The Saturn V is on display at the Johnson Space Center in Houston. It is still the largest and most powerful single-use launch vehicle ever built. It is 363 feet tall and weighs over 6 million pounds. The Roman numeral "V" stands for the five powerful F-1 engines used to lift the first stage of the rocket.

Why It Matters

As you study Unit 8, you will learn about Texas’s recent history. Texans in the second half of the twentieth century continued to value their heritage while Texas underwent great changes. Its population rose to become second among the states. Women, Mexican Americans, African Americans, and Asian Americans expanded their influence in business and government. Texas became a leader in science and technology, in education, and in international trade. As the twenty-first century began, Texans looked ahead with confidence and pride.

Primary Sources Library

See pages 698–699 for primary source readings to accompany Unit 8.
“Manned exploration of the moon is essential.”

—Lyndon B. Johnson, April 28, 1961
**Trade Partners**

Blue jeans, computer parts, portable CD players—what do these have in common? They are often produced in factories in the Texas–Mexico border region. The economy of the region has changed dramatically during the last decade. Most of the changes have been triggered by the North American Free Trade Agreement (NAFTA), which went into effect in 1994. NAFTA reduced taxes on goods and services traded between Mexico, Canada, and the United States.

Texas’s economy has benefited from NAFTA in many ways.
- In 1999, almost half of the products shipped out of Texas went to Mexico.
- More than $112 million in merchandise made in Texas crosses the border every day.
- One out of every five jobs in the state is somehow related to the trade between Texas and Mexico.

There are also some problems, however, that have resulted from the increase in trade.
- The increased number of *maquiladoras* in Mexico’s northern border states has created air and water pollution on both sides of the Rio Grande.
- Some Texans lost jobs when U.S. companies closed their factories to open *maquiladoras* south of the border.
- Truck traffic has quadrupled since 1990 on eight heavily traveled bridges to Mexico. Bridge traffic has grown from one-half million trucks per year to more than 2.2 million trucks per year.
- The safety of Mexican trucks has been questioned by some. After lengthy debate, however, Congress passed laws in 2001 allowing Mexican trucks on U.S. highways. The trucks must undergo regular safety inspections and the licenses of drivers carrying high-risk cargo must be electronically checked at all border crossings.

Texas, as Mexico’s neighbor, will continue to benefit from and be challenged by the interaction between NAFTA countries.

**Learning from Geography**

1. Between which border cities is the most heavily traveled crossing between Texas and Mexico?
2. In which state in northern Mexico has the number of *maquiladoras* grown the most?
Brisk trade with Mexico has increased truck traffic on Texas’s highways.

Worker assembles car mufflers in a *maquiladora* in Reynosa, Mexico.

**Border Economy**

- Major highways
- Number of *maquiladoras* in 1993
- Number of *maquiladoras* in 2000
- Number of truck crossings at these major border cities

Lambert Conformal Conic projection

**Worker assembles car mufflers in a *maquiladora* in Reynosa, Mexico.**
Why It Matters

World War II had a dramatic impact on Texas and altered the way its people lived and worked. In coming to terms with those changes, Texas became an urban industrial state with many international connections.

The Impact Today

Two projects from the 1950s and 1960s continue to have dramatic effects on the Texas landscape. The first was the construction of dams across almost all of the major rivers of Texas. The second was the establishment of the interstate highway system linking Texas cities to each other and to the rest of the nation.

1953
- Texas state employees required to sign loyalty oaths

1954
- Women allowed to serve on Texas juries

1951
- “Rock and Roll” era began

1953
- Soviet Union exploded hydrogen bomb
- Korean War ended

1954
- First McDonald’s opened

1955
- Montgomery, Alabama, bus boycott
This busy freeway interchange is found in Dallas. The Texas highway system is both a cause and an effect of urbanization.

1956
- Jack Kerouac wrote On the Road

1957
- Jack Kerouac wrote On the Road

1958
- Jack Kilby invented the "silicon chip," first used in calculators

1959
- Charles de Gaulle became president of France

1960

Categorizing Information Study Foldable
When you group information into categories in a table, it is easier to compare characteristics of items. Make this foldable to help you evaluate the causes and effects of the changes Texas experienced between 1952 and 1963.

**Step 1** Fold a sheet of paper into thirds from top to bottom.

**Step 2** Open the paper and refold it into fourths from side to side.

**Step 3** Unfold and turn paper, then draw lines along the folds.

**Step 4** Label your table as shown.

<table>
<thead>
<tr>
<th>Causes</th>
<th>Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political Issues and Changes</td>
<td></td>
</tr>
<tr>
<td>Civil Rights Movement</td>
<td></td>
</tr>
<tr>
<td>Technology and Economic Growth</td>
<td></td>
</tr>
</tbody>
</table>

Reading and Writing As you read the chapter, use your foldable to record information as you learn about how Texas developed into an urban, industrial state. Write the causes and effects of the events listed on the table.
Politics and New Problems

Main Idea
Texas confronted many new issues involving politics and civil rights after World War II.

