

The End of WWII & The Dropping of the Atomic Bombs



The Beginning of the end

- Big three – Stalin (Soviet Union), FDR (USA), and Churchill (Great Britain)
- Meetings
 1. Tehran 1943 – plan the war/ unconditional surrender
 2. Yalta 1945 – Russia promises to go to War with Japan. The three nations begin to make plans for a Postwar Europe
 3. Potsdam Conference – July –August 1945 – Stalin, President Truman, and British Prime Minister Atlee – Issued the "Potsdam Declaration" which stated Japan must immediately agree to unconditionally surrender, or face "prompt and utter destruction".

The Big Three at Yalta - 1945

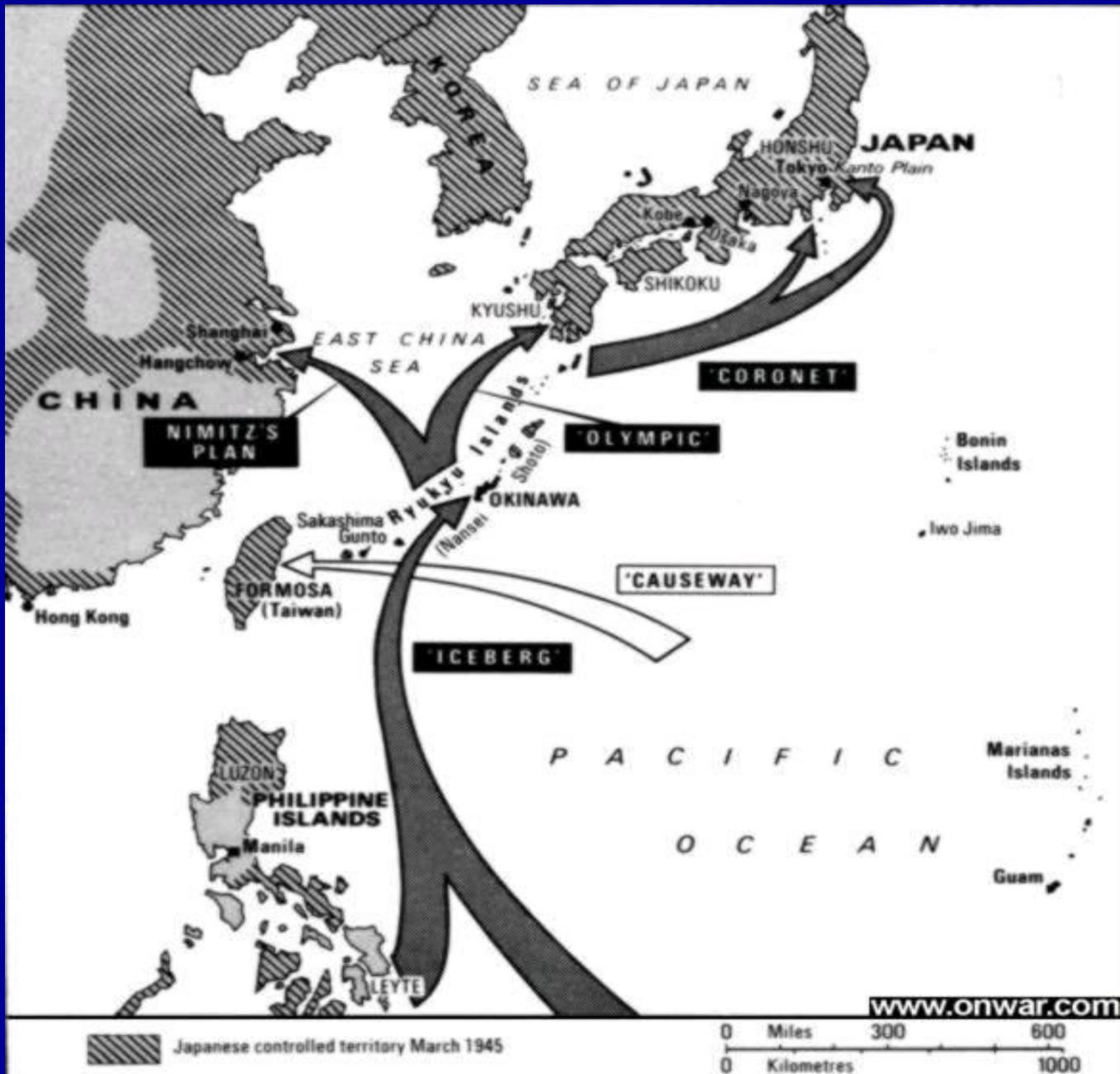


End of the War In Europe

- June 6 1944--D Day; U.S. and British forces land in Normandy, begin push across France and reach German border by the fall
- Dec. 1944, German counterattack at the Battle of the Bulge inflicts heavy Allied casualties, but fails
- April 1945 FDR & Hitler both die. Harry Truman becomes the President
- Allied forces close on Germany from both sides by early spring; Berlin falls in May 1945
- May 7-8 Germany armies surrender the Allies- **VE day**

End of the War in the Pacific

- U.S. returns to Philippines in 1944; Navy destroys most of remaining Japanese fleet at Leyte Gulf
- Islands of Iwo Jima and Okinawa taken after desperate struggles. 7,000 Americans and 22,000 Japanese are killed on Iwo Jima. On Okinawa 13,000 Americans and 100,000 Japanese (including civilians) will die in the 3 month long battle.
- U.S. begins air campaign against Japan; devastate Tokyo and other cities--sometimes using fire bombs to burn cities to ground (over 100,000 killed in one raid on Tokyo)
- Japan, if with resources and food being cut off by an American blockade, refuses to surrender at this point

