

LESSON 41

TEXAS ALMANAC TEACHERS GUIDE

SOCIAL STUDIES TEKS

4 - 6, 11, 13, 21, 22, 23

7 - 7, 8, 13, 21, 22, 23

8 - 12, 14, 29, 30

STAAR

4, 7 - Writing - 1, 2, 3

4, 7, 8 - Reading - 1, 2, 3

8 - Social Studies - 4

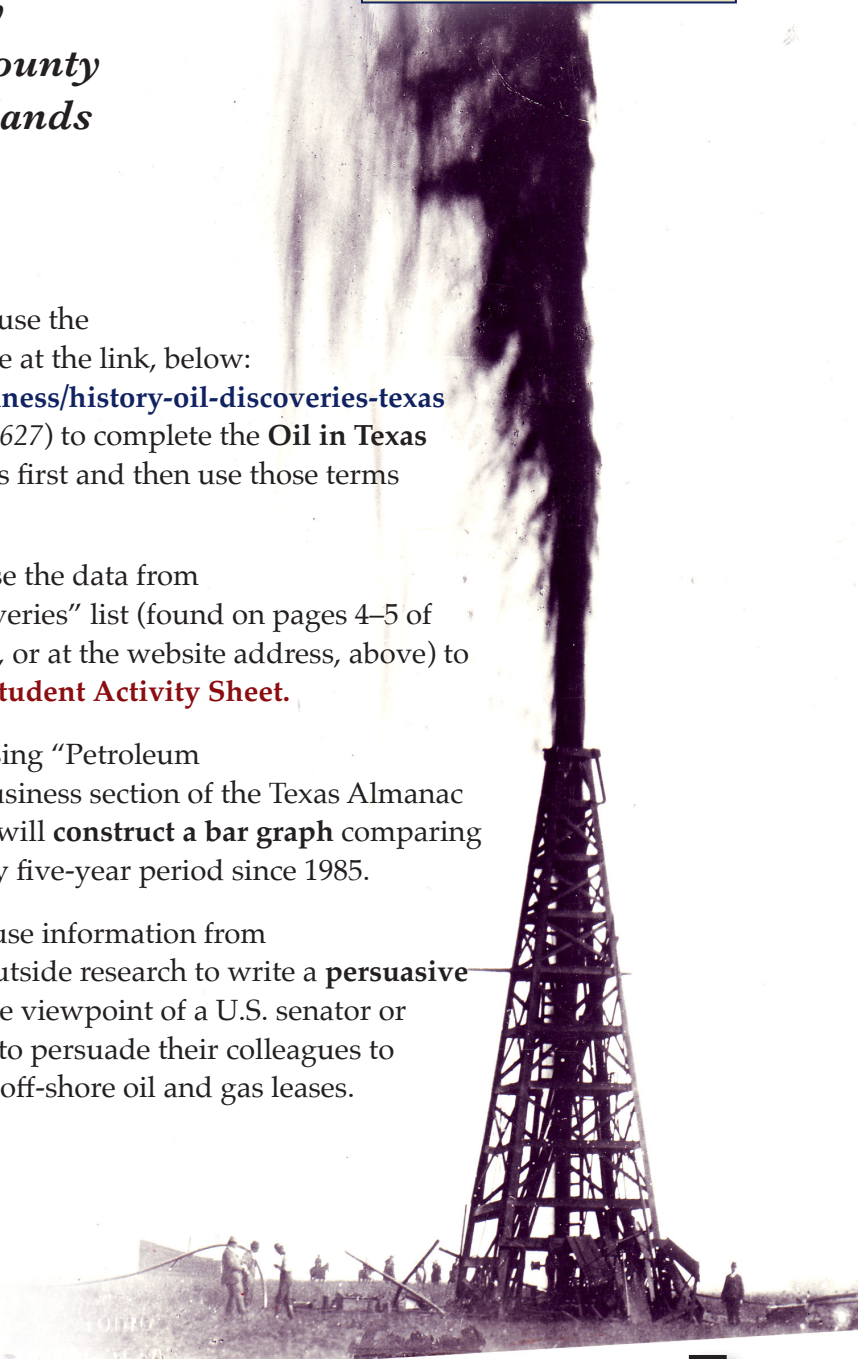
Minerals in Texas

- *History of Oil Discoveries in Texas*
- *Chronological Listing of Major Oil Discoveries*
- *Petroleum Production and Income in Texas*
- *Texas Oil Production History*
- *Oil and Gas Production by County*
- *Receipts by Texas from Tidelands*
- *Nonpetroleum Minerals*

INSTRUCTIONAL SUGGESTIONS

- 1. OIL IN TEXAS WORD SEARCH:** Students will use the “History of Oil Discoveries in Texas” article at the link, below: <http://www.texasalmanac.com/topics/business/history-oil-discoveries-texas> or in the *Texas Almanac 2010–2011*, pp. 625–627) to complete the **Oil in Texas Word Search**. They should fill in the blanks first and then use those terms to complete the word search.
- 2. CHRONOLOGICAL LISTING:** Students will use the data from “Chronological Listing of Major Oil Discoveries” list (found on pages 4–5 of this lesson, in the *Texas Almanac 2010–2011*, or at the website address, above) to complete the **sequencing activity** on the **Student Activity Sheet**.
- 3. OIL AND GAS COMPARISON BAR GRAPH:** Using “Petroleum Production and Income in Texas” in the Business section of the Texas Almanac and a blank grid (see Appendix), students will **construct a bar graph** comparing the value of crude oil to natural gas for any five-year period since 1985.
- 4. OFF-SHORE LEASES SPEECH:** Students will use information from “Receipts by Texas from Tidelands” and outside research to write a **persuasive speech**. Their perspective should reflect the viewpoint of a U.S. senator or representative from Texas as they attempt to persuade their colleagues to approve the continuation of revenue from off-shore oil and gas leases.

