglas H. Cooper (C)*
Middle Boggy Depot, Feb. 13, 1864	Major Charles Willette (U)*	Lt. Col. John Jumper (C)
Cabin Creek, July 1, 1863	Col. James M. Williams (U)*	Col. Stand Watie (C)
Honey Springs, July 17, 1863	Major Gen. James G. Blunt (U)*	Col. Douglas H. Cooper (C)*

U=Union C=Confederate \*=claimed victory

Although the exact site of the Battle of Round Mountain is unknown today, it was probably fought about 30 miles east of the OSU campus in Stillwater, near present day Lake Keystone.

- <http://americancivilwar.com/statepic/oklahoma.html>
- <http://okcivilwar.org/sites/round-mountain>

### TRIVIA ANSWER:

Oklahoma State met Florida State University in the first and only Bluegrass Bowl in Louisville, Kentucky, on December 13, 1958. OSU won by a score of 15-6. Cliff Speegel coached the OSU Cowboys, and the FSU Gators were coached by Tom Nugent.

- [http://www.tulsaworld.com/sportsextra/osusportsextra/fifty-six-years-ago-oklahoma-state-defeated-florida-state-in/article\\_c803f5bb-7f5b-5c75-9f75-3a6ddc97f0d7.html](http://www.tulsaworld.com/sportsextra/osusportsextra/fifty-six-years-ago-oklahoma-state-defeated-florida-state-in/article_c803f5bb-7f5b-5c75-9f75-3a6ddc97f0d7.html)

# WEEK 11 GAMES

Ann Kennedy, OKAGE Teacher Consultant,  
Oklahoma City, OK

## GAME SCHEDULE

Kansas at TCU  
Kansas State at Texas Tech

Oklahoma at Baylor  
Oklahoma State at Iowa State

Texas at West Virginia

**1.** Within a 500-mile radius of Morgantown, West Virginia, lives about half of the population of the United States and one-third of the population of Canada. West Virginia University is about one day's drive from 6 of the 8 largest U.S. metropolitan areas, 20 metro areas with populations of 1 million or more, and 22 of the nation's top 35 industrial markets. **Use a road atlas or an online map site (e.g., Google Maps or Mapquest) to find the names and locations of the metropolitan areas that are easily accessible from WVU. What is the approximate distance of each from Morgantown? Find at least eight (8) cities: two north, two south, two east, and two west of WVU**

**2.** The Kansas Jayhawks will be playing the TCU Horned Frogs in Fort Worth this week. Fort Worth gained notoriety after the Civil War as a focal point of the cattle trails, heading north through Indian Territory. Once the railroads arrived it became a major shipping point for livestock. Today the Fort Worth stockyards are a major tourist attraction, but there are many other reasons people visit and live there. **Visit some online Fort Worth sites and make a list of reasons individuals and businesses might want to move to Fort Worth.**



**3.** The newest addition to the National Park System is a site on the Bosque River, near the campus of Baylor University. **What is the name of this new national monument? When was it designated a National Park site? What is unique about this place?**

### → OVERTIME ACTIVITY

The Civil War had a major impact on all of the states in which Big 12 universities are located today. **Do a little research and discover the Big 12 school that (1) is located in a county that was once part of an Indian reservation, (2) is in a state that sided with the Union during the war, and (3) is a few miles east of the fort that is home of the "Big Red One."**

**4.** The OSU Cowboys will ride into Ames this week to take on the Iowa State Cyclones. The players and fans should feel at home in Ames as it has some similarities to Stillwater. Yet both cities have their own unique qualities. **In the chart below determine if the description is for Ames, Stillwater, or both cities. Place a checkmark in the appropriate box.**

Ames	Stillwater	Both	
			Is located in "Tornado Alley"
			Has a veterinary school
			Location of the National Wrestling Hall of Fame
			Has a humid, continental environment
			Has a university that was established as a result of being a land grant college (as a result of the Morrill Act)
			Was ranked as #9 on a list of the best places to live by CNN.money.com
			Is the location of the first-in-the-nation caucuses in the 2016 race for the Presidency