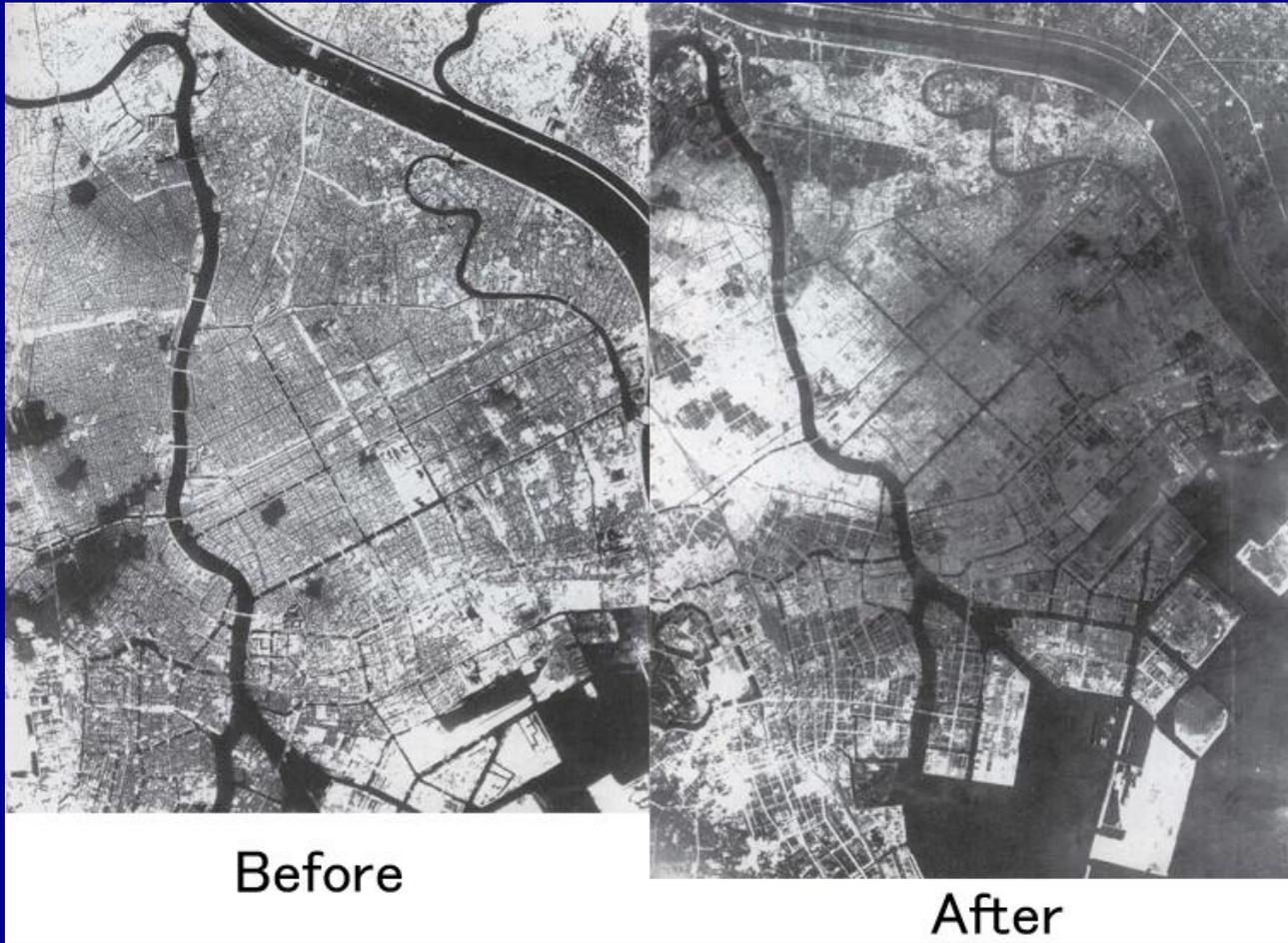


Planned Invasion of Japan

- Set the beginning of November 1945. Operation Olympic would invade the southern island of Kyushu. The final Push toward Tokyo would come in the Spring of 1946 with the invasion of the Honshu and a direct assault on the city of Tokyo.
- At the time Military experts estimated that the casualties from both the Kyushu and Honshu invasion operations could range from 250,000 to one million Americans killed
- However the thought of a bloody campaign caused some in July 1945 to believe that it would have been more humane to have just continued the conventional B-29 bombing of Japan, which in six months had killed nearly 300,000 people and displaced or rendered homeless over 8 million more. They also assert that the growing US blockade would have soon forced a surrender because the Japanese faced, quote: "imminent starvation."



View of Tokyo Burning March 1945, taken from American B-29 during the raid



Before and After pictures of Tokyo March 1945



