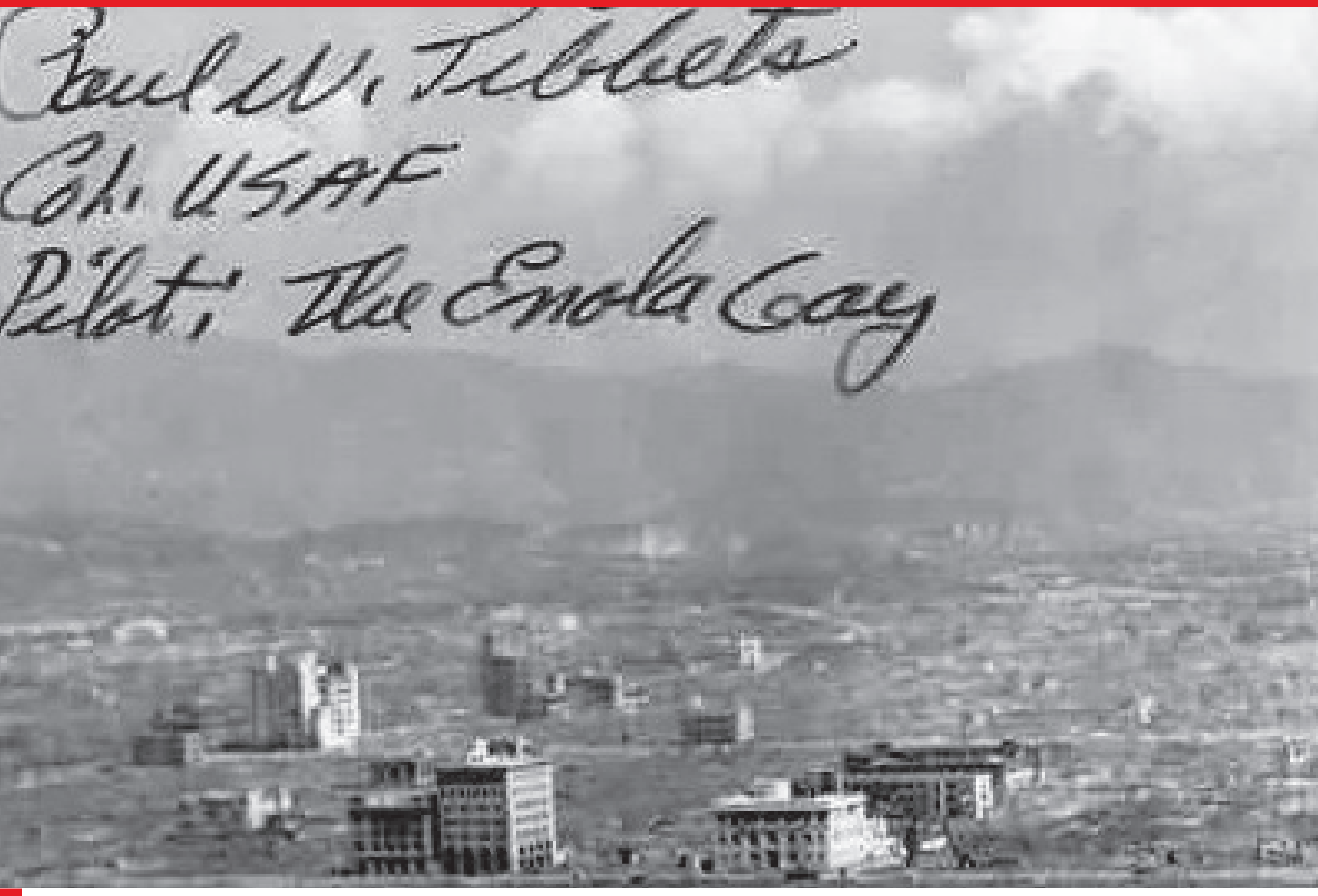
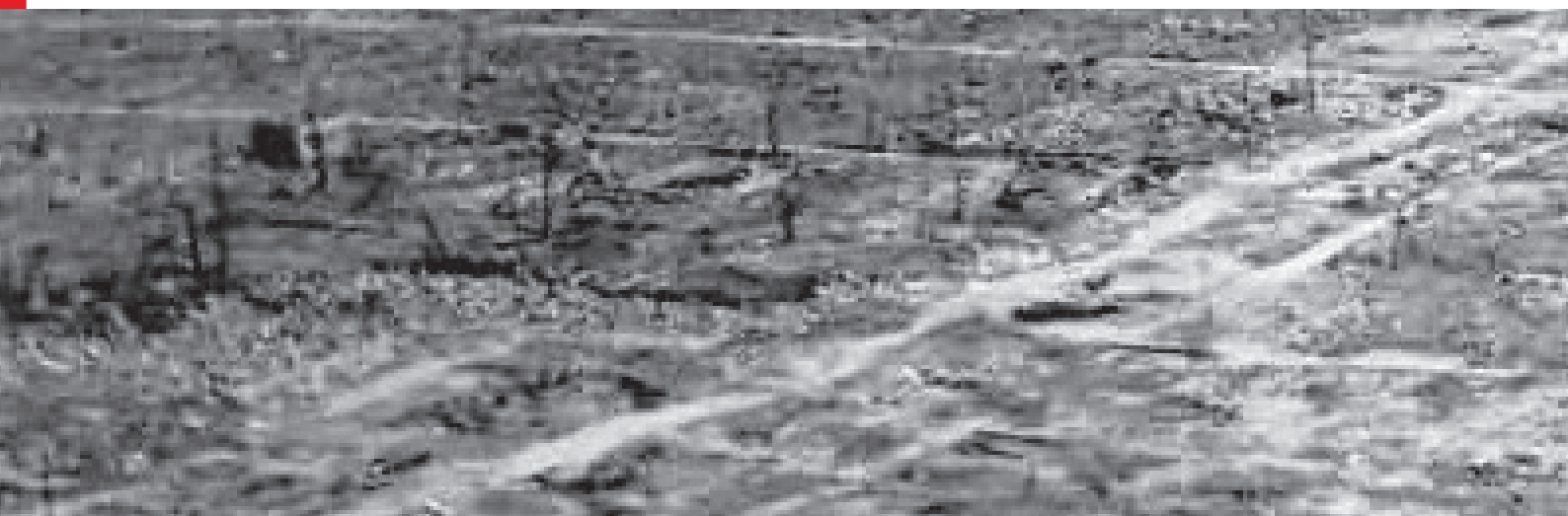
THIS DAY IN HISTORY

