

**Sifting Through the Ashes:  
A Multi-Media Inquiry into the People and Events That Led to the  
Development Of Atomic America**

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**Introduction**

There is a scene in the film Fat Man and Little Boy that depicts the final countdown sequence to the July 16, 1945 Trinity test detonation of the world's first nuclear device. The fearful suspense of the moment is masterfully crafted by the wizards of Hollywood who use frequent camera pans between the principal players, the control room, and the number of remaining seconds to heighten the viewer's sense of dread and anticipation. In the background can be heard the discordantly cheerful strains of Tchaikovsky's "Nutcracker Suite," which imbue the somber proceedings with an eerie, nightmarish quality. As the final seconds tick away, the camera pans to a lone Gila monster, perched on a rock, calmly surveying his predawn environment, unknowingly experiencing his final moments on earth. The poignancy of that instant is palpable, the symbolism unmistakable. The ensuing blast is the death knell to an age of innocence, for it ushers in with apocalyptic ferocity, a new age, the Atomic Age.

This curriculum unit is designed to investigate the people and the events that led not only to that historical moment in the New Mexican desert, but also to certain aspects of the fallout from that moment-America's use of the atomic bomb, the end of World War II and the development of the Arms Race. It is a multi-media study in that it incorporates the use of nonprint texts such as Web sites, videos, cartoons, photographs and posters, as well as traditional histories, biographies, personal narratives, and non-fiction resources. Fictional elements are included primarily as suggestions for extended, independent reading. It is interdisciplinary in that the story cannot be told in a literary vacuum. It requires its historical context. Engineered for eighth graders, whose American history requirement facilitates a logical expansion into literature classes, this unit is skills-based for a population that requires, for the most part, remedial reading and writing interventions.

**Academic Setting**

I teach at a South Valley middle school that has been designated as a school-wide Title I site. The poverty level of the majority of students entitles them to the free lunch program. For most of them, school represents the most stable element in their environment. Breakfast and lunch are provided on a daily basis, and grades are divided into teams, enabling a group of teachers to share the same group of students. While a familial sense of caring is encouraged, routines are structured and rules are enforced. For most, the school nurse is often the only source of medical intervention, and trips to the clothing bank the only shopping sprees.

Vacations are often dreaded, as they interrupt the steady stream of predictable meals and social contacts so many of our students find only at school. Looking "good," and therefore being accepted by peers is more of a priority than doing well in school. In fact, students who do excel are often taunted and labeled "school boy/girl." Absenteeism is a major problem, along with frequent moves into, out of, and back into schools within the district. Delayed attendance at the beginning of the school year, and before and after major vacations is both commonplace and problematic. While improvements are being made into the areas of parental and community involvement, they remain sorely untapped.

With only a very few exceptions, students routinely score two or more grade levels below their current grade on the Gates McGinitie Reading Test. Scores on the Terra Nova National Achievement test are abysmally low in all areas. While the reasons for these low scores are immeasurably complex, and therefore of questionable value, the fact is that almost any standard measurement would yield the same result: students in my school fare way below the national averages in almost every area. While most will complete the eighth grade, only an estimated sixty percent will graduate from high school and of that number, only an estimated twenty percent will pursue a post-secondary education of any kind.

In light of these demographics, the district has delineated special objectives for the schools in the Rio Grande Cluster that focus on two central directives: increase literacy and decrease the dropout rate.

### **Unit Goals and Objectives**

In accordance with the district's goals, I want my students to be able to function as informed and effective citizens in a democratic society. I want them to experience personal fulfillment. I want to prepare them to be able to function in a society where the tools of learning are becoming increasingly more technologically advanced. In addition, and most importantly, I want not only to increase but also to expand their literacy levels, and in so doing, give them the tools they will need in order both to stay in school, and to become lifelong learners. More specific goals include leading my students on a journey into the past, using both traditional and high tech tools of the present to explore the people and events surrounding the emergence of America as an atomic nation. I want my students to step out of their painfully small comfort zones, to gain new awareness of this vitally important atomic story, and hopefully, to develop thoughtful insights and problem solving techniques for some of the complex problems this story promises for their future.

To advance these goals, I propose the following objectives. Using the tenets of the "new literacy" movement which describes literacy as "the ability to access, analyze, evaluate, and communicate messages in a variety of forms" (Hobbs 3), students will:

- access messages by locating, organizing, and retaining information from a variety of reference resources including

print and the "superhighway skills" (Hobbs 4) of computer and video technology

- analyze messages by recognizing categories or concepts; by making inferences about cause and effect; and by recognizing the historical, political or economic context in which the message is created
- evaluate messages by interpreting a work or an event; by predicting an outcome or conclusion; or by identifying values
- communicate messages by identifying and understanding the audience; by using effective symbols; by organizing ideas into logical sequences; and by editing and revising written and spoken material (Hobbs 3-4)

(Please note that more specific objectives accompany individual lesson plans in the Implementation section of this unit).

