

The Race to the Moon: An Offshoot of the Cold War

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We choose to go to the moon! We choose to go to the moon in this decade and do the other things – not because they are easy, but because they are hard. Because that goal will serve to organize and measure the best of our abilities and skills, because that challenge is one that we are willing to accept, one we are unwilling to postpone, and one which we intend to win . . .

—John F. Kennedy, *In a speech at Rice University on September 12, 1962*

INTRODUCTION

“We choose to go to the moon!” Could anything be more exciting or more inspiring than that? Certainly not to a little third-grader sitting in the stands at Rice Stadium with her father, listening to the president of the United States explain his plan to send American astronauts to the moon. After all this time I may have forgotten why I wasn’t in school that day, but I will never forget the way I felt as I listened to President Kennedy speaking about his plans for America’s space program. What an amazing adventure that would be! What I didn’t notice—and wouldn’t have understood in any event—was the significance of the final words in the above quote. I had no idea that the president was motivated by politics and Cold War one-upmanship rather than by any grand vision. In fact, outer space was to be a major “cold” battlefield in the Cold War, and being first to land on the moon was the one battle that both sides—American and Soviet—desperately wanted to win.

I grew up during the time period covered by this curriculum unit—the heyday of American space exploration, but also a time of ongoing tensions between the United States and the Soviet Union, as well as with other Communist nations. My only childhood recollections directly related to the Cold War are of “duck and cover” exercises in first grade; I have no memories whatsoever of the Cuban Missile Crisis although I was in second grade when it occurred. While I might have been totally oblivious to world affairs I most assuredly was not oblivious to the United States space program. My passion for space exploration began with Gemini III, the first manned flight in the Gemini program. Almost forty years later I can still talk about various bits of trivia from that mission as well as from the nine succeeding Gemini missions and from the Apollo program. I was completely and totally fascinated by NASA and its exploits, many of which are still vivid in my mind to this very day.

What social studies teachers must always remember is that most of our students were infants or not yet born when the Berlin Wall fell and the Soviet Union collapsed. They

live in a world where Americans and Russians build and work together in an international space station. This makes it very difficult for them to understand the hostility that once existed between these two nations. The recent Columbia shuttle tragedy only accentuates how profoundly today's world differs from that in which my generation grew up. The astronauts on the International Space Station are in no imminent danger because Russian spacecraft are available to supply the station and to provide transportation back to Earth if necessary while the shuttle program is grounded. The idea of routinely relying on the Soviets for assistance would have been unthinkable thirty or forty years ago. More than that, in fact, there was a very real concern about what would happen if a returning astronaut fell into Soviet hands (Lovell 9-10). That world is ancient history for our students.

We must also remember that because these children were born at the end of the Cold War they spent their early years in a world where the United States seemed invincible. In the last two years they have witnessed unprecedented attacks on America in New York and Washington and have seen the United States go to war with Iraq in the face of opposition from many of our long-time allies. Their world must suddenly seem like a much more scary place than before September 11, 2001. The 1960s were a dangerous time but they were also a time of energy and optimism. I clearly remember living in an America in which anything was possible if we put our minds to it. By studying the Cold War years, I hope that they will come to understand that we can survive difficult and dangerous times and that enemies can become friends. I also want them to see that all actions have consequences and that our leaders need to consider all of the possible consequences before making policy decisions. I want these lessons to give my students a nudge on the road to becoming informed, concerned and responsible citizens.

I am designing this unit to be taught toward the end of the school year in my seventh grade Texas History class. The unit will require twelve ninety-minute class periods and will extend over a 2 to 3 week period with block scheduling. It will tie in with the chapters about the post-war world, and will correlate with many of the Project CLEAR objectives in the Science, Technology and Society and Social Studies Skills strands of the seventh grade Social Studies TEKS. Since Houston has played, and continues to play, an integral part in the story of space exploration, these lessons are particularly appropriate for a Texas history course. In studying the history of the space program, we will begin to see to what degree politics influences policy decisions, in domestic matters as well as in foreign affairs.

This curriculum unit has special value for me because many of my students are immigrants to this country and are, therefore, unfamiliar with many aspects of the history of the United States, of Texas, and of the City of Houston. When we discuss the space program, I like to tell them that the first word spoken from the moon during the first lunar landing mission was "Houston."

I teach second-language learners, native-English speakers, and gifted students, so it can be a challenge to design lessons that will hold the interest of each group. The Columbia tragedy confirmed my belief that most children are fascinated by the idea of space travel. Students are much more likely to take an interest in the Cold War era when it is tied in with the history of space exploration and with the history of the city in which they live. By studying the ways in which early space policy was rooted in Cold War concerns, students will better understand the overall role of the Cold War in U.S. history.

BACKGROUND

My curriculum unit will focus on two major events of the last half of the 20th century - the Cold War and the United States space program. Although the Cold War predates the space race, I will begin this unit with an introduction to the history of space exploration. Space is the hook that I will use to get my students interested in this topic. We will then go backward chronologically to study the origins of the Cold War, beginning with the reaction of Western nations to the Russian Revolution in 1917, considering how and why such hostile attitudes were suspended in order to fight a common enemy during World War II, and looking at the reasons for renewed antagonisms in the post-war years. We will study both the American and Soviet space programs from their beginnings in the 1950s through the Apollo-Soyuz flight in 1975 and will examine the changing nature of American and Soviet space policy in the larger context of changing U.S. relations with the Soviet Union.

The Cold War

Although the Soviet Union was an ally of the western nations during World War II, once Germany and Japan had been defeated everything changed. By dropping two atomic bombs on Japan the United States established a weaponry superiority that must have been threatening to the Soviet Union, given America's pre-war hostility to the idea of communism. Beginning with its domination of the countries of Eastern Europe, and exacerbated by later comments about plans to "bury" the West, the U.S.S.R. was soon seen as a threat to the Western democratic way of life. The United States responded by becoming involved in anti-communist alliances in Europe (NATO) and anti-communist conflicts in Korea and Vietnam. The Soviets then built the Berlin Wall and began placing missiles in Cuba. When the United States learned of the missiles, the future of the world hung in the balance. Powerful men in both countries wanted to use force against the other side to resolve the crisis. Fortunately, cooler heads prevailed and both countries drew back from the brink of nuclear war.