Sendai, Japan on April 4, 2010



Sendai, Japan on March 12, 2011



Japanese civilian dead March 1945

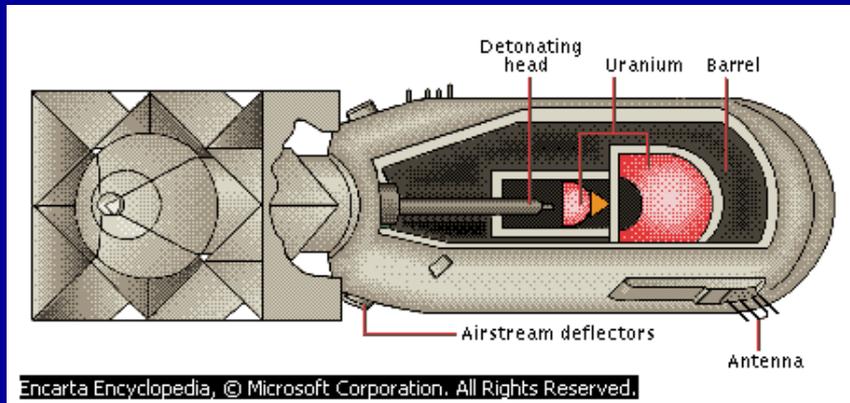
Dropping the Atomic Bomb

- **July 16, 1945**
Trinity test, a plutonium implosion device, takes place at 5:29:45 a.m. mountain war time at Alamogordo, New Mexico. It is the world's first atomic detonation. The device has a yield of 19 kilotons, which is equivalent to 19,000 tons of TNT. **J. Robert Oppenheimer, lead scientists of the Manhattan Project**, recalls a quote from the Bhagavad Gita, a Hindu classic: "I am become death, the destroyer of worlds." The Atomic age was born
- **July 26**
Potsdam Declaration calls upon Japanese government "to proclaim now the unconditional surrender of all Japanese armed forces." The alternative, the Declaration states, is "prompt and utter destruction."
- **July 28** |
Japan rejects Potsdam Declaration: using the Japanese word *mokusatsu* - "to ignore" or "to treat with silent contempt" or "no comment"

How do Nuclear Bombs Work?