STUDY GUIDE



AUG. 6, 1945: BOMB DROPPED ON HIROSHIMA

Biographies, discussion questions, suggested activities and more



NUCLEAR WEAPONS

Setting the Stage

Even before the outbreak of World War II in 1939, a group of American scientists–many of them refugees from fascist regimes in Europe–became concerned with Nazi Germany's nuclear weapons research. In 1940, the U.S. government began funding its own top-secret atomic weapons development program, codenamed "The Manhattan Project."

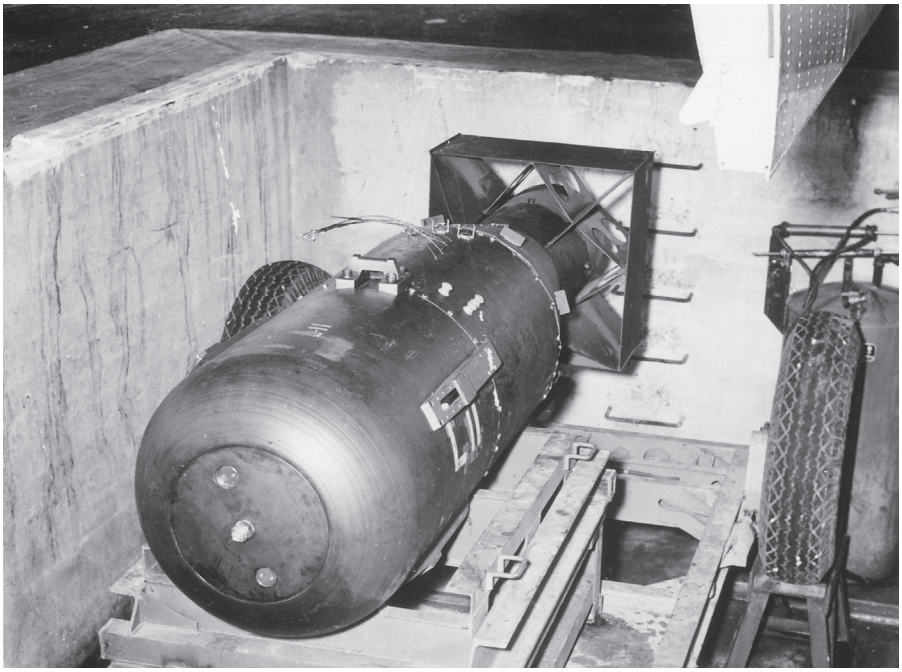
Over the next several years, the program's scientists worked on producing the key materials for nuclear fission, uranium-235 and plutonium (Pu-239). They sent them to Los Alamos, New Mexico, where a team led by J. Robert Oppenheimer worked to turn these materials into an atomic bomb. Early on the morning of July 16, 1945, the Manhattan Project held its first successful test of an atomic device--a plutonium bomb--at the Trinity test site at Alamogordo, New Mexico.