**5.** Most rivers exist because a number of smaller streams join at a common spot or flow into a larger stream. These smaller streams are called tributaries. The Red River that forms much of the border between Oklahoma and Texas is an example. **Using a physical map or the Internet, identify the major tributaries that flow into the Red River from the Oklahoma side. Which of these tributaries was once part of the boundary between Oklahoma and Texas?**

## 12 GRIDIRON GEOGRAPHY 2015

### WEEK 11: NOVEMBER 9-NOVEMBER 15

<b>1.</b>	<b>North</b>	<b>South</b>	<b>West</b>	<b>East</b>
	Pittsburgh, PA ... 77 miles Cleveland, OH ... 208 miles Toronto, Canada ... 384 miles New York, NY ... 393 miles	Charleston, WV ... 155 miles Richmond, VA ... 322 miles Charlotte, NC ... 385 miles Norfolk, VA ... 407 miles	Columbus, OH ... 205 miles Chicago, IL ... 528 miles	Washington, D.C. ... 218 miles Baltimore, MD ... 225 miles Philadelphia, PA ... 327 miles

<http://www.morgantownwv.gov/about/location/>

**2.** Answers will vary, but should include some of these: a moderate climate, major transportation infrastructure, affordable living, access to DFW airport, cultural events, world class museums, business friendly tax-environment, low cost of living, high quality of life, and a central location in the U.S.

<http://www.fortworthchamber.com/>

<http://www.fortworthstockyards.org/>

**3.**

Ames	Stillwater	Both	
	X		Is located in "Tornado Alley"
		X	Has a veterinary school
	X		Location of the National Wrestling Hall of Fame
X			Has a humid, continental environment
		X	Has a university that was established as a result of being a land grant college (as a result of the Morrill Act)
X			Was ranked as #9 on a list of the best places to live by CNN.money.com
X			Is the location of the first-in-the-nation caucuses in the 2016 race for the Presidency

<http://www.add.lib.iastate.edu/spcl/exhibits/150/index.html>

<http://www.mapquest.com/us/ia/ames>

<http://www.mapquest.com/us/ok/stillwater>

**4.** President Barack Obama issued a proclamation making the Waco Mammoth Site a new unit of the National Park System on July 10, 2015. This site represents the nation's only recorded discovery of a nursery herd of Columbian mammoths. Visitors can view "in situ" fossils including female mammoths, a bull mammoth, and a camel that lived approximately 67,000 years ago.

<http://www.nps.gov/waco/index.htm>

<http://www.waco-texas.com/cms-waco-mammoth/>

**5.** The major tributaries (from east to west) include the Kiamichi River, Boggy Creek, the Blue River, the Washita River, the North Fork of the Red River, and the Salt Fork of the Red River. From statehood until 1896, Texas claimed the North Fork of the Red River was the principal part of the river and the boundary between Texas and the land to the north. The area between the North Fork and the Red River proper was Greer County, Texas, until it became part of Oklahoma Territory as the result of a U.S. Supreme Court decision in 1896.

<http://www.okatlas.org/okatlas/hydrography/rivers.htm>

<https://tshaonline.org/handbook/online/articles/rnn08>

### OVERTIME ANSWER:

Kansas State University is located in Riley County, once part of the Kansa Indian reservation, near Fort Riley, the home of the Big Red One.

<http://www.rileycountyks.gov/441/History-of-Riley-County>

<http://www.riley.army.mil/>

### TRIVIA ANSWER:

The team nickname of Iowa State University is the Cyclones.