- The Little Boy bomb was a type of bomb called a gun-type fission bomb that generates a nuclear explosion by firing one piece of fissile material into another of the same type. In this case, the material is uranium.
- The bomb is gun like because a small wedge of uranium is fired at a larger, target piece. Upon impact, the two pieces fuse together briefly, forming what is called a supercritical mass (a mass slightly greater than what is necessary to sustain a chain reaction).
- The rapid release of massive amounts of energy in a limited volume creates the explosion.
- In the atomic bomb, a mass of uranium about the size of a baseball produced an explosion as powerful as 20 kilotons of TNT.

How do Nuclear Bombs Work?



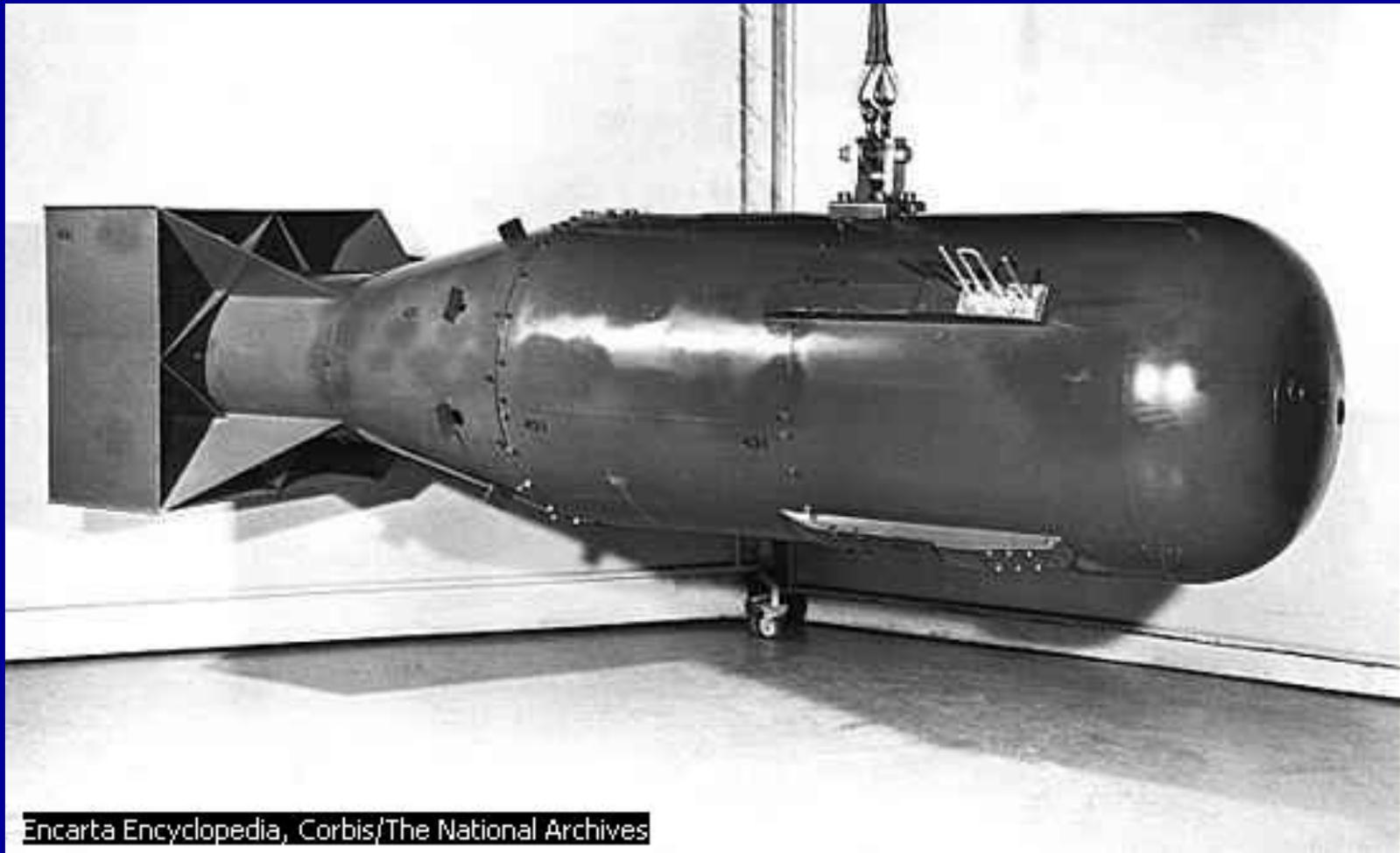
This glass ball, 3.2 inches across, is the size of the plutonium core in the bomb that exploded over Nagasaki with a force equivalent to 22,000 tons of TNT.