By this time, the Allied powers had already defeated Germany. Japan, however, vowed to fight to the bitter end, despite clear indications that they had little chance of winning. In fact, between mid-April 1945, when President Harry Truman took office, and mid-July, Japanese forces inflicted Allied casualties totaling nearly half those suffered in the previous three full years of war in the Pacific, proving that Japan had become even more deadly when faced with defeat. In late July, Japan rejected the Allied demand for surrender put forth in the Potsdam Declaration, which threatened the Japanese with "prompt and utter destruction" if they refused.

General Douglas MacArthur and other top military commanders favored continuing the conventional bombing of Japan already in effect and following up with a massive invasion, but they advised Truman that such an invasion would result in U.S. casualties of up to 1 million. Truman decided instead--over the moral reservations of Secretary of War Henry Stimson, General Dwight D. Eisenhower and a number of the Manhattan Project scientists--to use the atomic bomb in the hopes of bringing the war to a quick end. Proponents of the A-bomb--such as James Byrnes, Truman's secretary of state--believed that its devastating power would not only end the war, but also put the U.S. in a dominant position to determine the course of the postwar world.

Cover photo: Photo from 1945 showing the destruction of Hiroshima, autographed by Enola Gay pilot Paul Tibbets.

AUG. 6, 1945 BOMB DROPPED ON HIROSHIMA



Little Boy bomb

On August 6, 1945, at 8:16 a.m. Japanese time, an American B-29 bomber, the Enola Gay, dropped the world's first atomic bomb over the city of Hiroshima. Approximately 80,000 people were killed as a direct result of the blast, and another 35,000 were injured. At least another 60,000 would be dead by the end of the year from the effects of the fallout.

U.S. President Harry S. Truman, discouraged by the Japanese response to the Potsdam Conference's demand for unconditional surrender, made the decision to use the atomic bomb to end the war in order to prevent what he predicted would be a much greater loss of life were the United States to invade the Japanese mainland. And so on August 5, while a "conventional" bombing of Japan was underway, "Little Boy," (the nickname for one of two atomic bombs available for use against Japan), was loaded onto Lt. Col. Paul W. Tibbets' plane on Tinian Island in the Marianas. Tibbets' B-29, named the Enola Gay after his mother, left the island at 2:45 a.m. on August 6. Five and a half hours later, "Little Boy" was dropped, ex-

ploding 1,900 feet over a hospital and unleashing the equivalent of 12,500 tons of TNT. The bomb had several inscriptions scribbled on its shell, one of which read "Greetings to the Emperor from the men of the Indianapolis" (the ship that transported the bomb to the Marianas).

There were 90,000 buildings in Hiroshima before the bomb was dropped; only 28,000 remained after the bombing. Of the city's 200 doctors before the explosion; only 20 were left alive or capable of working. There were 1,780 nurses before--only 150 remained who were able to tend to the sick and dying.

According to John Hersey's classic work *Hiroshima*, the Hiroshima city government had put hundreds of schoolgirls to work clearing fire lanes in the event of incendiary bomb attacks. They were out in the open when the Enola Gay dropped its load.

There were so many spontaneous fires set as a result of the bomb that a crewman of the Enola Gay stopped trying to count them. Another crewman remarked, "It's pretty terrific. What a relief it worked."