Key Terms
liberal, conservative, moderate, sovereignty, redistricting, unconstitutional, McCarthyism, libel

Guide to Reading

Reading Strategy
Classifying Create a chart like the one shown below. Indicate with an X each Texan’s political party.

<table>
<thead>
<tr>
<th>Politician</th>
<th>Republican</th>
<th>Democrat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gov. Shivers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sen. Tower</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pres. Eisenhower</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pres. Johnson</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Read to Learn
• about post-war politics in Texas.
• about the Korean War.
• about desegregation in Texas.
• about fears of communism.

Section Theme
Government and Democracy Civil rights made Texans consider the issues of freedom and democracy.

Preview of Events

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1948</td>
<td>President Truman desegregates armed forces</td>
</tr>
<tr>
<td>1952</td>
<td>Dwight Eisenhower is elected president</td>
</tr>
<tr>
<td>1954</td>
<td>Women are allowed to serve on Texas juries</td>
</tr>
<tr>
<td>1963</td>
<td>President Kennedy is assassinated in Dallas</td>
</tr>
</tbody>
</table>

A Texas Story

In 1954, African American students in Mansfield had to ride a bus 15 miles and walk 20 blocks to the nearest African American high school. Then, in Brown v. Board of Education of Topeka, Kansas, the Supreme Court wrote: “We conclude that in the field of public education the doctrine of separate but equal has no place.” Mansfield resident T.M. Moody celebrated the Court’s decision. He and other parents prepared to ask the local school board to admit African Americans to Mansfield High.

Political Parties
Franklin Roosevelt’s death in the closing days of World War II made Vice President Harry Truman the new president. During his years in office, both Democrats and Republicans were divided about how to
respond to new, post-war conditions. Now that the Great Depression was over, what should be the role of the government in the economy? What would be the best way to deal with the Communist threat of the Soviet Union? How should the government address the demand of minority groups for equal rights?

The Republican Party was divided between those who wished to return to a policy of isolationism and those who wished to be involved in world affairs. In economic matters, some wished to eliminate New Deal programs that still existed, while others did not. The party was also divided between Republicans favoring civil rights for African Americans and others supporting continued segregation.

The Democratic Party was even more divided. In 1948 the party’s platform included a strong civil rights program. With President Truman’s desegregation of the armed forces, the Democrats seemed to be making a strong commitment to civil rights. Many Southerners, including Texans, began to rethink their loyalty to the Democratic Party. Southerners who favored segregation nominated ex-Democrat Strom Thurmond of South Carolina to head the new Dixiecrat Party and run for president against Harry Truman. He received 106,000 votes in Texas, or about 10 percent of the total.

Texas Democrats had their differences as well. Some identified themselves as liberals. They remained loyal to New Deal programs. They wanted more done to ensure equal rights and opportunities for minorities. They also supported labor unions. They were strongest in the poorer areas of Texas and also in cities with large labor union representation, such as Port Arthur and Beaumont. Conservative Democrats, such as Texas Governor Allan Shivers, believed that government assistance weakened the ability of people to do things for themselves. Shivers believed that “the growing tendency to look toward Washington for financial assistance can be destructive of a most important element in our form of government—that of responsibility.” Many Democrats considered themselves neither conservative nor liberal. They called themselves moderates. Most political offices in Texas were held by moderates or conservatives.

Reading Check  Contrasting How did liberal and conservative Texas Democrats differ?

Texans Support Republican Eisenhower

As the 1952 elections approached, it appeared that Democrats were in trouble in Texas. The Korean War, which began in 1950, had not produced a decisive victory for the United States. As North Korean Communists tried to take control of South Korea, they used Soviet-supplied tanks. South Korea, the United States, and the Allies who made up the United Nations forces gained the advantage with a surprise sea-to-land invasion far behind enemy lines. The war became a political issue, however, when the Chinese entered the fight and inflicted reverses upon U.S. troops. President Truman fired General Douglas MacArthur after he publicly disagreed with Truman’s strategy. General MacArthur enjoyed great popularity in Texas. After his dismissal and a sentimental farewell
speech to Congress, MacArthur toured Texas, speaking to a crowd of 27,000 of his supporters at the Cotton Bowl in Dallas.