The great gusher at Spindletop, near Beaumont, erupted on Jan. 10, 1901. It was the first salt dome oil discovery, and thousands of barrels of oil flowed before the well could be capped. Texas Almanac file photo.



LESSON 41 — Minerals in Texas

5. **TOP 10 OIL PRODUCING COUNTIES:** Students will use a **Texas Counties Map** (*see Appendix*) and identify the top 10 counties in total oil production since its discovery **by drawing an oil derrick in the correct counties**. Use the “Top Oil Producing Counties since Discovery” table for reference.
6. **OIL AND GAS BY COUNTY:** Students will **answer the questions** on the **Student Activity Sheet** using the table “Oil and Gas Production by County.”
7. **CREATE A MINERAL COMPANY:** Students will be divided into groups of two to four. Using information in the “Nonpetroleum Minerals” section, each group will **create a company** that produces a nonpetroleum mineral.
 - a. Students will select a company **name, logo, and headquarters** location. They will design a **business card and brochure** to be distributed to potential customers.
 - b. Students will create one or more **advertisements** for their company that will be presented to potential customers. The advertisements can be for newspaper, television, or radio. Formats for these advertisements may be written, visual, a skit, jingle, etc.
 - c. Students will make a **business presentation** to potential customers (the class); it should include their business card, brochure, and an advertisement.
8. **TEXAS MINERALS CHART:** Students will read information in the “Nonpetroleum Minerals” section and complete the **Texas Minerals Chart** on the **Student Activity Sheet**. “Locations” may be regions, counties, or a city.
9. **TEXAS MINERALS MAP:** Students will **create symbols for the minerals on the chart**, draw them in the correct locations on a **Texas Counties Map** (*see Appendix*), and **include a key** to interpret the data.

Luling in Caldwell County has decorated oil well pumpjacks with cartoon characters like Snoopy. Photo by Robert Plocheck.