[http://espn.go.com/college-football/conferences/teams/\\_/id/4/big-12-conference](http://espn.go.com/college-football/conferences/teams/_/id/4/big-12-conference)

# WEEK 12 GAMES

Marilyn Pineda, OKAGE Teacher Consultant,  
Comanche, OK

## GAME SCHEDULE

Baylor at Oklahoma State  
Iowa State at Kansas State

West Virginia at Kansas  
TCU at Oklahoma

1. May 2015 is now the wettest single month on record in Oklahoma, providing much needed rain for the natural turf in many football stadiums, including the one at the University of Oklahoma. Most tropical storms from the Gulf of Mexico weaken as they travel over land, but they will occasionally gain strength as they pass over warm moisture-rich soil. In August of 2007, an eye-like feature with 82 mph wind gusts formed over the plains around Watonga, Oklahoma, as Tropical Storm Erin passed through. **What is this phenomenon called? In what countries has it occurred, and where does it occur most frequently?**



**characteristics in Kansas and Iowa are responsible for them being major producers of wind energy? How is the height of a commercial wind turbine to be built at a particular site determined? Where is the largest wind turbine farm in the United States? Where in the world?**

2. Kansas State and Iowa State players will use a lot of energy when they face off this week. A great deal of electricity is also used when a major event like this occurs. Wind energy was responsible for about 4% of the nation's electricity production during 2013. **What geographical**

3. Although tallgrass prairies originally spanned more than 170 million acres in fourteen states from Texas to Minnesota and into Canada, there is now less than ten percent of these magnificent prairies remaining. Iowa, Oklahoma, Kansas, and Texas all have tallgrass preserves. **In what state is the largest protected tallgrass**

**prairie preserve remaining on earth? What are some natural ways to keep the prairies healthy and viable?**

4. The states of all Big 12 teams playing this week have access to major rivers that flow directly into the Mississippi River. **What are the rivers? Historically, why was access to the river network of North America an advantage, and why does it continue to be?**



5. Said to be "the most photographed landmark on Route 66," this structure is located about halfway in between the campuses of OU and OSU. **When and where was it built? What is unusual about its construction? Why was it built this way?**

### ➔ OVERTIME ACTIVITY

Early day homes in West Virginia were built of available materials, as were the homes in Kansas, where the Mountaineers will play the Jayhawks this week. **Considering the very different landscapes of West Virginia and Kansas, what would houses have been made of when the states were first settled? Describe the building materials and the construction of houses in each of these two states in the 1800s.**



GRIDIRON GEOGRAPHY 2015

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### WEEK 12: NOVEMBER 16-NOVEMBER 22

1. When a hurricane or tropical storm moves inland, it rarely intensifies, but sometimes it does in what is known as a "Brown Ocean Effect." It occurs in the United States and China, but most frequently in Australia, where they are called "landphoons" or "agukabams."  
<http://www.weather.com/storms/hurricane/news/brown-oceans-known-fuel-tropical-systems-over-land-20130718>  
<http://blog.chron.com/weather/2015/06/how-will-the-gulf-disturbance-affect-texas-and-oklahoma/>  
<http://journals.ametsoc.org/doi/abs/10.1175/2008MWR2409.1>  
<http://www.savanna.org.au/all/landphoons.html>
2. Kansas is in the "wind tunnel" of the United States, a corridor that stretches from North Dakota to Texas. Iowa has hills, valleys, river bluffs, and lakes that create a complex and highly variable terrain. The height of a wind turbine is determined by the land surface surrounding it. Rough areas with trees or buildings produce more resistance than smooth surfaces like water or open farmland. The largest wind turbine farm in the United States is the **Alta Wind Energy Center in Kern County, California. It is also the largest in the world currently, although the Gansu Wind Farm in China may surpass it soon. Five of the top ten wind farms are located in Texas.**  
<http://www.care2.com/causes/7-most-impressive-wind-farms-and-turbines-in-the-world.html-ixzz3f9UaDnCS>  
<http://www.awea.org/generationrecords>  
<http://businessclimate.com/kansas-economic-development/kansas-wind-power-draws-major-companies>  
<http://www.power-technology.com/features/feature-biggest-wind-farms-in-the-world-texas/>  
<http://www.iowawindenergy.org/whywind.php>
3. The largest protected tallgrass prairie preserve is in Osage County in northern Oklahoma, 39,000 acres that is home to 2200 bison. Prairies need grazing animals to stimulate growth, make room for more plants, and spread seeds. They also need to be burned, whether by natural means or by controlled burns, to get rid of excess leaf litter, allowing more plants to flower, produce seed, and grow taller. It exposes the soil to the sunlight so that it warms more quickly and extends the growing season for native plants.  
<http://www.nps.gov/tapr/learn/nature/index.htm>  
<http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/oklahoma/placesweprotect/tallgrass-prairie-preserve.xml>  
<https://linncountyconservation.wordpress.com/2013/03/28/why-do-we-burn-prairie/>