It is pertinent to ask how and why wartime allies so quickly became peacetime adversaries. Such an outcome was certainly not anticipated by Franklin D. Roosevelt in the early 1940s. While many Americans distrusted the Soviets, especially after Stalin signed a non-aggression pact with Japan in April 1941, Roosevelt took a more optimistic view. Although he recognized that Stalin was just as dictatorial as Hitler, he considered

Russia less dangerous than Germany because he did not believe that the Soviets sought to conquer the world militarily. According to John Lewis Gaddis:

Much of Russia's hostility to the West, he [Roosevelt] believed, stemmed simply from lack of knowledge: 'I think the Russians are perfectly friendly; they aren't trying to gobble up all the rest of Europe or the world. They don't know us, that's the really fundamental difference They haven't got any crazy ideas of conquest . . . and now that they have got to know us, they are much more willing to accept us.' Proud of his decision to recognize the USSR in 1933, Roosevelt sought to bring Russia into the postwar community of peace-loving states

The President believed that he could obtain Stalin's postwar cooperation by meeting legitimate Russian security needs, provided the Soviet Union had given up its attempts to force communism on the rest of the world (Gaddis 6-7).

Given what we now know about Stalin's actions after the war ended and the fact that it appeared, at least to the West, that "gobbling up Europe" was precisely what the Soviets did intend to do, Roosevelt seems to have been incredibly naïve, a political Pollyanna. At the same time, a cursory review of FDR's political career shows him to have been a very shrewd politician. So why did everything turn out so differently from what he had expected?

When we think of the beginnings of the Cold War, the time frame that comes to mind is the immediate post-World War II period. The hostility and mutual suspicion between the Soviets and the Western democracies goes back much further, however, at least to the years of the First World War. The Russian Revolution occurred in 1917 and was seen as a serious threat to western capitalism and to the entire way of life enjoyed in Europe and America. One of the aims of the Russian Revolution was to spread the rule of the proletariat around the globe. This so frightened the Western powers that they actually intervened in the revolution, trying to prevent the communists from gaining control. The memory of this stayed with the Soviets even though it was set aside during World War II when the need to defeat Hitler was paramount. Once the war was over, however, the Soviets were again free to worry about the possible dangers presented by Europe and America. Many of the actions that seemed so threatening to the West appeared to the Soviets to be nothing more than necessary steps to protect their own sovereignty.

One result of World War I was the emergence of several independent nations in Eastern Europe, made possible by the postwar weakness of both Germany and Russia. Of these new nations, five (Poland, Finland, Latvia, Lithuania, and Estonia) had been part of Russian Empire. The Russians never became reconciled to this change and Stalin used his 1939 agreement with Hitler as a means to force Latvia, Lithuania, Estonia, and parts of Poland and Finland back into the Russian fold. From the outset he made it clear that he had no intention of relinquishing these lands at any time in the future. The need to maintain a united front against Hitler forced Stalin's allies to turn a blind eye to the

situation. Roosevelt hoped that Hitler's defeat would make Stalin feel more secure and curb his desire to control Eastern Europe.

Roosevelt was certainly right about one thing—a mutual lack of understanding was a major problem. U.S. leaders seem not to have comprehended the Soviet policy of establishing spheres of influence as a protective buffer for Russia. They saw the Soviet grab of Eastern Europe as a prelude to a communist takeover even though Stalin did not immediately install communist governments in those areas and “showed notoriously little interest in promoting the fortunes of communist parties in areas beyond his control” (Gaddis 355).

From the Western viewpoint, on the other hand, the Soviets were a communistic monolith set on world conquest and determined to destroy the Western way of life. NATO was created to guard against what was perceived as a Soviet intent to grab control of Europe. Korea and Vietnam were both seen as “dominoes” which could not be allowed to fall to Soviet control.

Beginning in 1947, each side embarked on a series of actions guaranteed to engender fear in the other. In 1947 President Truman pledged U. S. aid to any country trying to fight communism. In 1948 the U.S.S.R. closed off all access to Berlin. The United States and Great Britain responded by making 200,000 flights carrying 1.5 million tons of supplies to West Berlin between June 1948 and May 1949. The Soviets relented and lifted the blockade. One month later Western fears were exacerbated again when the Communists came to power in China.

The early fifties witnessed the Korean War. In 1959 Castro took over in Cuba and entered into trade agreements with the Soviet Union. A year later he nationalized U. S. assets in Cuba. Tensions were heightened further when an American U-2 plane was shot down over the U.S.S.R. in 1960 and the pilot was captured, blowing a hole in initial U. S. claims that the plane was on a weather research mission.

In April 1961 a group of Cuban exiles, trained in the U.S., unsuccessfully tried to invade Cuba and overthrow Castro. President Kennedy refused to commit American troops to the effort, but accepted full responsibility for the Bay of Pigs fiasco. In August 1961 the communist authorities in Berlin began building a wall across the city to keep East Germans from escaping to the West through West Berlin. In October 1962 the most dangerous confrontation of the Cold War occurred when the Soviets began placing nuclear warheads in Cuba. Diplomacy prevailed and nuclear war was averted.

Throughout the 1960s Cold War fears were also being played out in Vietnam. Richard Nixon was elected in 1968 largely on a promise to end the war but the last American troops did not leave Vietnam until after Nixon's resignation. Ironically, the first real steps toward an end of the Cold War were taken by President Nixon when he

visited China in 1972. The two countries issued a joint statement that it would be in the best interest of both countries to normalize their relations.

During the 1970s the U.S. began to sell wheat to the Soviets. The tensions continued to ease between the superpowers, but each remained suspicious and fearful of the other throughout the 1980s.