### Strategies

This unit is intended to take between three and four weeks to complete, based on a daily, seventy minute language / literature block. Its implementation would benefit from the cooperation of social studies and science teachers, but is not dependent on it. I will introduce the unit with a film about World War II, its causes, principal players, and its resolution on both fronts. (It would be educationally advantageous to schedule the start time to either coincide with or, preferably, follow shortly after the social studies teacher's study of this unit in American history). With the war as the major contextual backdrop, we will enlarge and focus on selected people, issues, events and places: The Manhattan Project; a brief description of the atom and what causes a bomb to become atomic (Note: this is where either the science teacher or a guest speaker will be called in to address the issue with my students); the Trinity test site; Robert Oppenheimer and General Groves; President Truman and his decision to drop the bomb; Emperor Hirohito and a brief study of Japanese culture; Hiroshima and Nagasaki; the Arms Race; the end of World War II; and a brief discussion of world reaction to atomic events and possibilities.

The implementation phase will include films, videos, Web sites (some of which are interactive) photographs, posters, cartoons, collages, timelines, graphs, and tables. Traditional histories, biographies, personal memoirs and non-fiction storybooks for readers' theater will be used as well. Settings will vary and will include individual assignments, whole group activities, small group learning stations, mock trials, vocabulary tree planters and pruners, time line maintenance workers, partners and teams. The majority of assignments are skills based, and many involve hands-on manipulation. The culminating project will be a notebook that will contain notes, vocabulary words, pictures, poetry, impressions, questions and answers, study guides, and anything else that pertains to the month long study of this turning point in American history. Students will be advised of the expectations for the upkeep

and final presentation of their notebooks. A rubric will be provided at the beginning of the unit that will explain the assessment/ evaluation of the project. Students will note that the variety of activities has been designed to accommodate various strengths and learning styles.

### Background Information

In order to understand the historical and cultural context in which the atomic bomb was developed, it is necessary to examine the history of technology as well as the developments that led to World War II. A side-by-side chronology copied onto an overhead transparency could provide an adequate survey of coincidental events. The "Manhattan Project Chronology," in the Department of Energy's document, "The Manhattan Project: Making the Atomic Bomb," by F.S. (Skip) Gosling, is cited. In the interest of brevity, only a modified list of highpoints will be selected for presentation.

The atomic bomb grew from both scientific and political roots. In 1919, Ernest Rutherford discovered the proton and thirteen years later, in 1932, James Chadwick discovered the neutron. That same year, Cockroft and Walton split the atom. In 1933, Hitler became Chancellor of Germany and began to enact his racist beliefs against non-Aryans. Since only Aryans were allowed to hold public office, and because "12 percent of the chairs" (Badash 11) in the university system were held by Jews, the United States inherited by emigration a virtual braintrust of scientists. Albert Einstein emigrated in 1933, and the Italian physicist, Enrico Fermi, who produced fission in 1934, arrived in America in 1938 after accepting the Nobel Prize for Physics in Sweden. In 1935, Germany and Italy became allies, the Axis powers, and in 1938, Hitler invaded Austria. Among the Austrian Jews who fled from Hitler were Lise Meitner and her nephew, Otto Frisch, who, that same year confirmed the discovery of uranium fission by Hahn and Strassman. In a near step by step progression, it seemed that scientists were calculating the potential power of a weapon created by the splitting of an atom.

Meanwhile, Hitler continued his assault on Europe with the invasion of Czechoslovakia, and in the summer of 1939, he banned the export of uranium from Czechoslovakian mines (Gonzales 20). The physicists of the world were thus alerted to the fact that the unthinkable was at hand: German scientists must be developing atomic weapons. Fermi and two of his colleagues, Leo Szilard and Eugene Wigner, both Jewish and both recent emigres from Europe, agreed that they must advise President Franklin Roosevelt of the potential terror they foresaw with Hitler in possession of an atomic device. They drafted a letter outlining the problem and suggesting that Hitler might have access to information that might be used for "the construction of bombs...extremely powerful bombs" (Gonzales 21). They convinced Einstein to sign the letter, and a few weeks later Roosevelt informed Einstein that he had established a committee, the Advisory Committee on Uranium, to study uranium and to determine whether atomic weapons were actually possible.

Two weeks later, in September 1939, Hitler invaded Poland. Two days later Great Britain and France, the Allied powers, declared war on Germany. In response to an increasing sense of urgency, in November of 1940, the U.S. government allocated funds to construct a system suggested by Szilard but designed by Fermi to develop a self-sustaining chain reaction- the key to unleashing the power of the atom. "A chain reaction occurs when neutrons from fissioning atoms split other atoms. This splitting releases energy and more nuclei-splitting neutrons. If enough neutrons begin the action, the splitting will continue on its own. This is called a self-sustaining chain reaction." (Gonzales 25). (A far more detailed explanation of the science behind the bomb can be accessed at the following Web sites:

[http://www.historychannel.com/perl/print\\_book.pl?year=1945&ID=16246;](http://www.historychannel.com/perl/print_book.pl?year=1945&ID=16246;)

[http://www.gi.grolier.com/wwii/wwii\\_atom.html;](http://www.gi.grolier.com/wwii/wwii_atom.html)