Oil in Texas Word Search

1. Oil and natural gas are the most valuable _____ produced in Texas.
2. Oil and gas have been produced from rocks of all geologic eras except the _____.
3. The _____ is a large oil-producing area of West Texas.
4. The University of Texas and Texas A&M University have benefitted from the _____ of the 1923 discovery, Santa Rita No. 1, in Reagan County, on University of Texas land.
5. Mesozoic rocks are the primary hydrocarbon reservoirs of the East Texas Basin and the area south and east of the _____ Fault Zone.
6. Survivors of the DeSoto expedition found crude oil near _____.
7. _____ is the site of Texas' first producing oil well.
8. Texas' first commercial oil field was in _____ County.
9. A major oil discovery was made at _____ in 1894.
10. _____ is the site of the Beaumont gusher in 1901.
11. Oil was discovered in the _____ in Wichita County in 1911.
12. Eastland County oil can be found in the _____.
13. The _____ in Wichita County was discovered in 1918.
14. In 1920, oil was discovered in _____ in the Mexia Field.
15. Oil was discovered in the Texas _____ in 1921.
16. Overproduction in the East Texas Field brought a fall in the _____ of oil.
17. Private attempts were made to _____ production in the East Texas Field.
18. The West Texas Field was discovered in 1948 in _____.

Oil in Texas Word Search

F	E	S	B	Z	M	P	J	R	L	I	C	I	J	W	R	T	T	A	S
P	N	T	S	A	T	K	A	N	A	C	I	S	R	O	C	Z	V	S	D
W	T	I	X	S	L	L	B	U	R	X	A	Q	R	R	Y	A	P	E	D
W	G	U	S	G	L	C	T	G	E	Q	Q	V	L	Z	L	P	L	L	M
H	O	L	V	A	J	A	O	T	D	C	Q	E	I	M	J	U	E	E	G
U	N	E	S	D	B	F	R	N	O	M	P	J	M	G	N	I	D	C	D
F	U	O	P	A	F	N	F	E	E	Z	M	E	E	G	F	I	F	T	R
M	C	M	E	J	B	G	A	R	N	S	Y	P	S	T	Y	Y	B	R	P
T	A	L	R	T	G	I	S	I	X	I	N	A	T	E	U	M	Q	A	A
Y	B	P	P	C	A	X	N	R	M	A	M	E	O	Y	E	E	C	F	N
T	W	H	X	O	A	R	V	E	C	R	N	P	N	B	A	L	O	I	H
N	T	K	U	K	T	Q	O	O	P	R	E	Y	E	Q	N	R	R	E	A
U	E	Q	Q	O	Y	E	G	R	U	A	N	P	C	M	A	O	C	L	N
O	Y	A	X	F	C	D	L	B	P	E	S	S	O	S	I	S	H	D	D
C	N	K	X	T	O	R	K	D	C	Q	R	S	U	P	R	E	H	Y	L
Y	U	T	W	C	W	R	B	I	N	A	T	Y	N	X	B	N	U	L	E
R	F	G	H	Z	U	A	R	V	O	I	R	N	T	L	M	E	B	G	Z
R	Q	E	N	B	B	P	G	S	F	S	P	D	Y	N	A	S	V	U	V
U	S	H	M	F	X	S	C	O	I	T	O	S	X	Q	C	R	X	G	S
C	Y	R	A	N	G	E	R	F	I	E	L	D	G	J	E	A	S	V	U
S	M	R	O	Y	A	L	T	I	E	S	S	O	Z	M	R	X	B	B	D
Z	F	S	M	G	G	Z	M	N	W	C	R	Y	M	O	P	F	W	D	W

Chronological Listing of Major Oil Discoveries

This list names the field, county, and discovery date. Sources include Texas Mid-Continent Oil and Gas Association from records of the U.S. Bureau of Mines; the Oil and Gas Journal; previous Texas Almanacs, the New Handbook of Texas, and the Energy Information Administration of the U.S. Department of Energy.