Mutual fear and mutual misunderstanding on both sides contributed greatly to the Cold War. These tensions affected politics and decision-making throughout much of the world for almost half a century as smaller countries aligned themselves with one side or the other. Although the two powers never fought each other directly, their conflict played out over and over in areas such as the Middle East, Afghanistan, Korea and Vietnam.

The Space Race

It is against this backdrop of mutual antagonism that American space policy was formulated. In the immediate post-war years each branch of the military had its own rocketry program and was reluctant to share knowledge with the others. The shock of Sputnik put things in a whole new context. America could no longer tolerate this competition between the services. A new governmental department was created to focus on the problem of getting the U. S. into space—NASA. After allowing the Soviets to take the lead in space exploration, American leaders felt that they had to reestablish American supremacy in some way.

The decision to land Americans on the moon looked like a bold and adventurous move, which it certainly was. It was also an act of desperation. With America's first rockets proving to be notoriously unreliable in unmanned tests and with the Soviets continuing to reach each new goal ahead of the U. S., it was imperative that attention be focused on a dramatic long-term goal.

During the 1960s there were years when Congress actually gave NASA more money than it had requested. This period of almost limitless funds didn't last long. Once the goal of landing on the moon had been achieved, legislators began questioning the need to continue flying to the moon. The final three lunar landings planned by NASA in the 1970s were cancelled due to budgetary constraints. Was this merely indicative of a lack of vision on the part of Congress or were there political considerations involved in the cutbacks just as there had been in the initial buildup of NASA?

The early 1970s were the beginning of détente. Nixon went to China and worked for more friendly relations with the Soviet Union. By this time it was also clear that the U.S.S.R. had abandoned its lunar landing program in favor of a space station in Earth orbit. While it was still possible for Ronald Reagan to refer to the Soviet Union as the "evil empire" in the 1980s, by the middle of the 1970s the situation between the two countries had changed enough to make a "space race" seem unnecessary. In 1975 these

once-fierce competitors for space supremacy worked together on the Apollo-Soyuz flight in which a specially designed docking module allowed an American Apollo and a Russian Soyuz to dock and for their crews to move freely between the two spacecraft. Although there was no follow-up to the stated purpose of this mission—a way for either country to provide a rescue if the other had an emergency in space—this was clearly the beginning of a new attitude by both countries toward space travel.

There were other factors involved in the decision to end the lunar landing missions. It can be argued that NASA's successes spelled the end for the Apollo program. The original purpose of going to the moon was to get there before the Soviets. Once that had been accomplished, not once but several times, many Americans couldn't see the point of continuing to spend money and risk astronauts' lives. Another, generally overlooked, result of the Apollo program is the change it began to make in our view of our world. For the first time humans saw how their home looked from a distance—a bright blue and white marble shining in the darkness of space. We began to realize how fragile our home is and how barren and uninviting our nearest neighbor in the solar system is. A concern with the ecology and with many social problems on earth led to calls for our resources to be spent at home rather than “wasted” on continued trips to the moon (Zimmerman 242-243).

The lunar landings took place at the height of opposition to the war in Vietnam—another offshoot of Cold War fears. If we no longer felt that we had to hold Vietnam against communism, it makes sense that we would also believe that we no longer needed to maintain supremacy in space. If our opposition to the war in Vietnam was coming to outweigh our fear of communism, then it began to make sense for Nixon to make approaches to both the Soviet Union and Communist China. Changes in attitude can lead to changes in policy.

TEACHING STRATEGIES

This unit is intended for use as part of the social studies curriculum in my seventh grade Texas history class. The lessons will address the following objectives:

- SST.HIS.7.1.b. Apply absolute and relative chronology through the sequencing of significant individuals, events, and time periods.
- SST.CTZ.7.17.c. Identify the leadership qualities and analyze the contributions of selected elected and appointed leaders of Texas, past and present.
- SST.STS.7.20.c. Analyze the effects of scientific discoveries and technological innovations on developments in Texas, including citing examples of the resulting interdependence among Texas, the United States, and the world.
- SST.SSK.7.21.d. Identify points of view and frame of reference.
- SST.SSK.7.21.e. Support a point of view on a social studies issue or event.
- SST.SSK.7.22.c. Transfer information from one medium to another.

- SST.SSK.7.22.d. Create written, oral, and visual presentations of social studies information.

I intend to combine traditional written resources with multimedia lessons. On the first day I will give each student a brochure/study guide with questions to guide them in their study of this topic. After a short introductory lecture, I plan to utilize sections from various books, websites and videos relating both to the space program and to the Cold War to give the students a deeper understanding of the topic. Since I teach at a Title I school I also plan to take advantage of that program to take all of my students on a field trip to Space Center Houston once we have completed this unit. Having seen the video of President Kennedy speaking at Rice University, they should really enjoy seeing the lectern he used that day on display at Space Center Houston.

I have prepared a PowerPoint presentation to highlight the areas that I want the students to focus on. The PowerPoint can be used during one class session or in sections over more than one class period since it includes questions at several points in the presentation that require students to stop and think about the answers before proceeding with the rest of the presentation.

I have also created a website connected to this lesson, which gives a short background of the Cold War and the space race as well as specific information related to the American and Soviet space programs, links to related websites and a list of resources for further research. Many of my students who have difficulty staying on task with more traditional lessons have no problem whatsoever becoming fully engaged with a lesson that involves the use of computers. The slides from my PowerPoint will also be available on the website, which is included as a website resource in the bibliography. I intend to expand and update the website periodically as I find new information and photos and video clips.

Videos are particularly useful for my second-language learners since they tend to speak English more easily than they read it. The Cold War is difficult enough for modern students to understand without adding the complication of unfamiliarity with the language. In addition, most of today's students get their information from television and the Internet and therefore are more likely to pay attention to a video presentation of facts than to a lecture or a book. I feel very strongly that movies and documentaries are vastly underrated as a tool for engaging students in the study of history.