[http://www.csi.ad.jp/ABOMB/data.html.](http://www.csi.ad.jp/ABOMB/data.html)

The site chosen for the work was the squash court beneath the University of Chicago's Stagg Field. Richard Rhodes, author of *The Making of the Atomic Bomb*, said, "scientists were risking a small Chernobyl in the midst of a crowded city"(672). Nevertheless, the first controlled release of energy was finally realized. "Many consider that moment in the freezing squash court at the University of Chicago the key step in the development of the atomic bomb. The basic principle of a self-sustaining chain reaction had been demonstrated beyond all doubt" (Cohen 29). Meanwhile, scientists all over the world were looking for fissionable materials. Ernest Lawrence and Robert Oppenheimer were studying fission at the University of California, using the device invented by Lawrence, the cyclotron, to study uranium. Colleagues Glen Seborg, Edwin McMillan, Joseph Kennedy, and Arthur Wahl discovered that plutonium could also fission. Even though it was more rare than uranium, the physicists found they could make plutonium out of conventional uranium (Gonzales 29).

While the scientific communities continued their search for the missing pieces to their atomic puzzle, military events would dramatically increase their sense of urgency. The Japanese surprise attack on Pearl Harbor on December 7, 1941, catapulted the United States into the conflagration that was World War II with a ferocity best described by the actor who played the role of Admiral Yamamoto in the film, *Tora! Tora! Tora!* when he stated, "We have awakened a sleeping giant and filled him with a terrible resolve."

American reaction was immediate. The United States declared war on Japan on December 8, 1941, as did Great Britain and Canada, while Germany and Italy declared war on the United States. When in June of 1942 the Advisory Committee on Uranium reported to President Roosevelt that "a nuclear weapon might be made in time to influence the outcome of the present war," he ordered the army to build it (Gonzalez 33).

Thus was born the Manhattan Engineer District, more popularly called the Manhattan Project. It was to be one of the biggest secrets of World War II.

Brigadier General Groves was appointed head of the project. He selected Oak Ridge as the site for uranium separation, and Hanford for the plutonium production. He decided to establish a separate scientific laboratory for the design of the atomic bomb. He chose Los Alamos, New Mexico, as the site and named Robert Oppenheimer director. Fermi's groundbreaking chain reaction occurred shortly thereafter.

Three goals were established immediately for the Los Alamos lab: "Confirm that a chain reaction was possible with fast neutrons; determine how rapidly new neutrons were released in each fission, and determine the quantity of scarce U-235 and plutonium needed for a supercritical mass" (Badash 43). By the spring of 1944 the scientists had designed two different kinds of bombs. Both would have a nuclear core the size of a baseball, but one core would be made of U-235, and the other core would be made of plutonium. The bomb known as Little Boy was approximately ten feet long and two feet high. Inside, a long metal barrel stretched between a uranium core and a uranium bullet, hence the designation as a gun-type weapon. Behind the bullet rested a powerful explosive, which, when detonated, would fire into the uranium core, adding enough U235 to create a critical mass. A chain reaction would then be set off that would create an explosion (Cohen 45).

The second bomb, Fat Man, was an oval-shaped, implosion device about eleven feet long and five feet high. Inside, a ball of plutonium was surrounded by a circle of small explosives. Upon detonation, the explosives would squeeze the plutonium until it created a critical mass, resulting in an explosive chain reaction (Cohen 45-6).

Because of their uncertainty about the plutonium bomb, the scientists decided that Fat Man needed to be tested. Groves selected a site near Alamogordo, New Mexico, for the test, code named Trinity. While plans proceeded in New Mexico, on April 12, 1945, the world learned of the death by cerebral hemorrhage of President Roosevelt. Though the news shocked and saddened Americans, the scientists continued their frenetic pace. Vice-president Harry Truman was sworn in as the new president, and shortly thereafter was informed by Secretary of War Henry Stimson of the ongoing plans for the atomic weapon. The following month, on May 8, 1945, Germany surrendered and the world celebrated V-E Day, Victory in Europe. But the conflict still raged on in the Pacific. American losses in the island battles were heavy, and the Japanese continued to fight with their characteristic ferocious tenacity. Plans for an invasion of Japan were being considered, and many people estimated excessively high casualties from that encounter.

The "big three," Churchill, Stalin, and Truman, had agreed to meet in Potsdam, a suburb of Berlin, to discuss the postwar future of Europe. Truman expressed an understandable anxiety about the meeting: "He was still a novice...traveling to meet and doubtlessly disagree on important issues with two crusty and renowned leaders who must have seemed larger than life" (Walker 53). His deliberate

postponements of the meeting in order to make it coincide with the Trinity test date make sense when one considers the hope he had for the positive result of the test and the perceived advantage he would then have in his dealings with Stalin and Churchill.