FIELD	COUNTY	YEAR
Corsicana	Navarro	1894
Powell	Navarro	1900
Spindletop	Jefferson	1901
Sour Lake	Hardin	1902
Batson-Old	Hardin	1903
Humble	Harris	1905
Mission	Bexar	1907
Piedras Pintas	Duval	1907
Goose Creek	Harris	1908
Panhandle Osborne	Wheeler	1910
Archer County	Archer	1911
Electra	Wichita	1911
Burk	Wichita	1912
Iowa Park	Wichita	1913
Orange	Orange	1913
Somerset	Bexar	1913
Damon Mound	Brazoria	1915
Thrall	Williamson	1915
Wilbarger County	Wilbarger	1915
Barbers Hill	Chambers	1916
Stephens County Regular	Stephens	1916
Ranger	Eastland	1917
Young County	Young	1917
Burkburnett Townsite	Wichita	1918
Desdemona	Eastland	1918
Hull	Liberty	1918
West Columbia	Brazoria	1918
Blue Ridge	Fort Bend	1919

FIELD	COUNTY	YEAR
KMA (Kemp-Munger-Allen)	Wichita	1919
Mexia	Limestone-Freestone	1920
Refugio	Refugio	1920
Westbrook	Mitchell	1920
Panhandle	Carson-Collingsworth-Gray-Hutchinson-Moore-Potter-Wheeler	1921
Currie	Navarro	1921
Mirando City	Webb	1921
Pierce Junction	Harris	1921
Thompsons	Fort Bend	1921
Aviators	Webb	1922
High Island	Galveston-Chambers	1922
Luling-Branyon	Caldwell-Guadalupe	1923
Big Lake	Reagan	1923
Cooke County	Cooke	1924
Richland	Navarro	1924
Wortham	Freestone	1924
Boling	Wharton	1925
Howard-Glasscock	Howard	1925
Lytton Springs	Caldwell	1925
McCamey	Upton	1925
Hendrick	Winkler	1926
Iatan East	Howard	1926
McElroy	Crane	1926
Yates	Pecos	1926
Raccoon Bend	Austin	1927

Continued on the next page.

STUDENT ACTIVITY

Chronological Listing of Major Oil Discoveries

FIELD	COUNTY	YEAR
Waddell	Crane	1927
Agua Dulce-Stratton	Nueces	1928
Greta	Refugio	1928
Kermit	Winkler	1928
Salt Flat	Caldwell	1928
Sugarland	Fort Bend	1928
Darst Creek	Guadalupe	1929
Penwell	Ector	1929
Pettus	Bee	1929
Van	Van Zandt	1929
Cowden North	Ector	1930
East Texas	Cherokee-Gregg-Rusk-Smith-Upshur	1930
Fuhrman-Mascho	Andrews	1930
Sand Hills	Crane	1930
Conroe	Montgomery	1931
Manvel	Brazoria	1931
Tomball	Harris	1933
Dickinson	Galveston	1934
Hastings East	Brazoria	1934
Means	Andrews	1934
Old Ocean	Brazoria	1934
Tom O'Connor	Refugio	1934
Anahuac	Chambers	1935
Goldsmith	Ector	1935
Keystone	Winkler	1935
Plymouth	San Patricio	1935
Withers	Wharton	1936
Pearsall	Frio	1936
Seminole	Gaines	1936
Slaughter	Cochran-Hockley	1936
Talco	Titus-Franklin	1936
Wasson	Gaines	1936