Hiroshima's devastation failed to elicit immediate Japanese surrender, however, and on August 9 Major Charles Sweeney flew another B-29 bomber, Bockscar, from Tinian. Thick clouds over the primary target, the city of Kokura, drove Sweeney to a secondary target, Nagasaki, where the plutonium bomb "Fat Man" was dropped at 11:02 that morning. More powerful than the one used at Hiroshima, the bomb weighed nearly 10,000 pounds and was built to produce a 22-kiloton blast. The topography of Nagasaki, which was nestled in narrow valleys between mountains, reduced the bomb's effect, limiting the destruction to 2.6 square miles.

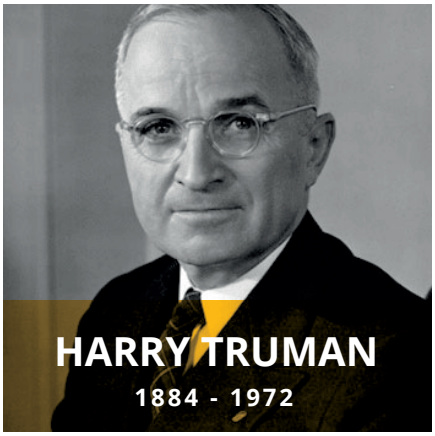
At noon on August 15, 1945 (Japanese time), Emperor Hirohito announced his country's surrender in a radio broadcast. The news spread quickly, and "Victory in Japan" or "V-J Day" celebrations broke out across the United States and other Allied nations. The formal surrender agreement was signed on September 2, aboard the U.S. battleship Missouri, anchored in Tokyo Bay. □

DID YOU KNOW?

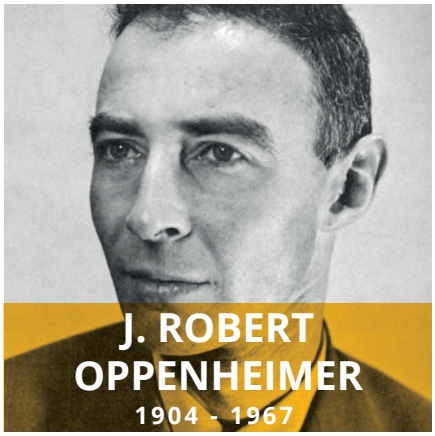
Since 1968, the sitting mayor of Hiroshima sends a letter of protest every time a nuclear test is conducted anywhere in the world. Copies of these letters are on display at Hiroshima's Peace Memorial Museum.

In May 2016, Barack Obama became the first sitting U.S. president to visit Hiroshima since the city was devastated by the U.S. atomic bomb.

PEOPLE TO KNOW



Harry Truman, the 33rd U.S. president, assumed office following the death of President Franklin Roosevelt. In the White House from 1945 to 1953, Truman made the decision to use the atomic bomb against Japan, helped rebuild postwar Europe, worked to contain communism and led the United States into the Korean War. A Missouri native, Truman assisted in running his family farm after high school and served in World War I. He began his political career in 1922 as a county judge in Missouri and was elected to the U.S. Senate in 1934. Three months after becoming vice president in 1945, the plain-spoken Truman ascended to the presidency. In 1948, he was reelected in an upset over Republican Thomas Dewey. After leaving office, Truman spent his remaining two decades in Independence, Missouri, where he established his presidential library.