4. These major tributaries of the Mississippi River are the Missouri, Arkansas, Red, and Ohio Rivers. Historically, it was a commercial advantage to be able to ship goods to New Orleans, a major ocean port for imports and exports. It cut time for those who wished to travel for business, and was also a draw for tourists wanting to visit New Orleans and to see the mighty Mississippi. A trip from St. Louis to New Orleans that once took four months overland could be completed in only three days by river steamboat. The negative effects of the Civil War, along with the building of the railroads took a toll on the booming river economy. Today, however, the Mighty Mississippi is once again a major avenue of commerce.  
[http://bglog.net/CientFiles/9a74c4e6-27be-4ac2-8049-4ca527de6f99/US\\_Rivers.GIF](http://bglog.net/CientFiles/9a74c4e6-27be-4ac2-8049-4ca527de6f99/US_Rivers.GIF)  
<http://web.mit.edu/12.000/www/m2010/finalwebsite/background/mississippi-river/mississippi-economic.html>
5. The Round Barn was originally built in 1898 and restored in 1992 just east of Oklahoma City in the little town of Arcadia. Supposedly, the barn was built to be round to withstand Oklahoma's frequent tornadoes. The reasoning may not be scientifically accurate, but the barn is still standing after more than 100 years!  
<http://www.legendsofamerica.com/66-facts.html>  
[http://www.arcadiaroundbarn.com/Round\\_Barn\\_Website/HISTORY.html](http://www.arcadiaroundbarn.com/Round_Barn_Website/HISTORY.html)

#### OVERTIME ANSWER:

Homes built in 19th century West Virginia were constructed most of lumber cut from the hillsides and valleys of this mountainous area. Log homes, split log cabins, and clapboard houses, often with stone fireplaces and chimneys, were common. On the open plains of Kansas, however, trees were much more scarce, so homesteaders cut the thick prairie sod, the top layer of earth that included grass, its roots, and the dirt clinging to the roots, into "bricks" that were 18 inches wide and 24 inches long, each weighing about 50 pounds. The builder stacked sections of the sod into walls and then often laid a series of cedar poles across the walls, covering them with layers of brush tied into bundles.

<http://amhistory.si.edu/ourstory/activities/sodhouse/more.html>

<http://genealogytrails.com/wva/harrison/settlers.houses.diseases.html>

#### TRIVIA ANSWER:

Located on more than 100 acres in northeast Oklahoma City, the Oklahoma State Capitol is the only capitol in the world surrounded by working oil wells. One is even named Petunia #1, because it was drilled in the middle of a flower bed.