Before discussing specific shows, however, I must offer a caveat. While I usually have no concern about showing a documentary, there are frequently serious problems about presenting Hollywood productions in their entirety. War-related violence is a special concern for me because some of my students are refugees from war-torn countries. Recent movies pose a particular difficulty because of the free use of profanity and graphic violence. Gratuitous sex is less of a problem for Cold War and space movies, but it is not totally absent. This is a particularly touchy area in middle school,

where students want to watch a “grown-up” movie one day and then ask to see a Disney movie the next. While it is apparent from my students’ comments that many of them are allowed to watch all sorts of movies at home, a teacher must be circumspect about what is shown in the classroom.

There are also school district policies on permissible movie ratings that must be taken into account. Of the four shows that I intend to discuss, one movie is rated PG-13, two are rated PG and a made-for-TV production is unrated. I would advise any teacher wanting to use a movie to watch it carefully for problem areas. You must get permission from your various administrators *for all of the movies discussed in this unit* due to their ratings. You may also need to have permission slips signed by their parents before showing the movie.

Setting aside the above concerns, all of the movies which I will discuss are above the heads of most elementary students, but should not pose comprehension problems for middle school students if you provide them with background knowledge prior to viewing the film. In the lesson plans for this unit I have chosen to use only selected scenes from these movies to avoid the profanity problem. I prefer to use DVDs for this purpose since it is much easier to jump from scene to scene. DVDs often offer the added bonus of documentary materials about the historical subject of the film.

One excellent documentary video, which I taped at the time of its original broadcast, is *45/85*. This is an ABC News special about the United States between the years 1945 and 1985. At the outset the viewer is told that, while touching on other issues, the program will focus on the Cold War. There are several segments that illuminate changing attitudes: from the hysteria of the McCarthy era to Nixon’s détente-era trips to China and the Soviet Union. The program includes numerous comments from the participants in these events—a Japanese adult talking about growing up in a post-war Japan strongly influenced by American attitudes, a U.S. soldier discussing Vietnam, as well as various government officials (past and present) revisiting their Cold War experiences. One particularly interesting clip came from Richard Nixon acknowledging that his anti-communist credentials from the 1950s made it possible for him to improve relations with China and the Soviets when no Democratic president would have dared to do so.

While useful on its own terms, this documentary has additional value based on its age. In an interview at the end of the program, President Reagan acknowledged that he still considered the Soviet Union to be the “evil empire” and fully intended to pursue his “Star Wars” weapons plan. We now know that the Berlin Wall fell only four years after this program aired and that within seven years of the airdate the Soviet Union—the “evil empire”—had ceased to exist. The program itself, expressing opinions and attitudes current in 1985, has become part of the history of the Cold War. I have not been able to find the boxed set of this program for purchase but individual videocassettes are available on Amazon.com. It should also be possible to find copies in libraries to use during the teaching of this unit.

Several years ago, CNN produced an excellent series on the Cold War. Although it is no longer available for purchase on the CNN website, the boxed set can be found on Amazon.com. Like *45/85*, it should also be available in libraries. There are twenty-four episodes, covering the period from 1917 through 1991. Rather than following strict chronological order, each episode deals with a particular topic. Different aspects of the same historical period are covered in different episodes. For this curriculum unit the most valuable episodes are Episode 1 (*Comrades* 1917-1945), Episode 2 (*Iron Curtain* 1945-1947), Episode 4 (*Berlin* 1948-1949), Episode 6 (*Reds* 1947-1953), Episode 8 (*Sputnik* 1949-1961), Episode 10 (*Cuba* 1959-1962), Episode 11 (*Vietnam* 1954-1968), and Episode 16 (*Détent* 1969-1975).

There are numerous documentaries about the space program which are readily available for purchase at Space Center Houston and are probably available in libraries as well, one of which is listed in my bibliography. While these may be fascinating to a space buff like myself, students will become bored very quickly if asked to watch them from start to finish. These documentaries are most useful when used in conjunction with Hollywood productions that are more appealing to adolescents, and can set up a compare and contrast activity in which the students can evaluate how well Hollywood translates history into entertainment.

There are numerous movies about Cold War topics. Unfortunately, I think most of these would not hold the attention of middle school students. The best and most exciting is *Thirteen Days*. I have strong reservations about using this movie because of the profanity which is almost constant throughout the film and which is probably the main reason for the PG-13 rating. The DVD includes two documentaries, which could be useful if time allows—*Roots of the Cuban Missile Crisis* and *Bringing History to the Silver Screen*. A more acceptable show about the Missile Crisis is 1974's TV movie *The Missiles of October*. Although it also includes a very few mild profanities, there are not enough to make it a problem to show selected scenes from the movie. While this is an excellent film, I am not inclined to show the whole movie to seventh graders because I don't think it would hold their attention for the duration. It is somewhat staged in places, but there are powerful scenes which can help to improve student understanding of the problems faced by both sides in preventing an all-out nuclear war.

While space exploration is also a popular topic for motion pictures, I can think of only two that are fact-based, *Apollo 13* and *The Right Stuff*, both of which are rated PG. *Apollo 13* is an excellent movie. When discussing the value of history-based movies with my classes I always use it as an example of a movie where great attention was paid to making it as accurate as possible. I then point out to them that even *Apollo 13* occasionally distorts or exaggerates historical events for dramatic purposes - for example, the movie makes it appear that Marilyn Lovell lost her wedding ring down the shower drain on the morning of the launch, when in fact the ring came off her hand in the shower but was recovered. Losing the ring looks like a bad omen just before the start of a

mission that almost ended in disaster, and adds to the drama of the movie—but it is not accurate. I use this example to remind my students to be critical movie watchers as well as critical readers—just because a movie or television show is about a specific historical event or is set in the past does not make it historically correct.