Back at Trinity, the weather that morning of July 16, 1945, did not appear to be even marginally acceptable for the test. Thunderstorms rolled in, rain poured down, and the test was rescheduled for 5:30 a.m., weather permitting. After several anxious hours, the skies finally cleared and the countdown was begun. "Twenty miles from the explosion center, or ground zero, a group of observers shared the tension of the countdown by passing around suntan lotion. In the early morning darkness they coated their faces and hands as protection against the intense light flash of the explosion. Others prepared to view the blast through sunglasses and pieces of welder's glass" (Beyer 12). After the final seconds had ticked away, "The sky ignited. The flash was seen in three states. It lit up the sky like the sun, throwing out a multicolored cloud that surged 38,000 feet into the atmosphere in about seven minutes...the heat at the center of the blast approximated that of the center of the sun (100 million degrees), and the light was brighter than twenty suns. Where the fireball touched the ground it created a crater half a mile across, fusing the sand into a greenish gray glass" (Cohen 80). The next day, July 17, 1945, Truman received a coded message relaying the outcome of the test: "Operated on this morning. Diagnosis not yet complete but results seem satisfactory and already exceed expectations" (Walker 56).

Now that he knew the bomb was a viable weapon, Truman was faced with the question that has remained a major source of controversy: should the bomb be used against Japan? After considering several alternatives, including the continuation of the blockade, intensifying bombing, waiting for the Soviet Union to enter the war, or invading Japan, Truman made the decision to use the bomb. According to Walker, it was "the one issue on which Truman was clear and decisive...that the bomb should be used against Japan to end the war at the earliest possible moment." (74) Truman's priority was to end the war with the least possible number of American casualties, a sentiment obviously embraced by the American public. "Billboards such as the one outside Oak Ridge, Tennessee, were seen all across the United States. It read: 'Whose Son Will Die in the Last Minute of the War? Minutes Count!'" (Gonzales 87). The stage was now set for Hiroshima.

On August 6, 1945, Colonel Paul W. Tibbets and a crew of twelve men took off from Tinian Island in the Enola Gay, the B-29 bomber named after Tibbets' mother. On board was an atomic bomb fueled by uranium-235. At approximately 8:15 (Hiroshima time), the bomb was dropped. "Forty-three seconds after leaving the plane, the bomb exploded...in the air about 1,900 feet above Hiroshima" (Walker 76-77). Every living thing within a half mile radius of ground zero had been destroyed instantly, including between 70,000 and 130,000 people. The flash of intense heat emitted by the bomb not only caused many deaths and horrible injuries, but also ignited fire all across the city. Many survivors died after a short

time from radiation sickness or the effects of their injuries. The degree of devastation made any kind of rescue efforts impossible (Walker 77). (Note: Paul Boyer's "Hiroshima in American Memory," Chapter 15 from his book *Fallout*, offers an excellent source of additional insight into Hiroshima's unique experience, as does John Hersey's *Hiroshima*).

Three days after the bombing of Hiroshima, Nagasaki experienced a similar fate. An estimated forty thousand people were killed in the initial blast, and survivors experienced many of the same reactions as their Hiroshima counterparts. Then, on August 14, 1945, Japan surrendered to the Allies. Emperor Hirohito recorded a message that was played to the Japanese people, most of whom were hearing his voice for the first time. "The emperor explained to his stunned listeners that 'the war situation has developed not necessarily to Japan's advantage.' Without apologizing for Japan's aggression or mentioning the word 'surrender,' he went on to state that 'the enemy has begun to employ a new and most cruel bomb, the power of which to do damage is indeed incalculable'" (Walker 88). World War II was over. Americans celebrated August 14, 1945, as V-J Day, Victory over Japan Day. Jubilant celebrations erupted from coast to coast, and many prepared to welcome their loved ones home at last.

While many claimed that "the use of atomic bombs was decisive in ending the war" (Walker 88), what this newfound capability would mean for the future has become one of the most controversial issues of all time. "That first atomic blast at Alamogordo, and the second and third in Japan, set into motion a chain of events that changed the course of human affairs by influencing domestic and international politics, the world economy, and the ways that people think about themselves and the future" (Beyer 78). The Manhattan Project achieved its mission, which was to make a bomb that would help to end the war, but now what?

When the war ended in 1945, the Soviet- U.S. alliance began to collapse. Both sides, unable to settle their differences through negotiations, began to build up their supply of weapons. Since the Soviet Union exploded their first atomic bomb in 1949, the weapons involved in this build-up were now nuclear. The chance of one country obliterating the other was now possible. This development not only raised the stakes of actual warfare, but also set in motion the arms race. While the Manhattan Engineering District officially ended in January 1947, the nuclear laboratories at Los Alamos were never closed. In fact, under the direction of the newly formed Atomic Energy Commission, scientists at Los Alamos soon developed the hydrogen bomb, a thermonuclear device thousands of times more powerful than the fission bombs. In spite of the potential these bombs posed for total destruction, the United States and the Soviet Union continued to stockpile their lethal weapons. According to the NRDC's "Index of Nuclear Data," by 1978 the Soviet Union had exceeded the United States' arsenal by a count of 25,393 to 24,424. In 1986 the Soviets showed the biggest number of devices, 45,000 to the United States' 23,410. In 1996, the last year statistics were taken for this index, the Soviets were down to 25,000 devices to the United States' 12,937.