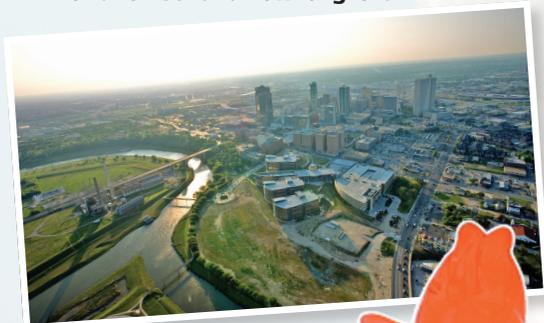
<http://www.okhouse.gov/Information/CapitolTours.aspx>

# WEEK 13 GAMES

Denise Aguilar, OKAGE Teacher Consultant,  
Lawton, OK

Texas Tech at Texas Baylor at TCU	GAME SCHEDULE	Iowa State at West Virginia Kansas State at Kansas

**1.** Texas Christian University sits in the heart of downtown Fort Worth, Texas. Fort Worth, with its strong western heritage, was established in 1849 as an Army outpost on a bluff overlooking what some sources describe as “the longest river that flows entirely within the state of Texas.” **What is the name of this river and how long is it?**



**2.** Coopers Rock State Forest is located 13 miles west of West Virginia University (WVU). It is divided into two parts by a major highway. The north side, known as WVU Forest, is leased by the West Virginia University Forestry Division for research, teaching, and demonstration. The south side is the main recreation



area. **Name the interstate that bisects the 12,713 acres of Coopers Rock State Forest. How did this forest get its name?**

**3.** The junior U.S. Senator from Kentucky is running for president this year. He was a student at one of the Big 12 universities from 1981 to 1984. **Who is this candidate, what is his Big 12 alma mater, and what was his profession before he entered politics?**

**4.** There are three presidential libraries located in Texas, but only one of them is located on the



campus of a Big 12 university. **Which U.S. presidents have their libraries in Texas? Where are they located? Whose library is on the campus of a Big 12 school?**

**5.** When the Five Tribes were forcibly removed from their ancestral homelands in the South, many of their citizens owned slaves and brought them to Indian



Territory along the Trail of Tears. After the Civil War, these former slaves, known as “freedmen,” were joined by thousands of other African Americans who established about 50 all-black towns in Indian Territory. Thirteen of these all-black towns are still incorporated today. **Which town is closest to OSU? Which one is closest to OU?**

**→ OVERTIME ACTIVITY**

The 110th Bedlam football game this week has historical significance: the game marks the 11th time the teams coached by Bob Stoops (Oklahoma) and Mike Gundy (Oklahoma State) will meet. It is the longest coaching rivalry in the Bedlam series. There are nine other long coaching rivalries in the Bedlam series. **Create a timeline of these coaching rivalries with the names of the coaches and the dates and records of their rivalries.**

## 14 GRIDIRON GEOGRAPHY 2015

### WEEK 13: NOVEMBER 23-NOVEMBER 29

- The Trinity River flows through Fort Worth and is (including the length of its four forks) about 710 miles long.  
<http://texasalmanac.com/topics/environment/rivers>  
<https://houston-tx.knoji.com/10-longest-rivers-in-texas/>
- Coopers Rock State Forest is cut in half by Interstate 68. Legend says the forest was named for a barrel maker (known as a cooper) who apparently committed some crime and hid from the law near what is now the overlook.  
<http://www.coopersrockstateforest.com/>
- Republican presidential candidate Rand Paul attended Baylor University until he was admitted without a baccalaureate degree to Duke University School of Medicine where he earned a doctorate in medicine. Paul owned an ophthalmology practice and performed eye surgery.  
<http://www.paul.senate.gov/about-rand/meet>
- The Lyndon Baines Johnson Presidential Library is located at the University of Texas at Austin, a Big 12 school. George Herbert Walker Bush's library is at Texas A&M University in College Station, and George W. Bush's library is at Southern Methodist University in Dallas.  
<http://www.lbjlibrary.org/>  
<http://www.archives.gov/presidential-libraries/visit/>
- Langston is about 20 miles southwest of Stillwater and boasts Oklahoma's only historically black university, Langston University, established in 1897. Brooksville, founded in 1903, is about 30 miles east of Norman, just south of Tecumseh.  
[http://www.travelok.com/article\\_page/african-american-history-culture-in-oklahoma](http://www.travelok.com/article_page/african-american-history-culture-in-oklahoma)  
<http://www.okhistory.org/historycenter/blacktowns/allblacktownsmap.php>