For the specific purposes of this curriculum unit, however, *Apollo 13* has no real value since it does not mention the Cold War context of the space program. *The Right Stuff*, on the other hand, focuses on the beginnings of the space race. Selected scenes showing the reaction to Sputnik, the selection process for the first astronauts, the astronauts' first press conference and our early rocket failures should be very effective in catching the students' interest. There is also a scene early in the movie that illustrates the fact that fear of the Soviet Union began right after World War II ended—the military concealed the fact that Chuck Yeager had broken the sound barrier in 1947 in order to prevent the Russians from learning of it, to the surprise of a newsman at the scene who still thought of the Russians as our allies.

A new DVD version of *The Right Stuff* was released in 2003 with some particularly valuable special features. There is a documentary that includes interviews with Scott Carpenter, Gordon Cooper, Walter Schirra and Chuck Yeager that provides valuable insights on the early days of the space program. A separate documentary on John Glenn also has an excellent segment on the Mercury program and even includes footage of President Kennedy's visit to Houston and to mission control in 1962. There is also an interactive timeline that includes photographs and video footage.

Even though this movie is rated PG it has enough profanity to make me reluctant to show the entire film. I would also prefer not to get side-tracked by the aspects of the film that deal with the skirt-chasing activities of several of the Mercury astronauts, since it has no relevance to the topic being studied. This topic is touched on slightly in the Glenn documentary but not enough to be distracting. I actually prefer the documentaries on the new DVD issue of *The Right Stuff* to many of the other pure documentaries about the space program since the video quality is good and these documentaries do a good job of putting the early days of the space program in the context of the times and really bring that era to life.

There are numerous websites about the Cold War and about space exploration, but by far the best is CNN's website on the Cold War, with a section devoted specifically to the space race. It would almost be possible to teach this unit using this resource alone. There are five different game-type interactive activities under the Cold War Challenge heading. Students can try to identify Cold War personalities, to match sound bites to those who said them, take a test on Cold War jargon, or try to complete a Cold War crossword puzzle or a Cold War wordsearch. The interactive timeline, interactive maps, extensive glossary and declassified historical documents from both the East and the West make this a unique resource for research activities. My favorite part of the CNN site is the alternate history section, which points out that Cold War competition resulted in rapid

advances in various types of technology. It then presents three possible scenarios for actions by the U. S. in the post-war years and presents a possible chain of events over the course of the next several decades. During one of my later lessons I will go through these scenarios with the entire class to make sure they understand the idea of “alternate history.” The students will then work in teams to prepare their own alternate history for the outcome of the Cuban Missile Crisis.

There will also be a lesson for my gifted students that will involve independent research comparing Franklin Roosevelt and Harry Truman. They will then use one class period to hold a debate about whether Franklin Roosevelt would have been more successful than Truman in avoiding post-war hostility with the Soviet Union.

The students will do a final project on a topic of their choice. This project will demonstrate what they have learned from this curriculum unit. I will include possible topics on the study guide that I give each class at the start of this unit. Students will be given a choice of completing the project as a newspaper report, a poster, or a PowerPoint presentation. I prefer to give my classes some options on the form of a project in order to allow students to work in a way that is best suited to their individual talents and abilities.

CONCLUSION

My primary goal in teaching this curriculum unit is to provide my students with an introduction to the Cold War. This is a difficult topic for seventh graders but I believe that the ever-popular subject of space exploration will be a bridge to the past. This unit illustrates many things—the ripple effects of policy decisions, the interconnectedness of domestic and international concerns, the way political considerations affect scientific activities, the fact that competition is not necessarily a negative thing, and that people and countries can make progress toward building a better world. I hope that at the end of this unit my students will have a better understanding and appreciation of a fascinating period in American history.

LESSON PLANS

Lesson Plan 1: A Short History of Space Exploration

The unit will be introduced with an overview of the main events of the U.S. and Soviet space programs. This initial lesson will take one ninety-minute class period.

HISD Objectives

- SST.HIS.7.1.b. Apply absolute and relative chronology through the sequencing of significant individuals, events, and time periods.
- SST.CTZ.7.17.c. Identify the leadership qualities and analyze the contributions of selected elected and appointed leaders of Texas, past and present.

- SST.SSK.7.22.d. Create written, oral, and visual presentations of social studies information.

Materials Needed

Pencil and paper

DVD of *The Right Stuff* (special edition with documentaries)

PowerPoint presentation on the space race

LCD projector

Procedure

I will begin the lesson by handing out a study guide with a list of questions about America and the Soviet Union that are designed to focus their attention on the subjects to be covered by this unit. (A copy of the study guide is in Appendix A.) After reading through the study guide with the students I will direct them to draw two K-W-L charts on separate sheets of paper and to label one “Cold War” and the other “Space Race.” I will then ask them to fill in the charts with everything they know about the Cold War and about the early years of space exploration. Next we will share answers and brainstorm other ideas. Finally we will discuss and list on the chart some things that they want to learn in order to answer the questions on the study guide.

I will then use the projector to go through the PowerPoint presentation, stopping at appropriate points to discuss the information being presented and to answer any questions the students may have. We will also discuss possible answers to questions posed in the PowerPoint that are intended to get the students thinking about the topic.

We will spend the remainder of the class watching selected scenes from “The Right Stuff,” as well as the documentary with Carpenter, Cooper, Schirra and Yeager and the astronaut segment of the Glenn documentary.

The students will keep their K-W-L chart in their folder and will fill in information about what they are learning as our study of this unit progresses.

At the end of this class I will give the students a list of words and phrases that they will need to know in order to understand the upcoming lessons. Their homework assignment will be to find the definitions of these terms. These vocabulary terms are in Appendix B.

Lesson Plan 2: A Comparative Timeline

This lesson will focus on the background and major events of the Cold War and of the U.S. and Soviet space programs. The lesson will extend over four ninety-minute class periods.