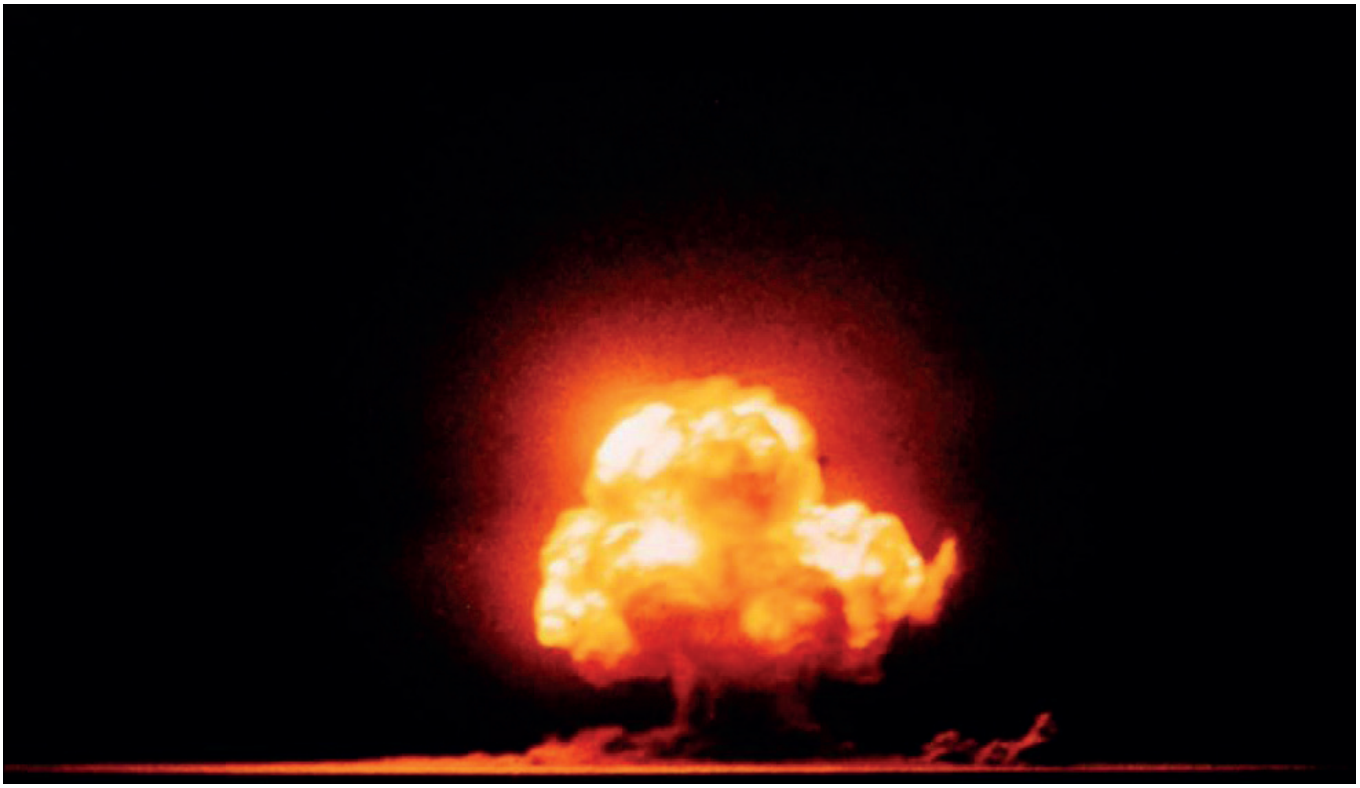
A native New Yorker, Oppenheimer was an expert in quantum theory and nuclear physics and joined the U.S. atomic weapons program in 1941. In 1942, Oppenheimer was asked to lead what became known as the "Manhattan Project" to produce an atomic bomb. Together with some of the world's top physicists, he began work on the bomb at a secret lab in the New Mexico desert. On July 16, 1945, the world's first atomic bomb was exploded at the "Trinity" test site and three weeks later the U.S. dropped the first of two bombs on Japan. Oppenheimer regretted the use of the terrible weapon, and he worked with the U.S. Atomic Energy Commission (AEC) to win approval for international control of atomic energy. In 1953, because of his opposition to the bomb and his leftist leanings, Oppenheimer was ousted from the AEC. The case stirred wide controversy, and many people came to his defense. He returned to teaching and died in 1967.

In 1941, Emperor Hirohito, or the Showa emperor, had been the emperor of Japan for nearly two decades. Although the emperor was considered to be "divine," or a "living god," in practice he had little real power over the day-to-day running of the country. Most historians today believe that, although he did little to prevent it, he was hesitant to join the Axis powers in World War II and believed Japan could not win a war with the United States. After the bombing of Hiroshima and Nagasaki, Hirohito publicly urged surrender. During the American occupation of Japan, Hirohito continued to serve as emperor, but with little real power, and he renounced the idea of his divinity. Hirohito died in 1989 after more than 60 years as emperor.