These children of Trinity are the descendants of the offspring of some of the most brilliant minds ever assembled in one place. The combined efforts of the scientists in the Manhattan Project amounted to nothing less than a Herculean accomplishment: the unlocking of the atom's secrets. It is the charge of subsequent generations to unravel the secrets not only of how to survive in atomic America but also how to survive in peace.

Paul Boyer offers an excellent survey of the cultural response to the paranoia and fear created by the nuclear age in Chapter 14 of his book, *Fallout*, entitled, "Nuclear Menace in the Mass Culture of the Late Cold War Era and Beyond." In addition, *War Day*, by Whitley Streiber and James Kunetka, is a fascinating, first person narration that describes life in the United States five years after the nuclear holocaust. *A Canticle for Leibowitz*, by Walter Miller, Jr. is a classic example of post-apocalyptic science fiction that will enhance any study of atomic America.

### **Implementation**

Implementation of this unit is going to be a blast, pardon the pun! There will be whole group activities like the introductory video about World War II, and there will be four or five small group learning stations, each with their own material and assignments (note-taking on Truman's decision to drop the bomb; a listening station where songs from the forties will be analyzed; a biography station that directs its participants to a web site that provides brief biographical information on the major players of the unit; a storybook station where students will take turns reading to the small group). Several on-going assignments include the creation of a class collage that will include pictures, quotations, objects, etc. from the study; a propaganda poster contest; and a living time line that will be on display throughout the duration of the unit. Students will create cards that depict persons or events from their study, and they will add them to the time line. Also, vocabulary trees will be maintained as groups progress through the different learning centers.

Three days of computer lab time have been scheduled wherein students will participate in different interactive web sites dealing with propaganda posters, a World War II Homefront Families Simulation, and PBS' *The American Experience*. I have purchased two videos from the History Classroom, *Cartoons Go To War* and *Hirohito*, which will expose my students to satire and Japanese culture, respectively. If time allows, I plan to hold mock trials to try President Truman and Emperor Hirohito for their roles in the destruction of Hiroshima and Nagasaki. In addition, after several groups finish their biographical studies, I plan to have them dress up and become their characters. We will have discussions about timely events, greatest fears, happiest moments, etc.

### **Assessment**

Assessment will be on-going and will be based on day to day observation, tests and quizzes, project work, which will include artwork, essay writing, and assorted

narrative responses, and on the culminating notebook. The notebook will contain six sections: notes and study guides, vocabulary, learning stations' assignments, computer lab work, classroom web work, and written work. The student and the student's peers will assist in the assessment, which will include diagnostic, formative, and summative elements. Assessment objectives are to improve the focus of my teaching; to motivate students by focusing on their strengths and improving their weaknesses; and to refine elements of the unit. Through assessment I hope to discover what my students already know, how well they can show what they know: what processes they use to complete their work, and how motivated they are by different aspects of the work.

## **Classroom Activities**

Week One: Introduction and Overview of Unit

*Objective: Students will use media and literature to develop an understanding of people, societies and the self.*

The teacher will explain the goals and objectives of the unit. Whole group, small group, on-going, and individual assignments will be explained as well, and small groups will be assigned, mixing ability levels and personalities. Expectations for the project notebook will be presented on an overhead transparency. For their Atomic America Notebook, students will be asked to purchase a three-ring binder, and divide it into the following sections:

1. Notes and Study Guides from Videos

- a) World War II b) Cartoons Go To War c) Hirohito d)

Twilight Zone

2. Vocabulary- each word will be defined and used in a meaningful sentence

3. Learning Stations- a collection of notes, assignments, reflections, etc. on

- a) biography site b) song analysis c) Truman's decision d)

storytelling

Computer Lab Work

- a) Posters as Propaganda b) Homefront Families Simulation c)

Race for the Superbomb Activities

Classroom Web Work

- a) A-Bomb Museum b) timeline c) charts and graphs

Written Work

- a) persuasive essay b) narrative responses c) journal entries d)

letters, etc.

Potpourri- this last section is for extra credit work, and odds and ends

*Introductory Video-World War II*

*Objectives: Students will use images, videos and visual representations as*

*informational research tools; analyze a piece of media by showing how it reflects and shapes cultures, values, beliefs, and attitudes.*

Before viewing, the teacher will give a brief outline from the time line of people and events involved in the war. Study guides will be distributed and students will focus on the main areas specified in the guide. They will answer the questions upon the completion of the film, through class discussion and individual reflection.

Study Guide:

Identify briefly: Hitler, Roosevelt, Stalin, Hirohito, Allied Powers, Axis Powers, Holocaust, Pearl Harbor, the Manhattan Project, Truman, Hiroshima, V-E Day, V-J Day

Discussion questions: It is said that an ending is also a beginning. What does this mean? What examples can you give of endings that are also beginnings? How was the year 1945 an ending and a beginning for the United States and the rest of the world?

Written response: prepare a 200-250 word response to this question- War brings misery and death. While most people do not want to go to war, history shows that war is a very common occurrence. Why are there so many wars? What can world leaders do to prevent war?