HISD Objectives

- SST.HIS.7.1.b. Apply absolute and relative chronology through the sequencing of significant individuals, events, and time periods.
- SST.SSK.7.22.c. Transfer information from one medium to another.
- SST.SSK.7.22.d. Create written, oral, and visual presentations of social studies information

Materials Needed

Construction paper
Colored pencils or colored markers
Rulers
ABC's 45/85 and CNN's *The Cold War* videos
DVD of *The Missiles of October*

Procedure

I will begin the lesson with a short lecture about the causes of the Cold War and the way in which Cold War concerns fueled the space race. I will follow this with a class discussion to assess student understanding of these basic concepts.

I will then show selected scenes from the ABC and CNN videos, as well as from *The Missiles of October*. The students will take notes about Cold War attitudes and beliefs that are exhibited in the video.

I will give the students a list of resources that they can use to research the main events of the Cold War and of the space race. The resources will include both Internet sites and books that can be found in our school library (listed under the heading of "student resources" in the annotated bibliography). They will use these resources to make a list of the major events in the Cold War and of significant milestones in manned exploration of space from its beginnings through the Apollo-Soyuz mission.

Students who are second-language learners will be allowed to work individually or in pairs. Gifted students will work individually.

I intend to reserve the computer lab for the second day of this lesson to enable the students to do research for the timeline. Students will turn in a preliminary list of dates at the end of the second class period devoted to this lesson.

At the start of the third class period I will return the preliminary lists to the students with corrections and suggestions for further research, if necessary. Students needing to do additional research will be allowed to use classroom and library resources. Once the students have revised their list accordingly, they will use construction paper and colored pencils or markers to make a timeline. They will list important Cold War events on one side of the timeline and major steps in the space race on the other side of the timeline. When this assignment is completed the students will be able to see the way in which Cold

War and space race events fit together. Essentially this will give the students a graphic organizer that will make it easier for them to see cause-and-effect relationships.

Lesson Plan 3: Writing Alternative History

The purpose of this lesson is to get the students to think more analytically about cause and effect relationships and to learn more about the ways that political concerns impacted both the space programs in both the United States and in the Soviet Union. The students will do some “what if?” theorizing about alternative outcomes to the Cuban Missile Crisis. The lesson will require four ninety-minute class periods.

HISD Objectives

- SST.STS.7.20.c. Analyze the effects of scientific discoveries and technological innovations on developments in Texas, including citing examples of the resulting interdependence among Texas, the United States, and the world.
- SST.SSK.7.21.d. Identify points of view and frame of reference.
- SST.SSK.7.21.e. Support a point of view on a social studies issue or event.
- SST.SSK.7.22.c. Transfer information from one medium to another.
- SST.SSK.7.22.d. Create written, oral, and visual presentations of social studies information.

Materials Needed

LCD Projector and computer with Internet access
Posters and markers (optional)

Procedure

I will begin this lesson by accessing the alternate history section of the CNN website on the Cold War. By projecting the website on a screen in the classroom I will be able to go through the various scenarios with the class and to discuss with them whether they agree with the alternate outcomes suggested by the website. I plan to go through all three scenarios with each class in order to model what I expect from an alternate history activity.

For this lesson my second-language learners will be allowed to work in groups of four or five students and my gifted students will work in two-person teams. Each team will choose an alternate history scenario for the Cuban Missile Crisis and will project outcomes for that scenario over a forty-year period, using the CNN site as a guide. At the end of this lesson each team will present their alternate history of the Missile Crisis to the class. They will be expected to present facts that will justify their proposed outcomes. The alternate scenarios are:

1. Kennedy follows the suggestions of his military advisers and bombs Cuba in an attempt to remove the weapons.
2. The Soviet ships run the blockade.

3. Kennedy decides not to risk nuclear war and does nothing about the missiles.

The next two class periods will be set aside for the teams to do research and to work on their alternate history presentations.

During the fourth class period each team will present their ideas to the class. They may use notes to assist in making their presentation or may present their suggested outcomes on a poster which they can then use as a visual aid during their presentation.

On the first day of this lesson my gifted students will be given an additional independent research assignment. Each student will research the presidencies, policies and personalities of Franklin Roosevelt and Harry Truman. They will be expected to use this information and what they have learned about the events of the Cold War to decide if they think Roosevelt could have prevented the deterioration of our wartime alliance with the Soviet Union. They will explain their decision in a 3 to 5 page paper and will be expected to argue the issue during a class debate on the last day of this curriculum unit.

Lesson 4: So What Does It All Mean?

The purpose of this final lesson is to help my students analyze what they have learned about this period in history. The lesson will take three ninety-minute class periods.

HISD Objectives

- SST.HIS.7.1.b. Apply absolute and relative chronology through the sequencing of significant individuals, events, and time periods.
- SST.STS.7.20.c. Analyze the effects of scientific discoveries and technological innovations on developments in Texas, including citing examples of the resulting interdependence among Texas, the United States, and the world.
- SST.SSK.7.21.d. Identify points of view and frame of reference.
- SST.SSK.7.21.e. Support a point of view on a social studies issue or event.
- SST.SSK.7.22.c. Transfer information from one medium to another.
- SST.SSK.7.22.d. Create written, oral, and visual presentations of social studies information.

Procedure

The students will use the first two class periods of this lesson to work on a final project on a topic of their choice. Some possible topics are the effect of the Cold War on space exploration in the U.S. and the U.S.S.R., the way in which mutual misunderstandings contributed to the beginnings of the Cold War, the impact of America's lunar missions on our changing view of the world and how that affected governmental policies, or the key events between 1945 and 1974 that caused America's relationship with the Soviet Union to change. Students will be given a choice of completing the project as a newspaper report, a poster, or a PowerPoint presentation.