Even more important to many Texas voters was the so-called “tidelands” issue. Tidelands are areas under the ocean and near the shore but not exposed in low tides. New technology was allowing companies to drill oil wells in tideland areas. When oil and gas were found in deposits off the Texas coast, a dispute over ownership arose between the federal government and Texas.

The U.S. government had agreed with Texas on its coastal boundaries as far back as 1845, when it was admitted to the Union as a new state. After that time, opinions on the legal limits of Texas territory changed. The federal government now claimed that Texas sovereignty, or right to rule, stopped at the 3-mile (5-km) line. Texas claimed that the limit was 3 leagues, or 10.5 miles. The 7.5-mile (12-km) area between the two lines spanned 2,440,650 acres and had the potential to produce billions of dollars worth of oil and gas. President Truman vetoed bills that would have given Texas revenues from the tidelands.

The Republican nominee for president, Dwight Eisenhower, met with Governor Shivers and announced that he would sign a bill giving the tidelands to Texas if he was elected. Money from the tidelands would go to support Texas schools. Even though Eisenhower was a Republican, Shivers organized a “Democrats for Eisenhower” committee. In November 1952, Texans helped elect the Denison-born Republican nominee, Dwight Eisenhower. When Republican leaders in Texas saw that the Democrat Shivers was supporting Eisenhower, they declined to name a candidate to run against Shivers for governor. Instead they nominated Shivers, and his name appeared on the ballot twice—once as a Democrat and once as a Republican—and he won.

**Shivers Helps Modernize Government**

Allan Shivers served Texas as either the lieutenant governor or governor from 1947 to 1957. He supported several programs that made Texas government more modern. For example, he helped create the Legislation Council to research proposed new laws. He also established the Legislative Budget Board to make recommendations on how much money different state government agencies should receive. He supported funding for state hospitals, retired teachers, retired state employees, and roads and bridges. He influenced the legislature to allow women to serve on juries. In 1954 Texas women finally gained that right, largely through the efforts of the League of Women Voters. Texans endorsed the right as a constitutional amendment. Until 1954, all jurors in Texas had been male.

**“One-Man, One-Vote”**

For most of Texas history, voting districts had been based on land area, not population. This meant that in elections, it could take far fewer votes to win in a rural district than in a city district. As a result, each person’s vote in a rural area seemed to count more than each person’s vote in the city. For a long time, this did not seem that important.
because there were not many big cities. By the 1960s, however, as the number and size of cities grew, this rural voting advantage became an issue of concern.

In 1962 the U.S. Supreme Court ruled that each state senator must represent about the same number of voters and that each state representative’s district must be nearly equal in population. This ruling was based upon the idea that every vote should be of equal value—sometimes known as “one-man, one-vote.”

The ruling meant vast changes for Texas. “One-man, one-vote” resulted in large population areas—large cities and surrounding suburbs—gaining representatives in the legislature. Less-populated areas—small towns and rural communities—lost representatives. The process of changing, or redrawing, district lines to reflect changes in population is called redistricting. The chart at right shows the inequality of some U.S. congressional districts in 1953.

National Politics

As Texas grew in wealth and population, it increased its influence in the federal government. Texans held several important committee chairmanships in the U.S. House of Representatives. Sam Rayburn served as the speaker of the House for all but four years between 1940 and 1961. Lyndon Johnson was selected as majority leader of the Senate in 1955. He ran for the Democratic Party nomination for president in 1960. Even though he lost the nomination to John F. Kennedy, Johnson became the vice presidential nominee. Kennedy knew that Johnson would help win votes in important Southern states. Many Southerners opposed Kennedy’s election because he was a Roman Catholic. On
September 12, 1960, Kennedy came to Houston for his most important speech of the campaign. In his speech, Kennedy told the audience that his Roman Catholic beliefs would not interfere with his ability to be president. Film clips from that speech were televised in campaign commercials in other states. The Democratic Kennedy–Johnson ticket won in one of the closest presidential elections in U.S. history.

The Democratic victory indirectly helped the Texas Republican Party. When Lyndon Johnson was elected vice president, he resigned his seat in the U.S. Senate. A special election was necessary to replace Johnson. The Republican candidate, John Tower, surprised many Texans by winning. He was helped by a feud between conservative and liberal Democrats. The split in the Democratic vote gave the victory to the Republicans. The Republican Party continued to grow in Texas. Tower remained in the Senate until 1985.

A National Tragedy

Lyndon Johnson took on important responsibilities as vice president. One of the key assignments given to him by President Kennedy was to oversee America’s space program. Johnson was named chairman of the high-level National Aeronautics and Space Council.

