

# The Atomic bomb and the end of WWII

# Bell Ringer Review..Frame your argument



Reasons for Using  
Nuclear Weapons  
(5)



Reasons against  
the use of Nuclear  
Weapons (5)

- Bell Ringer: What was the name of the program to build the Atomic Bomb? Who was the lead scientist?
- Agenda: Notes/discussion
- Objective: Through Discussion and notes students will begin to understand the steps leading to the dropping of the atomic bomb.

# The Manhattan project

In August 1939, Roosevelt received a letter from Albert Einstein, a brilliant Jewish physicist who had fled from Europe.

In his letter, Einstein suggested that an incredibly powerful new type of bomb could be built by the Germans.

Roosevelt organized the top- -secret secret Manhattan to develop the atomic bomb before the Germans. This was lead by **J. Robert Oppenheimer**.

**On July 16, 1945, Manhattan Project** scientists field- -tested the world's first atomic bomb in the desert of **New Mexico**.

With a blinding flash of light, the explosion blew a huge crater in the earth and shattered windows some 125 miles away.

Albert Einstein  
Old Grove Rd.  
Massau Point  
Peconic, Long Island

August 2nd, 1939

F.D. Roosevelt,  
President of the United States,  
White House  
Washington, D.C.

Sir:

Some recent work by E. Fermi and L. Szilard, which has been communicated to me in manuscript, leads me to expect that the element uranium may be turned into a new and important source of energy in the immediate future. Certain aspects of the situation which has arisen seem to call for watchfulness and, if necessary, quick action on the part of the Administration. I believe therefore that it is my duty to bring to your attention the following facts and recommendations:

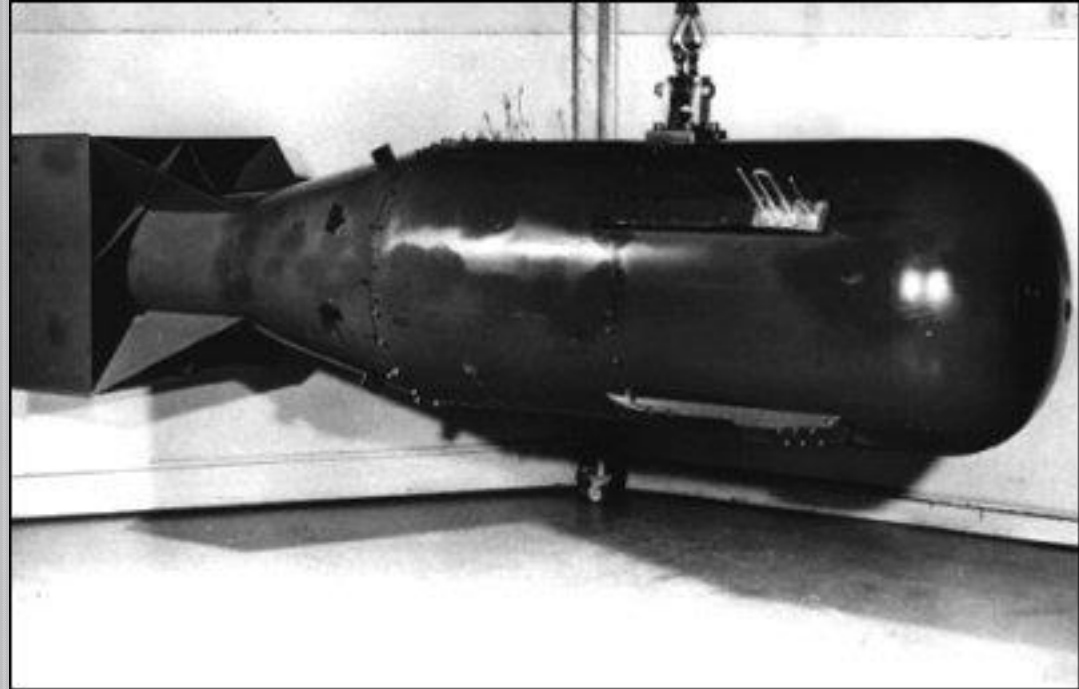
In the course of the last four months it has been made probable - through the work of Joliot in France as well as Fermi and Szilard in America - that it may become possible to set up a nuclear chain reaction in a large mass of uranium, by which vast amounts of power and large quantities of new radium-like elements would be generated. Now it appears almost certain that this could be achieved in the immediate future.