### OVERTIME ANSWERS:

- Bedlam OU-OSU series longest coaching rivalries
- 8: OU's Bud Wilkinson vs. OSU's Cliff Speegle, 1955-62. Wilkinson 8-0.
  - 6: OU's Bennie Owen vs. OSU's John Maulbetsch. Owen leads 3-1-2.
  - 6: OU's Barry Switzer vs. OSU's Jim Stanley. Switzer 5-1.
  - 6: OU's Gary Gibbs vs. OSU's Pat Jones, 1989-94. Gibbs 5-0-1.
  - 5: OU's Bennie Owen vs. OSU's Paul Davis. Owen leads 5-0.
  - 5: OU's Barry Switzer vs. OSU's Jimmy Johnson, 1979-83. Switzer 5-0.
  - 5: OU's Barry Switzer vs. OSU's Pat Jones, 1984-88. Switzer 5-0.
  - 5: OU's Bud Wilkinson vs. OSU's Ears Whitworth. Wilkinson 5-0.
  - 5: OSU's Jim Lookabaugh vs. OU's Snorter Luster. Tied 2-2-1.

To extend the activity, have students use 10 separate maps of Oklahoma to identify and label the winner of each rivalry. Title each map with the names of the coaches and years of their rivalries at the top of each map. Locate the cities of Norman (OU) and Stillwater (OSU) on each Oklahoma map by using RED for OU and ORANGE for OSU. Then circle the winning school for each rivalry in BLACK.

- <http://www.cfbreference.com/coaches/detail/4-mike-gundy-vs/32-bob-stoops/>
- [http://www.oudaily.com/sports/ou-football-stoops-to-face-gundy-for-th-bedlam-coaching/article\\_cd013666-78fe-11e4-b22f-d7ef5efb021e.html](http://www.oudaily.com/sports/ou-football-stoops-to-face-gundy-for-th-bedlam-coaching/article_cd013666-78fe-11e4-b22f-d7ef5efb021e.html)
- <http://newsok.com/bedlam-by-the-numbers-breaking-down-the-series-history/article/3730087>
- [https://en.wikipedia.org/wiki/Bedlam\\_Series](https://en.wikipedia.org/wiki/Bedlam_Series)

### TRIVIA ANSWERS:

- The OU-OSU game was described as “Bedlam” again in 1943 when the Sooners defeated the Cowboys 22-13 at Taft Stadium in Oklahoma City.
- <http://www.tulsaworld.com/sportsextra/ousportsextra/bedlam/>
  - [https://en.wikipedia.org/wiki/Oklahoma\\_A%26M\\_Cowboys\\_football,\\_1940-49\\_-\\_1944](https://en.wikipedia.org/wiki/Oklahoma_A%26M_Cowboys_football,_1940-49_-_1944)

# WEEK 14 GAMES

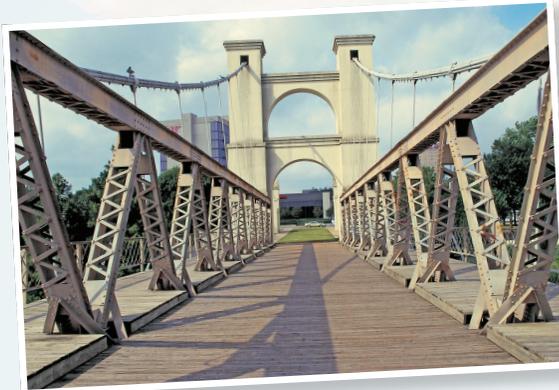
Jeffrey M. Widener, GIS Librarian,  
The University of Oklahoma, Norman, OK