In November 1963, President Kennedy was on a tour of Texas, having visited San Antonio, Houston, and Fort Worth. Riding in an open-car motorcade in Dallas, he was shot and killed. Investigators concluded that Lee Harvey Oswald was the assassin. Lyndon Johnson took the oath of office as president. It was given by federal judge Sarah T. Hughes of Dallas. As the nation grieved over the tragedy, Johnson acted swiftly to calm the nation. In a televised address to Congress, Johnson promised to carry on programs that Kennedy had begun.

The Warren Court

Early in President Eisenhower’s first term, he appointed Earl Warren to be the new chief justice of the United States. The “Warren Court” would make many important decisions. During the 1950s and 1960s, many individuals and groups worked to extend civil rights and individual liberties to all citizens. Others opposed their efforts. In the American political system, questions about rights, liberties, and justice are ultimately decided in the U.S. Supreme Court. Under Earl Warren’s leadership, the Supreme Court consistently decided in favor of people and groups seeking to end discrimination. These decisions affected many Texans.

School Desegregation

Civil rights lawyers argued that segregation of the races was unconstitutional, or not legal. In 1896 the U.S. Supreme Court had said that racial segregation was legal as long as the facilities for both races were equal. In the 1954 case of Brown v. Board of Education of Topeka, Kansas, civil rights lawyers, including future Supreme Court Justice Thurgood Marshall, argued that schools
that were separated by race could never be equal. The Supreme Court ruled that racial segregation in public schools was unconstitutional. The Court ordered schools to desegregate “with all deliberate speed.”

Some officials in Texas began a campaign of delay and resistance. The National Association for the Advancement of Colored People (NAACP) had brought the school desegregation case to court. The state attorney general filed a lawsuit to prohibit the NAACP from operating in Texas.

West Texas and central Texas schools obeyed the desegregation order more quickly than did schools in East Texas. San Antonio, Austin, San Angelo, El Paso, and Corpus Christi began desegregating in 1955. Mansfield, about 15 miles southeast of Fort Worth, was the site of the most visible resistance to desegregation, as mobs prevented African American students from enrolling at the local high school.

More common than mob action were delaying tactics. Some school districts submitted plans that called for desegregating one grade per year so that full desegregation would take 12 years. Other districts desegregated school faculty members but not students. Still other districts created schools with African American and Mexican American but no Anglo American students. Sometimes African American students were enrolled in white schools but were grouped in segregated classrooms in one part of the building and assigned a separate lunch period. These tactics delayed segregation in many schools until the mid-1970s, twenty years after Brown v. Board of Education of Topeka, Kansas.

School officials also resisted court decisions guaranteeing Mexican American children access to desegregated schools. The American GI Forum and LULAC filed numerous lawsuits to make districts follow the law.

**Desegregation of Public Facilities**

Schools were not the only focus of desegregation. African Americans also wanted access to public facilities such as parks, libraries, swimming pools, and auditoriums. These had been built with tax revenues. African Americans’ taxes helped to support these facilities, but they were denied the use of them. African Americans sued to gain access to a municipal
golf course in Houston. Similar suits occurred in several Texas cities. Sometimes city officials complied with desegregation orders. Other times they resisted. A popular form of resistance was to turn the operation of city properties over to a private club organized expressly to maintain discrimination. City officials could then claim there was no longer discrimination at public facilities.

**Individual Rights Versus National Security**

Fears about the rise of communism led to important consequences for Americans. The Soviet threat increased when Russia tested an atomic bomb. A revolution in China installed a Communist government in 1949. The U.S. Congress reacted by making membership in the Communist Party a crime. It held hearings about Communist influence in various American industries, including the motion picture business. Entertainers, producers, writers, and directors were investigated for signs of Communist Party sympathy or affiliation. In the name of national security, many people were willing to restrict traditional American rights, such as freedom of speech, press, and assembly. Whole groups of people, including labor unions and civil rights workers, were accused of having Communist ties. Conservatives criticized government welfare programs that had been popular during the New Deal. The Houston School District board refused to participate in a federally sponsored school lunch program. It defended its action in a newspaper ad that said in part, “Self reliance is the strongest lesson we can teach our youth.” In 1953 the legislature passed a law requiring all state employees, including teachers, to sign a loyalty
oath before they would be paid. Many Texans felt they were in the midst of a “red scare.”

The Red Scare

The most famous anti-Communist was Senator Joseph McCarthy of Wisconsin. McCarthy was the featured speaker at the San Jacinto Day celebration, April 21, 1954. Some 5,000 to 9,000 people in the audience heard him accuse leaders in the United States Army of being Communists. In Washington, D.C., McCarthy led televised hearings to investigate charges that Communists were in the U.S. Army. His behavior was seen by many to be bullying and cruel. Soon afterwards, McCarthy lost most of his influence. Because of his activities, a new word—McCarthyism—entered the language. It means the act of making unfounded, sensationalist charges against persons.