FIELD	COUNTY	YEAR
Webster	Harris	1936
Jordan	Crane-Ector	1937
Seeligson	Jim Wells-Kleberg	1937
Dune	Crane	1938
Kelsey	Brooks-Jim Hogg-Starr	1938
Walnut Bend	Cooke	1938
West Ranch	Jackson	1938
Diamond M	Scurry	1940
Hawkins	Wood	1940
Fullerton	Andrews	1941
Oyster Bayou	Chambers	1941
Tijerina-Canales-Blucher	Jim Wells-Kleberg	1941
Quitman	Wood	1942
Welch	Dawson	1942
Russell	Gaines	1943
Anton-Irish	Hale-Lamb-Lubbock	1944
Mabee	Andrews-Martin	1944
Midland Farms	Andrews	1944
TXL Devonian	Ector	1944
Block 31	Crane	1945
Borregos	Kleberg	1945
Dollarhide	Andrews	1945
Levelland	Cochran-Hockley	1945
Andector	Ector	1946
Kelly-Snyder	Scurry	1948
Cogdell Area	Scurry	1949
Pegasus	Upton-Midland	1949
Spraberry Trend	Glasscock-Midland	1949
Prentice	Yoakum	1950
Salt Creek	Kent	1950
Dora Roberts	Midland	1954

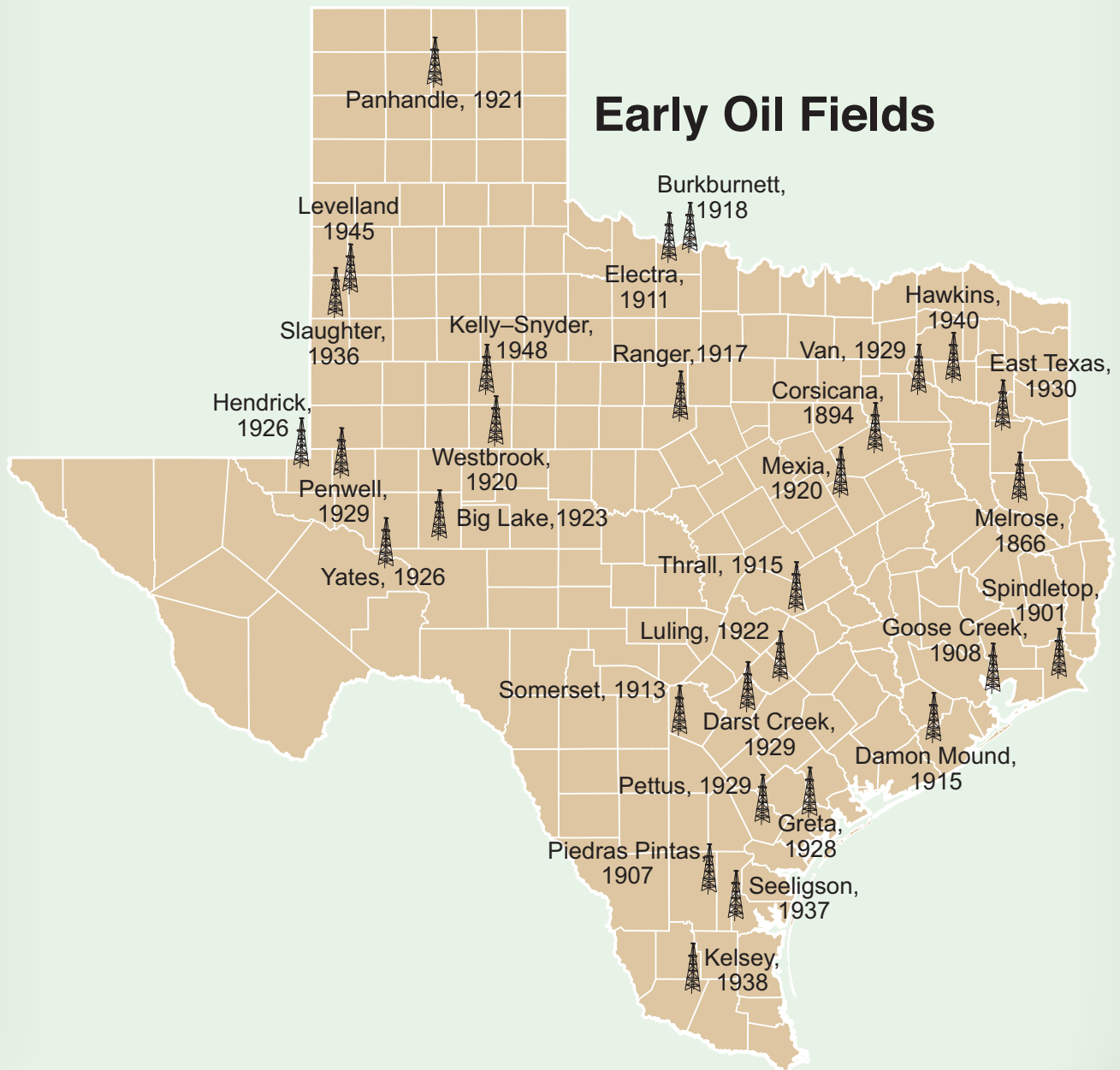
Chronological Listing of Oil Discoveries