SEE IT

Enola Gay and its crew

Hiroshima and Nagasaki



First nuclear test explosion at the Trinity Bomb Site, U.S. Department of Energy

SEE IT

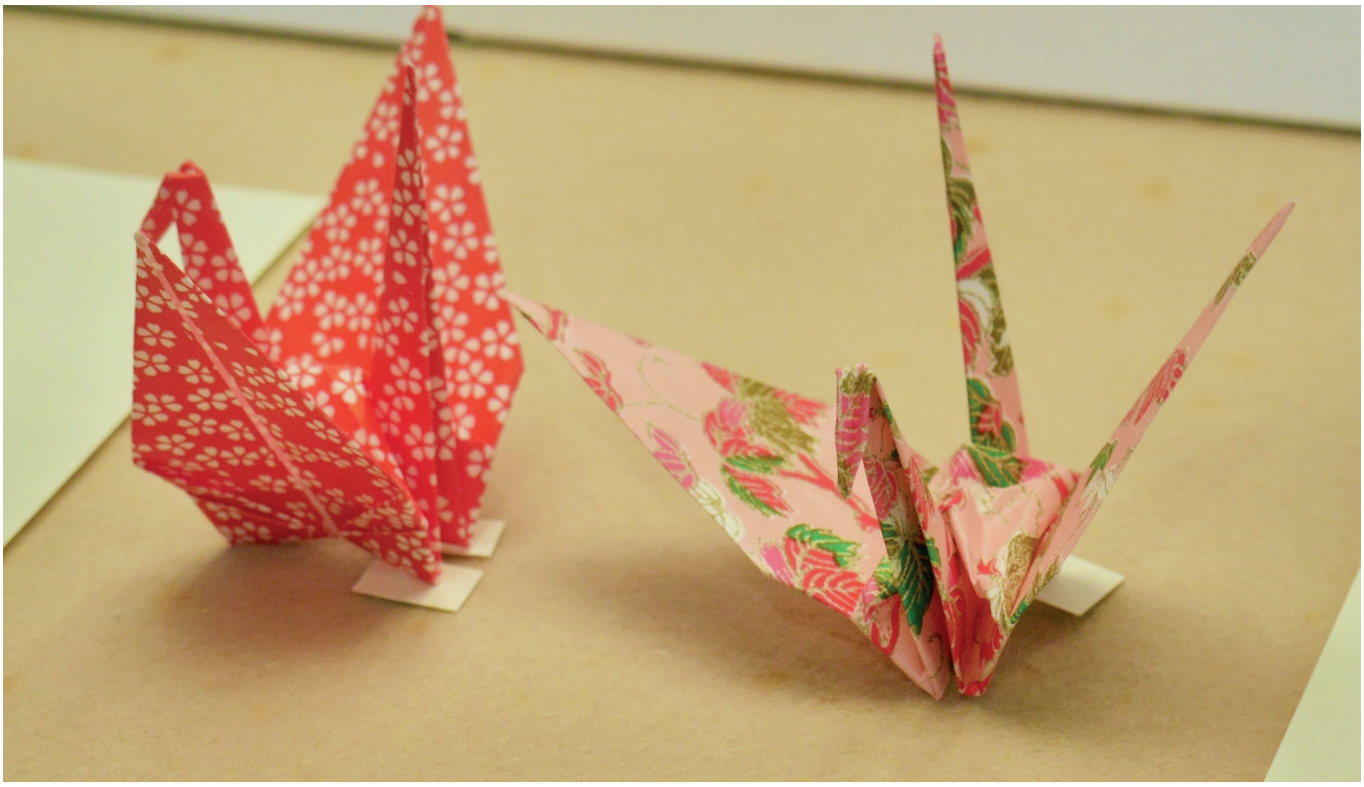
Hiroshima A-Bomb Dome

Hiroshima station after the bombing

Watch showing August 6, 1945 at 8:15. Source: Zigomar

SEE IT

Memorial Cenotaph at the Hirsohima Peace Memorial Park



A paper crane folded by U.S. President Barack Obama during his visit to Hiroshima