Results of the “red scare” were seen in Texas in the schools, libraries, and churches, and in opposition to labor unions and the United Nations. Textbooks and school library books were examined for possibly disloyal content. Some school board committees required teachers to attend anti-Communist lectures. People who belonged to certain international organizations were often closely watched for signs of Communist activity.

John Henry Faulk, an Austin native, was a radio star for CBS in New York City. He was fired when a group claimed he was a member of the Communist Party. He sued and was awarded $3.5 million in damages—the largest libel judgment to that date. Libel is the act of printing statements known to be false and intentionally spreading them to do damage to someone’s reputation. Faulk later moved back to Texas and toured the nation, speaking on the importance of protecting freedom of speech and freedom of the press.

Identifying Which traditional American rights were restricted because of the “red scare”?
Why Learn This Skill?

It is often necessary to make judgments about past or current events. Sometimes it is easy to make judgments with little information or based on emotion. Those judgments are usually unfair or inaccurate.

It is important to make judgments based on facts and reasoning. To do so, there should be a standard or criteria for judging. To judge the effectiveness of a law banning teenage smoking, for example, would require information about teenage smoking habits before and after the law was passed.

Learning the Skill

Follow these steps to make a reasoned judgment:
• Identify the criteria for making your judgment.
• For each criterion, decide what facts are necessary and gather that information.
• Evaluate the event according to the criteria.
• Make a judgment based on reason and fact.

Practicing the Skill

Study the information on the chart at left about the two-party system in Texas. Answer the questions that follow.
1 In which years did Democratic candidates receive more than 80 percent of the vote? The Republican candidates?
2 In which election did a Republican first receive more than 40 percent of the vote?
3 In the last four elections shown on the chart, how many times did the Democratic candidate receive more than 50 percent of the vote? The Republican candidate?
4 Based on the information on the chart, is the two-party system in Texas today stronger or weaker than in the past? Explain.

Selected Elections for Governor

<table>
<thead>
<tr>
<th>Year</th>
<th>Percent of votes for Democrats</th>
<th>Percent of votes for Republicans</th>
</tr>
</thead>
<tbody>
<tr>
<td>1946</td>
<td>91.2</td>
<td>8.8</td>
</tr>
<tr>
<td>1954</td>
<td>89.6</td>
<td>10.4</td>
</tr>
<tr>
<td>1962</td>
<td>54.0</td>
<td>46.0</td>
</tr>
<tr>
<td>1972</td>
<td>47.9</td>
<td>45.0</td>
</tr>
<tr>
<td>1982</td>
<td>53.2</td>
<td>45.9</td>
</tr>
<tr>
<td>1986</td>
<td>46.1</td>
<td>52.7</td>
</tr>
<tr>
<td>1990</td>
<td>49.5</td>
<td>46.9</td>
</tr>
<tr>
<td>1994</td>
<td>45.4</td>
<td>52.3</td>
</tr>
<tr>
<td>1998</td>
<td>30.0</td>
<td>67.5</td>
</tr>
<tr>
<td>2002</td>
<td>40.0</td>
<td>57.8</td>
</tr>
</tbody>
</table>

Glencoe’s Skillbuilder Interactive Workbook, Level 1, provides instruction and practice in key social studies skills.
Foundations for Growth

Main Idea
New interstate highways, the growth of suburbs, conservation, and technological developments changed Texas in the 1950s and 1960s.

Key Terms
convoy, suburb, reservoir, synthetic, vacuum tube, transistor, integrated silicon circuit

Reading Strategy
Evaluating Consequences As you read this section, create a chart like the one below of some positive and negative consequences of interstate highway construction in Texas.

<table>
<thead>
<tr>
<th>Positive Consequences</th>
<th>Negative Consequences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Read to Learn
• about suburban life.
• about drought conditions.
• about pioneer medical and business technology.

Section Theme
Economic Factors New technologies gave Texans more choices regarding where they could live and work.

Preview of Events

- **1957**
  - Soviet Union launches *Sputnik*
- **1958**
  - Jack Kilby invents the “silicon chip”
- **1962**
  - John Glenn orbits the earth three times
- **1969**
  - Americans walk on the moon

Texas Story

Despite *Brown v. Board of Education*, the integration of some Texas schools was delayed. Hearing that the Mansfield School Board had agreed to admit African American students, mobs refused to let the students enter. Mansfield High remained segregated until 1965. Many African Americans relied on spiritual values to help them through segregation. Maggie Briscoe wrote, “[African Americans] have had it very very hard and some of us it has made real real bitter, but I guess the Lord saved me, I just didn’t let it make me bitter. I just kept praying.”