Dropping the Atomic Bomb

- The world's second atomic bomb, *Little Boy*, a gun-type uranium bomb, is detonated 1,900 feet above Hiroshima, Japan. It has a yield of approximately 15 kilotons TNT. Some 90,000 to 100,000 persons are killed immediately; about 145,000 persons will perish from the bombing by the end of 1945.
- The blast also destroyed more than 10 sq km (4 sq mi) of the city, completely destroying 68 percent of Hiroshima's buildings



U.S. Nuclear Bomb “Little Boy” Dropped on Hiroshima, Japan



Encarta Encyclopedia, Corbis/The National Archives

U.S. Boeing B-29 Dropped the Bombs



Encarta Encyclopedia, Corbis/Museum of Flight



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Encarta Encyclopedia, Hulton Deutsch





This bronze Buddha was melted by heat from the Hiroshima bomb. Bronze melts at around 1600 degrees F. The temperature on the ground beneath the exploding Hiroshima bomb reached about 7000 degrees.



The clock stopped at 8:15 a.m.,
the moment the world's second
atomic bomb, *Little Boy* is
detonated 1,900 feet above
Hiroshima, Japan.

Dropping the Atomic Bomb

- On August 9, 1945, At 9:44 a.m. *BOXCAR* , a B-29 carrying *Fat Man* , the world's third atomic bomb, arrives at its primary target, Kokura. The city is covered in haze and smoke from an American bombing raid on a nearby city. *BOXCAR* turns to its secondary target Nagasaki. At 11:02 a.m. the world's third atomic bomb explosion devastates Nagasaki, the intense heat and blast indiscriminately slaughters its inhabitants.
- About one-third of the city was destroyed and according to U.S. estimates 40,000 people were killed or missing.

Atomic Bomb on Google satellite

<http://nuclearsecrecy.com/nukemap/classic/>





Distance from Ground Zero (km)	Kill	Inj	Pop
0 - 1.0	88%	6%	30,900
1.0 - 2.5	34%	29%	144,800
2.5 - 5.0	11%	10%	115,200
Total	22%	12%	173,800

Nagasaki After the Bomb



Encarta Encyclopedia, Corbis/Underwood & Underwood



The End of the War with Japan

- August 6, 1945 - First Atomic Bomb dropped on Hiroshima from a B-29 flown by Col. Paul Tibbets.
- August 8, 1945 - U.S.S.R. declares war on Japan then invades Manchuria.
- August 9, 1945 - Second Atomic Bomb is dropped on Nagasaki from a B-29 flown by Maj. Charles Sweeney -- Emperor Hirohito and Japanese Prime Minister Suzuki then decided to seek an immediate peace with the Allies.
- August 14, 1945 - Japanese accept unconditional surrender; Gen. MacArthur is appointed to head the occupation forces in Japan.
- September 2, 1945 - Formal Japanese surrender ceremony on board the MISSOURI in Tokyo Bay as 1,000 carrier-based planes fly overhead; President Truman declares VJ Day.

Japan Surrenders on U.S. Battleship *Missouri*



Encarta Encyclopedia, Archive Photos

Death toll for WWII—56 million. 1st war where civilians outnumbered combat deaths