Use the data from two-page “Chronological Listing of Major Oil Discoveries” to complete this sequencing activity.

- Write the year in which each of these events occurred in the left-hand column.
- Sequence the events by numbering the oldest event with “1” in the right-hand column and continue until all of the events are sequenced.

Year	Oil Field	Order
_____	Pegasus	_____
_____	Electra	_____
_____	Spindletop	_____
_____	Prentice	_____
_____	East Texas	_____
_____	Corsicana	_____
_____	Ranger	_____
_____	Salt Flat	_____
_____	Dora Roberts	_____
_____	Burkburnet	_____

Some early oil fields and their years of discovery



Oil and Gas by County

Answer the questions below using the table “Oil and Gas Production by County” in the Texas Almanac’s Business section.

- a. Which county produced the most barrels of crude oil and how much? See column “Oil (BBL).”

Most Barrels of Crude Oil: _____

How much?: _____

- b. Which county produced the most gas well gas and how much? See column “GW Gas (MCF).”

Most Gas Well Gas: _____

How much?: _____

- c. Which counties listed in the table produced no crude oil?

- d. What percentage of counties produced no crude oil? (**HINT:** Those listed as “0” *plus* the 38 counties not on the table.)

- e. How many counties did not have gas well gas? (**HINT:** Those listed as “0” *plus* those not on the table.)

- f. What percentage of counties had no gas well gas?

Texas Minerals Chart

MINERAL	LOCATIONS IN TEXAS	USES
ASPHALT In Cretaceous limestones	1. _____ 2. _____ 3. _____ 4. _____ 5. _____	1. _____
CLAYS • Ceramic • Nonceramic <i>(Choose any 3 "Uses")</i>	1. _____ 2. _____ 1. _____ 2. _____ 3. _____	1. _____ 2. _____ 3. _____ 1. _____ 2. _____ 3. _____
COALS • Bituminous • Cannel	1. _____ 2. _____ 3. _____ 1. _____	1. _____ 1. _____
GRAPHITE	1. _____ 2. _____	1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____

Texas Minerals Chart

MINERAL	LOCATIONS IN TEXAS	USES
GYPSUM	1. _____ 2. _____ 3. _____ 4. _____	1. _____ 2. _____ 3. _____ 4. _____ 5. _____
HELIUM	1. _____	1. _____ 2. _____ 3. _____ 4. _____ 5. _____
IRON	1. _____ 2. _____ 3. _____	1. _____ 2. _____ 3. _____
LIGNITE	1. _____ 2. _____ 3. _____	1. _____
MARBLE	1. _____ 2. _____ 3. _____	1. _____ 2. _____ 3. _____

Texas Minerals Chart

MINERAL	LOCATIONS IN TEXAS	USES
PEAT	1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____	1. _____
PUMICITE <i>(Choose any 6 "Locations")</i>	1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____	1. _____ 2. _____ 3. _____ 4. _____
SANDSTONE	1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____ 9. _____	1. _____ 2. _____ 3. _____ 4. _____
SULFUR	1. _____ 2. _____	1. _____ 2. _____ 3. _____