## GAME SCHEDULE

West Virginia at Kansas State

Texas at Baylor

1. The West Virginia Mountaineers will “come up” to the plains to take on the Kansas State Wildcats. **Visit [www.usclimatedata.com](http://www.usclimatedata.com). In the “Enter a Location” box, search for Manhattan, Kansas. Under the “Monthly” tab, find the average high and low temperature in Manhattan. Next, click on the “Geo & Map” tab. What is Manhattan’s elevation (distance above sea level) and its absolute location (latitude and longitude)? Find the same information for Morgantown, West Virginia. Explain why Manhattan and Morgantown have similar average high and low temperatures, even though KSU (on the Kansas plains) has a higher elevation than WVU (in the Appalachian Mountains).**



2. The Texas Longhorns will make a short trip north on Interstate 35 to take on the Baylor Bears. West of Baylor’s new McLane Stadium is the historic Waco Suspension Bridge. **What river does this bridge span? What historic cattle trail benefited from the construction of this bridge? What does this bridge have in common with the Brooklyn Bridge in New York City?**

3. Both Austin and Waco, Texas, have sizeable Hispanic populations, according to [www.city-data.com](http://www.city-data.com). Hispanic, however, is a general term used by the U.S. Census Bureau and does not explain an individual’s ethnic identity. **What term is often used to describe a Texan of Mexican descent?**

4. The “longest multiple-arch dam in the world” is located in a state that is home to two Big 12

universities. **What state is this, what is the name of this dam, and what lake was created when the dam was built?**

5. Mines in the Tri-State region of northeast Oklahoma, southeast Kansas, and southwest Missouri supplied the nation with two important minerals for more than 60 years. Today, the mines

are closed and much of the area has been included in the Tar Creek Superfund site. **What were the minerals produced there, and why has this area received the Superfund designation?**



### ➔ OVERTIME ACTIVITY

December 5, 2015, marks the end of the Big 12 football season this year, but it is also the 60th anniversary of a major historical occurrence that took place in the capitol of Alabama. **What was this event and in what city did it occur? What role did a 42-year-old African American seamstress play in this headline-producing event, and who was she?**

GRIDIRON GEOGRAPHY 2015

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### WEEK 14: NOVEMBER 30-DECEMBER 6

1. Manhattan’s average high temperature is 67.2 degrees, and its average low temperature is 42.6 degrees. The elevation is about 1,063 feet. The absolute location is Latitude 39.1972, Longitude -96.5813.

Morgantown’s average high temperature is 62.7 degrees and its low is 41.8 degrees. The elevation is about 823 feet. The absolute location is Latitude 39.6203, Longitude -79.9698.

The most basic explanation will involve a description of how the Earth is tilted on its axis and how the Earth faces the sun. As well, there should be an explanation of how Latitude provides a general platform for predicting temperature patterns, in other words, locations that are about the same distance north (or south) of the equator will often have similar average temperatures. Other factors, such as elevation, proximity to large bodies of water, air pollution, etc., can lead to variations in temperatures. Web sites that include “student-friendly” descriptions are:

<http://www.kidsgeo.com/geography-for-kids/0054-heating-cooling-atmosphere.php>  
<http://education.nationalgeographic.com/activity/latitude-longitude-temperature/>  
<http://www.usclimatedata.com/climate/manhattan/kansas/united-states/usks0358>  
<http://www.usclimatedata.com/climate/morgantown/west-virginia/united-states/uswv0507>

2. The Waco Suspension Bridge spans the Brazos River. The Chisholm Trail was the major cattle trail that ran through Waco, benefitting the cowboys and their herds, as the longhorns no longer had to ford the Brazos River which sometimes swept away some of the cattle if the water was high. The John A. Roebling and Son Company out of New York made the cables and steelwork for both the bridge in Waco and the Brooklyn Bridge.

<https://www.tshaonline.org/handbook/online/articles/rtw01>

<http://www.waco-texas.com/cms-parksandrecreation/page.aspx?id=50>

3. Often a person who lives in Texas whose ancestors were from Mexico will call him/herself a Tejano (male) or a Tejana (female).