*Learning Stations*-Small groups will rotate through all four stations.

### 1. Biography

*Objective: Students will apply strategies and skills to comprehend information that is read, heard and viewed.*

Students will receive directions to choose two folded papers from the basket at this station. The papers reveal the names of preselected characters from our era of study. They are to proceed to the classroom computer or the computer lab and access two web sites: [http://search.biography.com/print\\_record.pl?id=20202](http://search.biography.com/print_record.pl?id=20202) and <http://www.pbs.org/wgbh/amex/bomb/peopleevents/index.html>

They will be instructed to locate their characters in each program and to fill out a bio study form on each one. It asks for basic information as well as what were his/her major contributions to the times, what were their regrets, greatest joys, fears? Students will be asked to surmise answers based on available clues, if no direct answers are available.

### 2. Music as a Mirror of the Times (Song Analysis)

*Objective: Analyze a piece of media by showing how it reflects and shapes cultures, values, beliefs and attitudes*

Students will be directed to play several selections from the tape, "These Were Our Songs: Musical Memories of the War Years." Their worksheet will ask them: to look for common themes; how could you categorize the selections, and what are your criteria? Prepare a 100-125 word response to the question- How does music

act like a mirror of the times? Support your opinion with examples from the songs. (Do this for homework). Brainstorm with your group for titles of songs that might be mirrors of these times. When you have four or five titles, post them on the music poster in the back of the room. Titles of selections for this activity are "I'll Be Seeing You," "I'll Walk Alone," "It Had to be You," "We'll Meet Again," "Mairzy Doats," "G.I. Jive," and "Jukebox Saturday Night."

### 3. Truman's Decision to Drop the Bomb

*Objective: Research and organize information to achieve purpose, using notes and memory aides to structure information*

Students will be instructed to skim and scan the books provided for this station until they find information that relates to this central question: Did President Truman make the right decision when he bombed Hiroshima and Nagasaki? They will find Pro / Con worksheets at their station that show where to place their evidence and how to document it. Each person is responsible for a documentation sheet. When everyone has had a chance to gather information, the group will collaborate on a group sheet, on which the most concise responses will be copied. Individuals may add the collaborative responses to their original ones. This initial research will serve as the foundation for an upcoming five paragraph persuasive essay. Resources include selections from student's bibliography by Gonzales, Claypool, Grant, Cohen, Stein, Beyer and O'Neal. Walker's Prompt and Utter Destruction will also be used.

### 4. Storytelling

*Objective: Analyze and evaluate themes and central ideas in literary and other texts in relation to personal and societal issues.*

Students will choose between two storybooks, Shin's Tricycle and Sadako, non-fiction narratives about the human suffering caused by the bombing of Hiroshima. A reader will be chosen or students may elect to take turns reading aloud to the group. After discussion, individuals will volunteer ideas on theme and central ideas of the selection. Students will then be directed to compose a four to six line epitaph for the main character in the book they selected. After members of the group edit for spelling and grammar, the epitaphs will be transferred to tombstone cutouts which will be made into a wall display.

## Week Two

*Introductory Video: Hirohito*

*Objective: Students will analyze a piece of media by showing how it reflects and shapes cultures, values, beliefs and attitudes.*

Study Guide: available online at

<http://www.historychannel.com/classroom/guides/hirohito.html> This guide includes vocabulary, discussion questions and extended activities.

Computer Lab I : Homefront Families Simulation

*Objective: Compare, contrast and evaluate for details, main ideas, themes, actions, and main character from media selections.*

I will reserve two consecutive days for this activity which can be accessed at <http://library.thinkquest.org/15511/families/>. This site was designed for ThinkQuest, an educational web site building contest for high school kids. The program follows the lives of five families during the school year of September 1943- June 1944. There are four main activities: writing journal entries, experiencing fates, developing an issue campaign, and making a scrapbook or artifact box. Activities and detailed instructions are online.

### *Poster Propaganda*

*Objective: Analyze the purpose of the author or creator and the impact of that purpose by evaluating bias, messages, and underlying assumptions of a variety of texts and media.*

Students are directed to another site as part of the issue campaign: <http://www.nara.gov/exhall/powers/powers.html> This site is entitled "Powers of Persuasion: Poster Art from World War II." It is an on-line exhibit that is divided into two parts which represent two psychological approaches used in rallying support for the war. Part one motivates the viewer by "instilling patriotism, confidence and a positive outlook." Part two "rocks people out of their complacency with grim, unromantic visions of war." Students will be asked to make two columns on their paper and take names of both kinds of posters. What elements do they have in common? How are they different? Do you find examples of hyperbole or stereotyping? Describe. Study examples carefully and take notes. Then proceed to <http://webpub.alleg.edu/student/p/paynes/propaganda.html>. Select propaganda and American. This is the "Lest We Forget: World War II" site. It offers examples of posters that are not available at the previous site. Students are directed to create two posters, using the two psychological approaches mentioned earlier. One poster should reflect a wartime issue, and the other should be directed at a modern issue. Posters from all classes will be displayed and entered into the Propaganda Poster Contest. Fabulous prizes will be awarded to the winners!