APPENDIX A: STUDY GUIDE

During the next three weeks we will be studying the American and Soviet space programs from their beginnings in the 1950s through the Apollo-Soyuz flight in 1975. We will look at the changing nature of U. S. space policy in relation to changes in the relationship between America and the Soviet Union. As you do research for these lessons I want you to pay special attention to the following questions:

- What was the relationship between the United States and the Soviet Union during World War II?
- What happened to the German scientists who had been working on rocketry before and during World War II?
- What was going on in America while Russia was building its space program?
- Our relationships with Britain, France and other wartime allies remained friendly after the war and we formed new alliances with our old enemies, Germany and Japan. What happened to change another wartime ally, the Soviet Union, into our great enemy?
- Compare the Soviet and American news reporting about their space programs. What does this tell you about each country at that time?
- What impact, if any, did John Kennedy's death have on the space program, especially Apollo?
- Lyndon Johnson was a strong supporter of NASA from the start and strongly influenced the decision to locate Mission Control in Houston. What do you think kept him from setting new and more ambitious goals for NASA to follow up on the moon-landing program?
- Richard Nixon was strongly anti-communist during the 1950s. What caused him to start to build a more friendly relationship with Russia and China during his presidency?
- How did this changing attitude toward the Soviets affect America's space policy?
- What events in America might have played a role in shaping space policy after the successful moon landings?

As part of this lesson you will complete a project that shows me what you have learned. The project can be a news article, a poster or a PowerPoint presentation. You should keep this project in mind as you are studying this topic. I will give you two class periods to put the project together but you will have to gather the information that you need for the project during the times set aside for research during the next two weeks or as homework. Remember that the information you get from your research can be used to complete more than one project or activity.

Some possible topics for your final project are:

- The impact of the Cold War on space exploration in the U.S. and the U.S.S.R.
- The effect of America's lunar missions on our changing view of the world, and the ways in which that changing view affected our space policy.
- Events that you think were most important in causing America's relationship with the Soviet Union to change.

APPENDIX B: COLD WAR VOCABULARY

You will need to be familiar with the following terms as we study space exploration and the Cold War. You can use the Internet, your textbook, and classroom resources to look up the definitions of these terms. Write the words and their definitions in your journal to have as a reference as you work on these lessons.

Arms race

Bay of Pigs

Berlin airlift

Blacklist

Containment

Cuban Missile Crisis

Détente

Fallout shelter

Flexible response

Hollywood Ten

Hot line

ICBM

Iron Curtain

McCarthyism

Missile gap

NATO

Russian Revolution

Sputnik

38th parallel

Truman Doctrine

ANNOTATED BIBLIOGRAPHY

Teacher Resources

Chaikin, Andrew. *A Man on the Moon: The Voyages of the Apollo Astronauts*. New York: Penguin Putnam, Inc., 1994.

A historian's view of the Apollo program.

Compton, William David. *Where No Man Has Gone Before: A History of Apollo Lunar Exploration Missions*. Washington, D.C.: GPO, 1989.

This offers useful information about the funding of NASA during the space race and other factual information as well. It also provides a researcher/historian perspective.

Dickson, Paul. *Sputnik: The Shock of the Century*. New York: Walker Publishing Company, Inc., 2001.

An excellent book, with a valuable section on the roots of both the U.S. and Soviet space programs, going back to pre-WWII scientists with an interest in rocketry.

Gaddis, John Lewis. *The United States and the Origins of the Cold War, 1941-1947*. New York: Columbia UP, 1972, 2000.

This is an excellent overview of the beginnings of the Cold War.

Launius, Roger D. *NASA: A History of the U.S. Civil Space Program Update Edition*. Malabar, FL: Krieger Publishing Company, 1994, 2001.

This book has a relatively short history at the beginning, followed by a wealth of primary source documents about the space program.

Lovell, Jim and Jeffrey Kruger. *Lost Moon: The Perilous Voyage of Apollo 13*. New York: Houghton Mifflin Company, 1994.

While this has little or no discussion of the Cold War or the space race per se, it is valuable for its overall background of the space program told by a participant.

MacMillan, Margaret. *Paris 1919: Six Months That Changed the World*. New York: Random House, Inc., 2002.

While the subject matter of this book is the peace conference ending World War I, it has valuable information about the reaction of Western nations to the 1917 Russian revolution and the seeds of mutual distrust and suspicion which were sown at that time.

Patterson, James T. *Grand Expectations: The United States, 1947-1974*. New York: Oxford UP, 1996.

Chapter 5 deals specifically with the first years of the Cold War, but several other chapters also shed light on the subject.

Pellegrino, Charles R. and Joshua Stoff. *Chariots for Apollo: The Untold Story Behind the Race to the Moon*. New York: Avon Books, Inc., 1985.

A historian's view of the space race.

Shepard, Alan, Donald Slayton, Jay Barbree, and Howard Benedict. *Moon Shot: The Inside Story of America's Race to the Moon*. Atlanta: Turner Publishing, Inc., 1994.

Written primarily by two of the original seven astronauts, it is especially useful both for its version of the earliest days of the space race and for its portrayal of the beginning of the end of the competition between the Americans and the Soviets. Shepard was the first American in space and walked on the moon, while Slayton flew on the Apollo-Soyuz mission. Using excerpts from this book will require careful editing, however, since the profanity flows quite freely in numerous quotes.

Tsouras, Peter G. *Cold War Hot: Alternative Decisions of the Cold War*. Mechanicsburg, PA: Stackpole Books, 2003.

A fascinating book if you enjoy alternative history. A series of essays present scenarios such as a military conflict over 1948 Berlin, a North Korean victory in 1950, and a Soviet victory in Afghanistan.

Zimmerman, Robert. *Genesis: The Story of Apollo 8: The First Manned Flight to Another World*. New York: Four Walls Eight Windows, 1998.

A historian's version, including information about Cold War influences. There is also a discussion of the Apollo program's influence on the ecology movement.

Student Resources

Brubaker, Paul. *The Cuban Missile Crisis in American History*. Berkeley Heights, NJ: Enslow Publishers, Inc., 2001.

More complex than some of the books in this list, it offers detailed information about the missile crisis, as well as a timeline and Internet resources for further research.

Dolan, Edward F. *Famous Firsts in Space*. New York: E. P. Dutton, 1989.