Highway Construction

Although news headlines of the 1950s tended to focus on politics, international affairs, and civil rights, other changes were occurring that would reshape Texas and the nation.
Michael DeBakey, an internationally respected physician and surgeon, turned Baylor College of Medicine into a world-renowned facility. DeBakey was born in Louisiana, the son of Lebanese immigrants. While still a medical student at Tulane University in 1932, he invented the roller pump, a device that helped make open-heart surgery possible. Since then, DeBakey is credited with inventing or perfecting many medical devices and procedures that have become commonplace in heart surgery. He has served as an adviser to almost every president in the last 50 years, as well as to other leaders, including former Russian president Boris Yeltsin. In 1999, he received the United Nations Lifetime Achievement Award for his medical and humanitarian work.

One of Dwight Eisenhower’s tasks as a young army officer was leading a military convoy (a group of vehicles) across the country. The trip took months. It convinced Eisenhower that a better highway system was needed. When he was president, he supported the creation of an interstate highway system that would connect the states with quality roads. Congress appropriated money to help build highways that would have no cross traffic, stop signs, or traffic lights. Motorists could drive safely at higher speeds on these highways than they could on regular highways. In times of crises the highways would help the military quickly move troops and equipment.

Interstate highways were built with a combination of federal and state money. The first interstate highway in Texas was the Gulf Freeway in Houston, or Interstate 45. The interstate system consisted of east-west highways I-10, I-20, I-30, and I-40 and highways that went north and south, such as I-35. Three-digit highways signified loops around cities, such as I-410 around San Antonio.

Highway construction often caused problems. Some people had to find new homes when their houses were purchased to make way for the new highways. Sometimes businesses were forced to close. On the other hand, new businesses such as gasoline stations and motels sprang up to serve travelers. Truckers were able to deliver their products much more rapidly and efficiently than before. Texans loved their automobiles more than ever.

**Reading Check**

Describing What could motorists expect of the new interstate highways?

**Texans Move to the Suburbs**

Improved highways made it possible to live farther away from the central city and still work in a downtown office building or store. Developers purchased property located miles from the downtown business districts and began building residential areas, called suburbs, at the outskirts of cities or large towns. An increasing percentage of Texans lived in suburbs during the 1950s and 1960s, and developers built houses and shopping centers to serve these residents and attract new ones. As the suburban population grew, so did the need for new schools and religious centers. Modern recreational facilities such as Little League baseball fields and swimming pools became part of suburban life. Many suburban Texans rarely found a reason to go “downtown.”

Downtown movie theaters and stores closed because they could not withstand competition from the newer, more modern suburban facilities.
Sometimes the vacant stores were boarded up. More and more affluent people moved to the suburbs, while downtown neighborhoods became home to growing numbers of lower income people. “White flight” was the name given to describe this migration because often, lower income people were members of minority groups, such as Hispanics or African Americans. City governments, struggling to provide fire, police, and waste services, often directed more of their resources to the needs of the new suburbs and their residents. Almost every major city in Texas had some downtown, or inner-city, area that housed needy people during the 1950s and 1960s.

**Drought Puts a Strain on Water Resources**

Suburban, urban, and rural Texans all faced the same problem during the 1950s. That problem was drought. Rainfall amounts had been less than normal since 1949, but in 1956 conditions became even worse. Towns depended upon human-made reservoirs, or open water storage areas, for their water supply. These reservoirs began drying up. Lake Dallas was only 11 percent full. Rivers slowed to a trickle, and wells that had never run dry did so. Cattle went thirsty and thousands of square miles of pasture...
withered. In desperation, ranchers burned the thorns off cactus plants so that cattle could eat the prickly pear pads. One rancher in Washington County reported chopping down a hackberry tree every morning so that cattle could reach the leaves. Spring rains in 1957 ended the drought, but thoughtful Texans knew they had to plan for the next dry spell.

City officials, industrialists, farmers, and ranchers all responded to the water crisis. Cities funded new reservoirs. Ranchers built more stock ponds. Farmers turned more to irrigation. The U.S. Army Corps of Engineers built more dams across Texas rivers. The whole state became more aware of the need for water conservation.

Reading Check Explaining How did the drought affect water supplies?

Science and Technology

The 1950s and 1960s were a time of high interest in science and technology. State tax money, federal grants, churches, and wealthy donors together founded advanced hospitals and medical centers in Dallas, Galveston, San Antonio, and Houston. The various facilities treated patients, taught medical students, and engaged in trailblazing research. Houston’s M.D. Anderson Hospital, for example, became known for its cancer research. Just a short distance away, Doctors Michael DeBakey and Denton Cooley were pioneering new techniques in treating heart disease. DeBakey used synthetic, or human-made, materials to replace diseased blood vessels. The technique was so new that he had to use his wife’s sewing machine to make the synthetic vessels at home.