### *Week Three*

#### *Introductory Video: Cartoons Go To War*

*Objective: Analyze a piece of media by showing how it reflects and shapes cultures, values, beliefs, and attitudes.*

Study guide is available online at <http://www.historychannel.com/cgi-bin/framed.cgi.html>. It includes vocabulary, discussion questions, and extended activities.

### *Five Paragraph Persuasive Essay*

*Objective: Prepare an organizational tool for speaking or writing that includes an introduction, well-developed body, and effective conclusion.*

After reviewing the outline on five paragraph format, students will be directed to begin the first draft of a persuasive essay, either on Truman's decision to drop the bomb, or on another topic that relates to the unit. During this week, students will revert to their small groups. While the teacher conducts writing workshops with most students, a group will go to the computer lab or access the classroom computer to complete the following assignments. By the end of the week, all computer assignments should be completed and all first drafts should have been reviewed by the teacher and returned to the student for editing.

### *Classroom Web Work*

*Objective: Use the various parts of a text/ media to locate specific information.*

1. A-Bomb WWW Museum: <http://www.csi.ad.jp./ABOMB>. Students will choose two or three of the twenty three destinations to gather notes for their persuasive papers.

2. World War II Commemoration: Atomic Bomb  
[http://gi.grolier.com/wwii/wwii\\_mainpage.html](http://gi.grolier.com/wwii/wwii_mainpage.html)

Students will use this site to answer these questions: 1. What was the Manhattan Project? 2. What happened at Trinity? 3. Create a chart showing the differences between the Hiroshima and Nagasaki bombings. 4. What are some of the effects of an atomic bomb explosion?

3. Timeline

<http://www.historychannel.com/cgi-bin/framed.cgi> Students will be directed to go to "Search by timeline." They should select any year between 1939 and 1949, then choose one or two events from that year to add to the timeline. Care should be taken not to repeat any events already listed. Extra credit will be given for illustrated or decorated time line cards.

Week Four

*Introductory Video: The Twilight Zone-The Shelter*

*Objectives: Analyze and evaluate themes and central ideas in literary and other texts (media) in relation to personal and societal issues; use media to reflect on learning experiences and how they are influenced by society and historical issues.*

This episode deals with neighbors who must cope with the threat of a nuclear attack. Only one family on the block has a bomb shelter. The other residents frantically try to gain access to it. How this conflict is resolved offers the viewer insight into the theme. It also raises the issue of panic. After viewing the video and discussing possible themes, students will be directed to the following web site: <http://www.pbs.org/wgbh/amex/bomb/sfeature/panicquiz.html>. "How Panic-Proof are you?" is the title of this site. The worksheets will be reproduced to allow each student to complete their own panic profile. After discussion, students will write a 250-300 word narrative describing a time they felt panic or they witnessed others

experiencing it.

### *Computer Lab 2- Race for the Superbomb Activities*

*Objective: Independently apply the reading process and strategies to a variety of informational texts and use the defining features and structures of those works to understand main elements.*

This site offers a variety of online activities and can be accessed at <http://www.pbs.org/wgbh/amex/bomb/sfeature/index.html>. Students will map a nuclear blast, tour a secret government bunker, view film footage of actual blasts, and view nuclear stockpiles and tests charts.

### *Essay: Final Draft / Unit Wrap-Up*

*Objective: Students will demonstrate competence in the skills and strategies of writing.*

Final draft, rough draft, outline and checklist for five paragraph essay will be due this week. All timeline entries, propaganda posters and vocabulary lists should be completed by the end of the week.

If time and interest allow, students may elect to participate in mock trials of President Truman and Emperor Hirohito. The biography project, that involves dressing as a character and assuming his persona, could also be considered.

Final details should be added to the Atomic America Notebook, and it should be ready for submission by the beginning of the week following the end of the unit. Students will be asked to assess the program's strengths and weaknesses and will be encouraged to make suggestions for its improvement.

### *Field Trip*

Students in the Albuquerque area are fortunate to have access to the National Atomic Museum, America's museum resource for nuclear history and science. I plan to reserve time immediately following the conclusion of the unit to take my classes to the "Manhattan Project" program being offered this year. Any inquiries may be directed to Darline Dufour at 505-284-3244.

### **Sources:**

Badash, Lawrence. *Scientists and the Development of Nuclear Weapons*. Amherst, NY: Humanity Books, 1998.

Beyer, Don E. *The Manhattan Project*. New York, NY: A Twentieth Century American History Book, 1991.

Boyer, Paul. *Fallout*. Columbus, OH: Ohio State University Press, 1998.

Coerr, Eleanor. *Sadako*. New York: G.P. Putnam's Sons, 1993.

Cohen, Daniel. *The Manhattan Project*. Brookfield, CN: Millbrook Press, 1999.

Gonzales, Doreen. *The Manhattan Project and the Atomic Bomb in American History*. Berkeley Heights, NJ: Enslow Publishing, Inc., 2000.

Gosling, Skip. *The Manhattan Project: Making the Atomic Bomb*. United States Department of Energy, 1999.