CONCURRENT EVENTS

HITLER COMMITS SUICIDE

In April 1945, German dictator Adolf Hitler committed suicide by swallowing a cyanide capsule and shooting himself in the head. Since at least 1943, it had become increasingly clear that Germany could not win the war. In February, the German 6th Army was annihilated at the Battle of Stalingrad, and German hopes for a sustained offensive on both fronts evaporated. Then, in June 1944, the Western Allied armies landed at Normandy, France, and began systematically to push the Germans back toward Berlin. By July 1944, several German military commanders acknowledged their imminent defeat and plotted to remove Hitler from power so as to negotiate a more favorable peace. Their attempts to assassinate Hitler failed. In January 1945, facing a siege of Berlin by the Soviets, Hitler withdrew to his bunker to live out his final days. Located 55 feet underground, the shelter contained 18 rooms and was fully self-sufficient, with its own water and electrical supply. Though he was growing increasingly mad, Hitler continued to give orders and meet with close subordinates. On April 28, Hitler married his long-time mistress Eva Braun. Two days later, he retired to his private quarters with Braun, where they poisoned themselves and their dogs, before Hitler then also shot himself with his service pistol. Hitler and Braun's bodies were hastily cremated, as Soviet forces closed in on the building. The Soviets removed Hitler's ashes, continually changing their location so as to prevent Hitler devotees from creating a memorial at his final resting place. Only eight days later, on May 8, 1945, the German forces issued an unconditional surrender, leaving Germany to be carved up by the four Allied powers.

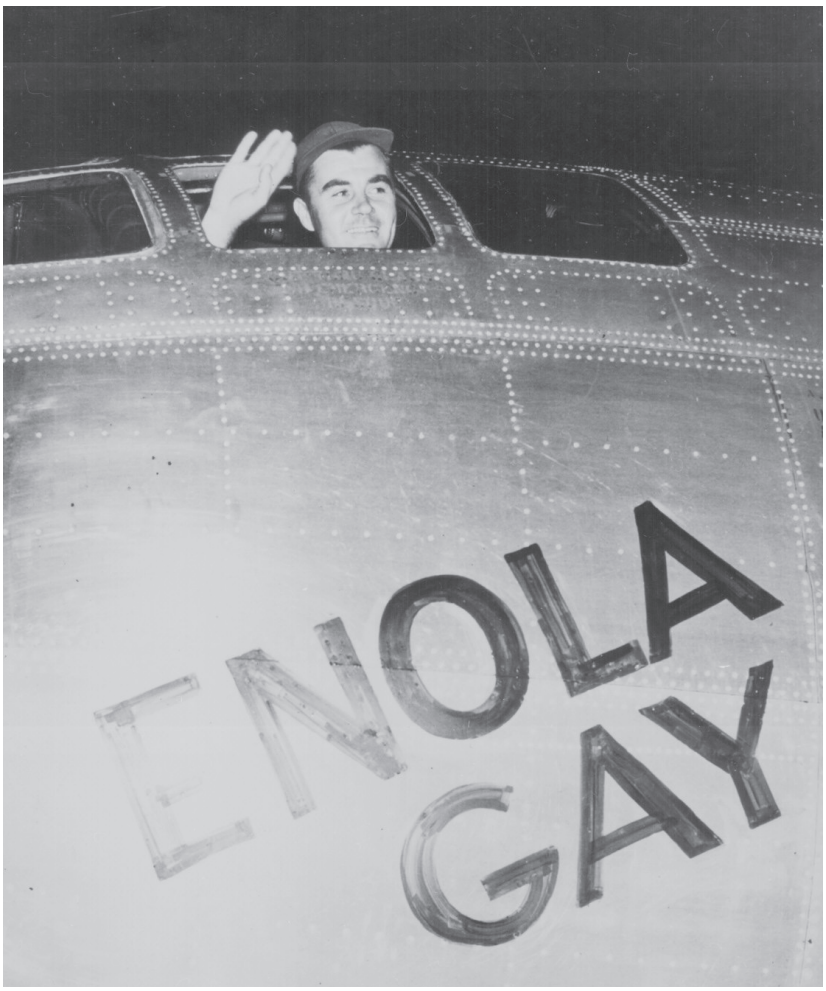
POTSDAM CONFERENCE

The Potsdam Conference, held near Berlin from July 17 to August 2, 1945, was the last of the World War II meetings held by the "Big Three" heads of state. Featuring American President Harry S. Truman, British Prime Minister Winston Churchill (and his successor, Clement Attlee) and Soviet Premier Joseph Stalin, the talks established a Council of Foreign Ministers and a central Allied Control Council for administration of Germany. The leaders arrived at various agreements on the German economy, punishment for war criminals, land boundaries and reparations. Although talks primarily centered on postwar Europe, the Big Three also issued a declaration demanding "unconditional surrender" from Japan.