Meanwhile Dallas engineers and scientists were laying the foundation for a revolution in electronics. Radio had become widespread in the 1920s. Now television was making its mark in the 1950s. Both radios and television sets depended upon vacuum tubes, but such tubes were heavy, slow, and fragile. A device called a transistor was a great improvement. In 1954 a Dallas company called Texas Instruments became the first company to make a radio with transistors. It was portable and battery operated. Soon people carried radios with them to the beach and on picnics.

In 1958, Jack Kilby, working for Texas Instruments, invented the integrated silicon circuit, which today we call a “chip.” The chip made it possible to make many electronic instruments even smaller and faster. Within a few years integrated circuits were being used in personal computers, calculators, watches, and thousands of other applications.

One of the most important applications of the chip was in the growing field of space science. The Soviet Union had launched Sputnik, the first artificial satellite, in 1957. Shortly after, they sent...
the first man into space. The United States responded quickly to this threat to American scientific leadership. President John F. Kennedy set the goal of landing a man on the moon by 1970. The National Aeronautics and Space Administration (NASA), formed in 1958, was given that task. In 1961, the Manned Spacecraft Center (now the Johnson Space Center) was built near Houston. A year later, John Glenn orbited Earth three times. In 1969, Americans walked on the moon. Texans working at the Center played a major role in these achievements. Since then, the Center has improved space satellites and developed new technology. The increase of scientific knowledge, however, has not come without human costs. In 2003, for example, seven astronauts died when the space shuttle Columbia broke up over Texas in the last minutes of a 16-day flight. Texas and the rest of the country responded with a deep sense of grief.

Evaluating How did Texas Instruments contribute to technological progress?

Organizing to Learn

4. Categorizing Create a chart like the one shown below and fill in the uses for each invention.

<table>
<thead>
<tr>
<th>Invention</th>
<th>Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synthetic blood vessels</td>
<td></td>
</tr>
<tr>
<td>Vacuum tube</td>
<td></td>
</tr>
<tr>
<td>Transistor</td>
<td></td>
</tr>
<tr>
<td>Integrated silicon circuit</td>
<td></td>
</tr>
</tbody>
</table>

Critical Thinking

5. Problem Solving Refer back to the section about drought. Suggest ways in which Texans could provide additional water or conserve existing water resources.

Analyzing How did the discoveries and inventions of the 1950s and 1960s mentioned in the text affect the everyday lives of Texans?
Reviewing Key Terms

1. Use the following six terms to write a short paragraph about life in Texas in the 1950s and 1960s: liberal, suburb, transistor, libel, interstate, and reservoir.

Reviewing Key Facts

2. After World War II, what were three of the issues that divided the Republican Party?
3. Whom did Southern Democrats who favored segregation nominate to run for president against Harry S Truman in 1948?
4. What policies did liberal Texas Democrats support at this time?
5. Why was General Douglas MacArthur, an important American general in the Korean War, fired?
6. In your own words, explain the so-called “tidelands” issue.
7. Which Texan became majority leader of the Senate, then vice president, and ultimately president?
8. What is the name of the landmark civil rights case that led to desegregation of schools?

Critical Thinking

9. Civic Rights and Responsibilities Why was segregation of schools and public facilities found to be unconstitutional?
10. Understanding Cause and Effect Even though the severe drought was a terrible hardship, especially for farmers, how could it also be seen as an opportunity for learning and creative problem solving?
11. Drawing Inferences Do you think that the Soviet Union’s satellite Sputnik, launched in 1957, was the turning point that spurred the United States on to enter the “space race” to land a man on the moon? Why or why not?
12. Economics and Politics The U.S. Congress held hearings to find, try, and punish suspected Communists. Some people were able to go free if they “told on” others. What do you think the atmosphere was like?
13. Drawing Conclusions Describe some possible economic benefits to Texas from changes in the areas of medicine and technology, highways, and civil rights during the 1950s and 1960s.
14. Making Connections How did the Johnson Space Center connect Texas to the rest of the United States and the world?
Geography and History Activity

15. The new suburbs around cities and towns needed many services. Design and illustrate a map of a suburb. Draw and label residential, professional, recreational, and commercial areas.

Practicing Skills

Demonstrating Reasoned Judgment Differences in computer ownership among the 50 states exist because of varying economic activities, income levels, and urbanization patterns. Study the chart below, and then answer the questions that follow.