Hersey, John. *Hiroshima*. New York: Modern Library, 1946.

Hobbs, Dr. Renee. "Expanding the Concept of Literacy." Robert Kubey, Ed.

*Media Literacy in the Information Age*. New York: Transaction Press, 1996.

Kodama, Tatsuharu. *Shin's Tricycle*. New York: Walker and Company, 1992.

Miller, Walter M. Jr. *A Canticle for Leibowitz*. New York: Bantam Books, 1959.

Rhodes, Richard. *The Making of the Atomic Bomb*. New York: Simon and Schuster, 1986.

Streiber, Whitley and James Kunetka. *WarDay*. New York: Holt, Rinehart and Winston, 1984.

Walker, J. Samuel. *Prompt and Utter Destruction: Truman and the Use of Atomic Bombs Against Japan*. Chapel Hill: The University of North Carolina Press, 1997.

### **Student Resources:**

Beyer, Don E. *The Manhattan Project*. New York: A Twentieth Century American History Book, 1991.

A very readable explanation of the science behind the bomb. Excellent glossary.

Cheney, Glenn. *They Never Knew*. New York: Franklin Watts Publishing, 1996.

Focuses on the effects of radiation from atomic testing.

Claypool, Jane. *Hiroshima and Nagasaki*. New York: Franklin Watts Publishing, 1984.

A concise history of the development of the atomic bomb, the Manhattan Project, and a report of the effects of the bomb on both cities.

Coerr, Eleanor. *Sadako*. New York: G.P. Putnam's Sons, 1993.

Younger children can learn the story of a twelve year old girl who contracts "the atom bomb disease," leukemia. Beautifully illustrated.

Cohen, Daniel. *The Manhattan Project*. Connecticut: Milbrook Press, 1999.

Investigates possible reasons behind Truman's decision to drop the bombs. Offers reader opposing viewpoints on this critical question.

Fleischer, Paul. *Understanding the Vocabulary of the Nuclear Arms Race*.

Minnesota: Dillon Press, 1988.

Author encourages readers to find out as much as they can to become involved in the struggle for nuclear arms control.

Gonzales, Doreen. *The Manhattan Project and the Atomic Bomb in American History*. Berkeley Heights, NJ: Enslow Publishers, 2000.

Examines the creation of the atomic bomb and its place in the history of World War II. Political, scientific and social issues are detailed.

Grant, R. G. *Hiroshima and Nagasaki*. Austin: Raintree, Steck Vaughn, 1998.

Excellent photographs, news clippings, political cartoons offer insight into the emotional climate of the times. Excellent time line and glossary.

Kodama, Tatsuharu. *Shin's Tricycle*. New York: Walker and Company, 1992.

Fifty years after the bombing of Hiroshima, the author tells the true story of Shin, a three year old victim of the bomb. Beautifully illustrated, tenderly rendered.

Lens, Sidney. *The Bomb*. New York: Lodestar Books, 1982.

Traces the development of the bomb, gives ages of atomic weapons, politics behind the bomb, a plea for disarmament, includes a chronology of above events.

Martin, Lawrence. *Nuclear Warfare*. London: Lerner Publications, 1989

Diagrams, graphs and illustrations are included in this study of the origin and spread of nuclear weapons.

O'Neal, Michael. *President Truman and the Atomic Bomb*. San Diego, CA: Greenhaven Press, 1990.

Investigates possible reasons behind Truman's decision to drop the bombs.

Pringle, Lawrence. *Nuclear War: From Hiroshima to Nuclear Winter*. New Jersey: Enslow Publishers, 1985.

Traces the history of nuclear warfare from early research to the bombing of Japan. Explores the possibility of nuclear winter.

Rummel, Jack. *Robert Oppenheimer: Dark Prince*. New York: Facts on File, Inc., 1992.

Detailed biography. Excellent glossary.

Sherrow, Victoria. *Great Scientists*. New York: Facts on File, Inc., 1992.

Biographies include those of Fermi, Compton, and Oppenheimer. Time lines on personal histories.

Sherrow, Victoria. *Hiroshima*. New York: New Discovery Books, 1994.

Parallels life in Hiroshima and the development of the atomic bomb.

Stein, R. Conrad. *The Manhattan Project*. Chicago: Children's Press, 1993.

Taylor, L.B. Jr. *The Nuclear Arms Race*. New York: Franklin Watts Publishing, 1982.

Discusses the buildup of nuclear arsenals in the United States and the Soviet Union. Questions how the world can move away from proliferation.

**Suggested Reading for Teachers:**

Bartimus, Tad and Scott McCartney. *Trinity's Children: Living Along America's Nuclear Highway*. Albuquerque: University of New Mexico Press, 1991.

Linenthal, Edward T. and Tom Engelhardt, eds. *History Wars*. New York: Metropolitan Books, 1996.

Previously referenced books:

Badash, *Scientists and the Development of Nuclear Weapons*

Boyer, *Fallout*.

Hersey, *Hiroshima*.

Miller, *A Canticle for Leibowitz*

Walker, *Prompt and Utter Destruction*