<https://www.tshaonline.org/handbook/online/articles/pft07>

Daniel D. Arreola, *Tejano South Texas: A Mexican American Cultural Province* (Austin: University of Texas Press, 2002), page 8

4. The Pensacola Dam, built across the Grand River, is about a mile long and connects the towns of Langley and Disney, Oklahoma. Each year thousands of people visit the Grand Lake O’ the Cherokees that was formed when the dam was completed in 1940.

<http://grandlakeliving.com/attractions-museums/pensacola-dam/>  
<http://www.travelok.com/listings/view.profile/id.5822>

5. Millions of tons of lead and zinc were produced from the underground mines near Quapaw, Miami, Picher, and Commerce, Oklahoma, from the late 1800s to the 1960s. However, large piles of leftover debris from the mines, called tailings and chat, contained toxic heavy metals that washed into the water supply and blew into the air. These contaminants can cause many diseases in people, and have killed off all animal life in Tar Creek whose waters are now orange in color. Because of these dangers, the Environmental Protection Agency designated the area a Superfund site and is spending millions of dollars to buy up homes and other property of people living in the area and to clean up the pollution-causing chat piles.

<http://www.ohistory.org/publications/enc/entry.php?entry=TR014>

[http://www.epa.gov/earth1r6/6sf/oklahoma/tar\\_creek/index.htm](http://www.epa.gov/earth1r6/6sf/oklahoma/tar_creek/index.htm)

<https://www.deq.state.ok.us/lpdnew/TarCreekindex.html>

[http://umich.edu/~snre492/cases\\_03-04/TarCreek/TarCreek\\_case\\_study.htm](http://umich.edu/~snre492/cases_03-04/TarCreek/TarCreek_case_study.htm)

<https://www.kansassampler.org/8wonders/historyresults.php?id=291>

<http://www.baxterspringmuseum.org/Tri-State-Mining-History.html>

Larry G. Johnson, *Tar Creek: A History of the Quapaw Indians, the World’s Largest Lead and Zinc Discovery, and the Tar Creek Superfund Site* (Mustang, OK: Tate Publishing & Enterprises, LLC, 2008)

### OVERTIME ANSWER:

Because Rosa Parks of Montgomery, Alabama, refused to give up her seat on a public bus to a white passenger, she was arrested, found guilty of violating a city ordinance, and fined \$10. Thus began the Montgomery Bus Boycott, a major event in the Civil Rights era of the 1950s and 1960s that helped to bring Dr. Martin Luther King, Jr., to national prominence.

<http://www.history.com/topics/black-history/montgomery-bus-boycott>

<http://www.biography.com/people/rosa-parks-9433715-death-and-legacy>

### TRIVIA ANSWER:

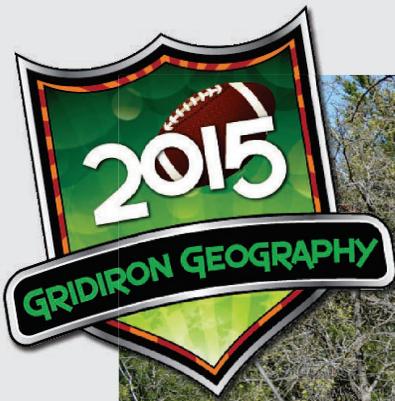
The Dr Pepper Museum is located in Waco, Texas. Big Red was also invented in Waco.

<http://www.drpeppermuseum.com/About-Us/History-Of-Dr-Pepper-Museum.aspx>

<http://www.drpeppermuseum.com/About-Us/History-Of-Dr-Pepper.aspx>

[http://www.huffingtonpost.com/2013/03/29/big-red-soda\\_n\\_2974747.html](http://www.huffingtonpost.com/2013/03/29/big-red-soda_n_2974747.html)

<http://www.texasmonthly.com/content/texas-primer-big-red>



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