FIRST ELECTRONIC COMPUTER

The earliest electronic computers were not "personal" in any way: They were enormous and hugely expensive, and they required a team of specialists to keep them running. One of the first and most famous of these, the Electronic Numerical Integrator Analyzer and Computer (ENIAC), was built at the University of Pennsylvania to do ballistics calculations for the U.S. military during World War II. ENIAC cost $500,000, weighed 30 tons and took up nearly 2,000 square feet of floor space. On the outside, ENIAC was covered in a tangle of cables, hundreds of blinking lights and nearly 6,000 mechanical switches that its operators used to tell it what to do. On the inside, almost 18,000 vacuum tubes carried electrical signals from one part of the machine to another. ENIAC and other early computers proved to many universities and corporations that the machines were worth the tremendous investment of money, space and manpower they demanded. For example, ENIAC could solve in 30 seconds a missile-trajectory problem that could take a team of human "computers" 12 hours to complete. At the same time, new technologies were making it possible to build computers that were smaller and more streamlined. The development of ENIAC helped pave the way for today's portable, personal computers, which made their debut in the mid-1970s.

DISCUSSION QUESTIONS



Col. Paul W. Tibbets aboard the Enola Gay before takeoff on August 6, 1945

1 How do you think it would have felt to be aboard the Enola Gay as it was flying toward Hiroshima?

2 Why do you think J. Robert Oppenheimer and other scientists involved in the development of the atomic bomb felt so strongly that it should not be used and that even more damaging bombs should not be developed?

3 How do you think the surviving citizens of Hiroshima and Nagasaki felt about the United States and the war after the bombings?

SUGGESTED ACTIVITIES

A collection of paper cranes at Peace Memorial Park. The cranes represent prayers for peace.

WAR COUNCIL

As a class, work together to create a list of "pros" and "cons" to using the atomic bomb against Japan, utilizing research and teacher prompts to form the most complete list possible. Then ask students to use the list to make their own decision: If they had been in President Truman's shoes, would they have made the same decision? Ask each student to prepare a short address to the nation announcing their decision and explaining their reasoning.

DEAR PRESIDENT TRUMAN

Have students compose a letter to Harry Truman from their vantage point in the 21st century. In their letters, students should explain their feelings about his decision to use the atomic bomb against Japan. Students can then describe under what circumstances, if any, they would support the use of nuclear weapons today. If it has been a topic of study, students can also include their understanding of the current global political climate surrounding nuclear weapons.

POSTCARDS FROM HIROSHIMA

Ask students to use the internet to research the memorials and museum, including the Children's Statue, at Peace Memorial Park in Hiroshima. Using a 5" x 8" card, ask them to draw or paint a scene inspired by their visit on one side of the card. On the other side, ask them to write a note to a friend about their "research" that includes information about why and when Hiroshima chose to build the park; descriptions of the museum and key features; and how they felt about "visiting" the park.

RESOURCES

Video: Coroner's Report: Atomic Bomb

http://www.history.com/topics/world-war-ii/bombing-of-hiroshima-and-nagasaki/videos/coroners-report-atomic-bomb

Video: Atomic Bomb Assembled

http://www.history.com/topics/world-war-ii/bombing-of-hiroshima-and-nagasaki/videos/atomic-bomb-assembled

Video: Eyewitness Account of Hiroshima Bombing

http://www.history.com/topics/world-war-ii/bombing-of-hiroshima-and-nagasaki/videos/eyewitness-account-of-hiroshima-bombing

Text: The Man Who Survived Two Atomic Bombs

http://www.history.com/news/the-man-who-survived-two-atomic-bombs

Website: Hibakusha Stories from the Japanese atomic bomb survivor organization

http://hibakushastories.org/mission/

Website: Atomic Heritage Foundation

http://www.atomicheritage.org/history/bombings-hiroshima-and-nagasaki-1945

Oral History: Voices of the Manhattan Project

http://manhattanprojectvoices.org/