This book discusses the fact that the Army, Navy and Air Force were caught up in their own space race with each other, goes into the significance of Sputnik, and explains that fears about continued Soviet superiority led to the Apollo program. This book might be a little difficult for second language learners.

Fleming, Fergus. *The Cuban Missile Crisis: To the Brink of World War III*. Chicago: Heinemann Library, 2001.

Well-written and easy to read, it discusses the steps that led to the missile crisis, has a chapter called "What If?" and a glossary and list of important dates.

Holland, Gini. *The 1960s*. San Diego: Lucent Books, Inc., 1999.

The chapter on the Cold War includes sidebar articles explaining why Berlin was a potent symbol of the Cold War and on the effects of the Organization of American States' decision to expel Cuba in 1962. The chapter on Vietnam includes a discussion of the Domino Theory. There is also a chapter on the space race which has a sidebar article about the fact that the astronauts were often put on display for political reasons. This book might be difficult for second language learners, but would be fine for regular or gifted students.

Kallen, Stuart A. *The 1950s*. San Diego, CA: Lucent Books, Inc., 1999.

The first two chapters focus on the Cold War, internationally and at home. There are interesting sidebars on nuclear contamination from nuclear testing and on Sputnik. There is also a photograph of an anticommunist poster that is an excellent illustration of the strong feelings engendered by the Cold War. This book might be difficult for second language learners, but would be fine for regular or gifted students.

Kallen, Stuart A. *The Race to Space*. Edina, MN: Abdo & Daughters, 1996.

Fairly easy to read, this book goes back to the earliest days of space exploration with chapters on Robert Goddard, Von Braun, the use of German rockets during World War II, Tsiolkovsky and other Soviet space pioneers, and Sputnik and the Cold War.

Kelly, Nigel. *The Moon Landing: The Race Into Space*. Chicago: Heinemann Library, 2001.

In addition to basic historical information, this book also includes chapters on spin-offs from the space program, a list of important dates and a glossary. Interesting and easy to read.

Kronenwetter, Michael. *America in the 1960s*. San Diego: Lucent Books, Inc., 1998.

This has chapters on the Cold War and on the space race.

Spangenburg, Ray and Kit Moser. *The History of NASA*. New York: Franklin Watts, Inc., 2000.

What I like best about this book is its timeline of NASA's history.

Uschan, Michael V. *The 1940s*. San Diego, CA: Lucent Books, Inc., 1999.

This book provides useful background information in its discussion of the war years, culminating in a chapter on the Cold War. One sidebar discusses the

Hollywood Ten and the blacklist. This book might be difficult for second language learners, but would be fine for regular or gifted students.

Wright, Pearce. *The Space Race*. New York: Gloucester Press, 1987.

This has information about the U.S., Russian and European space programs, but also has a chapter on the space race. It includes a chronological list of important events in space exploration.

The books on the 1940s, 1950s and 1960s are part of Lucent's cultural history of the United States series. Each book has an excellent chronology of key events during the period covered by that book, as well as maps and illustrations such as an anticommunist poster to show the fears caused by the Cold War.

Websites for Teachers and Students

Batyuk, Vladimir. *The End Of The Cold War: A Russian View*. 3 March 2003.

<http://www.findarticles.com/cf_dls/m1373/4_49/54396910/p1/article.jhtml>.

For a different perspective on the Cold War.

CNN – *Cold War*. 11 March 2003. <<http://www.cnn.com/SPECIALS/cold.war/>>.

An interactive timeline, online activities, a glossary, interactive maps, declassified historical documents from the East and the West, and lots of other information about the Cold War, including a section specifically about the space race. An outstanding site.

Homework Center – *Cold War Links*. 10 March 2003.

<<http://www.multcolib.org/homework/warwldhc.html#cold>>.

This is a list of various Cold War websites, with references to specific episodes of the CNN special on the Cold War.

Janes, Kathy. *The Race to the Moon – An Offshoot of the Cold War*. 27 June 2003.

<<http://home.earthlink.net/~historyisfun/Space/space.html>>.

This is my website which I designed to accompany this lesson.

Pisco, Carlos. *A Giant Leap for Mankind*. 3 March 2003.

<<http://www.life.com/Life/space/giantleap/>>.

From Life online this site explores the Cold War space race

Price, David. *Cold War Hot Links*. 11 March 2003.

<<http://www.stmartin.edu/~dprice/cold.war.html>>.

This is a list of various websites relating to the Cold War.

Space Race Exhibition. Smithsonian National Air and Space Museum. 3 March 2003.

<<http://www.nasm.edu/galleries/gall14/>>.

The Smithsonian National Air and Space Museum site has lots of information about the space race, including its military origin.

Videos

America in Space: The First 40 Years. Finley-Holiday Film Corp., 1996. (60 minutes)
Selected clips of actual NASA footage can be compared to *The Right Stuff*. This includes scenes of German rocketry and of Chuck Yeager's flight as well as NASA footage.

Cold War. Warner Home Video, 1998. (1440 minutes)
This is an 8-volume set from CNN and contains the entire 24-hour series. No longer available for purchase on the CNN website but the set is available on Amazon.com. It should also be in libraries. An excellent resource.

45/85. Directed by Roger Goodman. ABC News, 1985.
While this ABC special briefly mentions the space race and includes film of early U.S. rocket failures, its express purpose is to focus on the Cold War during the years between 1945 and 1985. I could not find the entire set for purchase but individual videocassettes are available on Amazon.com. Copies should be available in libraries as well.

The Missiles of October. Directed by Anthony Page. Viacom Enterprises, 1974. (150 minutes)
Although this TV movie is almost thirty years old it remains an excellent version of the Cuban Missile Crisis.

The Right Stuff. Directed by Philip Kaufman. Warners Brothers, 1983. (193 minutes)
Selected clips to illustrate the early days of NASA, plus two excellent documentaries on the new DVD release. This is worth the price of the DVD just for the documentaries.