<table>
<thead>
<tr>
<th>State</th>
<th>% Computer Ownership</th>
<th>% Growth in Ownership 1999–2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alaska</td>
<td>67.0</td>
<td>5.8</td>
</tr>
<tr>
<td>California</td>
<td>56.1</td>
<td>19.1</td>
</tr>
<tr>
<td>Texas</td>
<td>48.4</td>
<td>15.8</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>42.1</td>
<td>10.2</td>
</tr>
<tr>
<td>Arkansas</td>
<td>38.5</td>
<td>25.4</td>
</tr>
</tbody>
</table>

16. Which of the following data would be helpful in understanding this chart?
   a. the percentage of urbanized areas in each state
   b. the number of computers used in offices
   c. the average household income in each state

17. What prediction can you make based on the information in this chart?

Cooperative Learning Activity

18. Creating Presentations Assign groups to focus on one metropolitan area or city in Texas. Working in groups, find maps of the interstate highway model showing how it connects one city to the next. Each group should focus on a different part of the state. Create an oral and visual presentation to show how the highway system connects the entire state and makes travel to neighboring states easier.

Portfolio/TAKS Writing Activity

19. Predicting Consequences Imagine that you are an African American student who has had to endure separate and unequal education but finally can attend desegregated schools. Write one to two paragraphs in which you address some of the fears and frustrations you felt before finally gaining admission to equal, desegregated schools, and the relief you felt afterward. Save your work for your portfolio.

Building Technology Skills

20. Using the Internet or Library for Research Divide the class equally into two research teams to gather information about the 1960 presidential race between John F. Kennedy and Richard M. Nixon. Each team should research topics such as foreign policy, domestic policy, education, taxes, and civil rights. Develop a multimedia presentation using photographs, maps, and narration to share with the rest of the class.

Directions: Use your knowledge of Texas history to answer the following question.

In post-World War II American history, Texas has played an important role in national government because

F redistricting shifted the proportion of votes allotted to urban areas.
G it joined the union as an independent country.
H it is a geographically large state.
J several U.S. presidents have come from Texas.

Test-Taking Tip:
Make sure to read all the answers given before choosing your answer. It is easy to recognize a term that relates to the question, but the answer containing that term might not be correct.
Here is an old expression that says, “If you build a better mousetrap, the world will beat a path to your door.” Jack Kilby proved that this is still true. Kilby developed the silicon chip in 1958 at the Texas Instruments plant in Dallas. This invention had a revolutionary effect on our daily lives. It also had economic and social consequences for the state, the nation, and the world.

Jack Kilby grew up in Great Bend, Kansas. After serving in World War II, he attended the University of Illinois and graduated in 1947 with a degree in engineering. While working at his first job, Kilby developed a famous method for solving complicated engineering problems. First, he considered all possible answers to his question. Next, he eliminated all answers that did not seem likely. Last, he pursued the most practical solution to the problem at hand. He would use this method later to develop a very important invention—the integrated circuit.

**Working Smart**

In 1958, Kilby was hired by Texas Instruments. His assignment was to find a way for the electronics industry to manufacture better products...
to be sold at cheaper prices. At that time, transistors acted as the brains of electronic equipment. However, connecting transistors to complete a circuit required expensive hand labor and left room for error. In addition, transistor products, such as radios, were generally big, expensive, and wore out quickly.

Kilby tackled his project at Texas Instruments by using the problem-solving method he had perfected earlier. First, he considered all possible answers. Then he eliminated numerous plans that did not show promise. Finally, he decided to experiment with silicon, a substance that has the capacity to conduct, or carry, electricity. Previously, Texas Instruments had used this chemical element in its own transistors.

High Technology Discovery

Kilby’s efforts led to the development of what is known as the integrated circuit. Instead of complicated circuits made up of wired-together transistors, a single chip of silicon was designed to contain an entire circuit. This computer chip, less than half the size of a dime, could house electronic units capable of retaining memory and giving commands.

Within a few years, Jack Kilby’s invention changed society worldwide. The silicon chip reduced the size of new electronic products, cut down on the cost of manufacturing them, and, as a result, increased sales figures for his company and others in the electronics industry.

One of Texas Instruments’ first inventions to use the integrated circuit was the hand-held calculator. It has become an indispensable product used by people everywhere.

Today, the integrated circuit is part of most military weapon systems. It is necessary to run personal computers, appliances, cameras, clocks, video games, and countless other everyday products. It is even found on spacecraft and satellites that travel far beyond our planet.

Honors and Recognition

Jack Kilby, who left Texas Instruments in 1970, has been honored with membership in the National Inventors’ Hall of Fame in Washington, D.C. When inducted in 1982, he joined Thomas Edison, Henry Ford, Robert Noyce (recognized by the electronic community as the co-inventor of the integrated circuit), and other great American inventors. Will you remember the name Jack Kilby from now on?