This new phenomenon would also lead to the construction of bombs, and it is conceivable - though much less certain - that extremely powerful bombs of a new type may thus be constructed. A single bomb of this type, carried by boat and exploded in a port, might very well destroy the whole port together with some of the surrounding territory. However, such bombs might very well prove to be too heavy for transportation by air.

## The Decision to Drop

Nazi Germany surrendered unconditionally at 2:41 a.m., May 7, ending World War II in Europe. At midnight **May 8**, the guns stopped firing. The Pacific war with Japan, who was Germany's ally, continued.

U. S. President Harry S. Truman, English Prime Minister Winston Churchill, and Soviet Premier Joseph Stalin met in **Potsdam, Germany** between July 17 and August 2, 1945, to discuss strategies to end the war in the Pacific.



# Trinity Test... "gadget"



## The Potsdam Conference

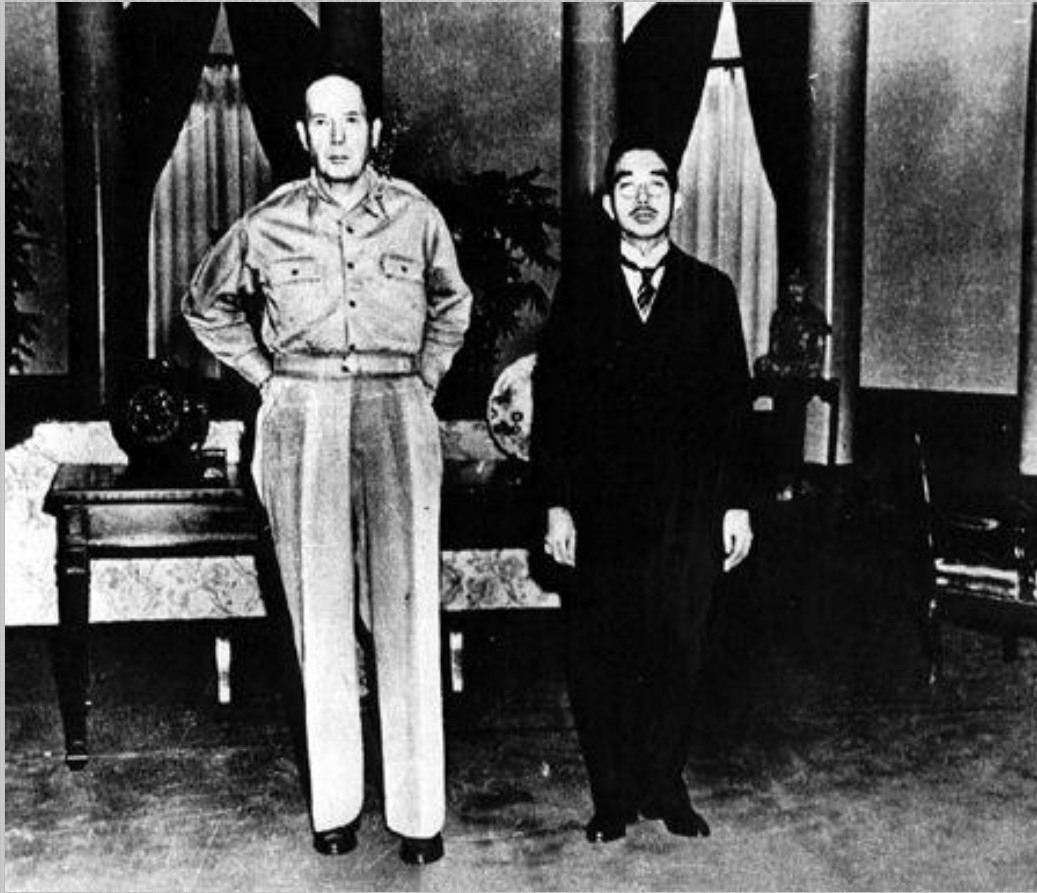
When the Potsdam Conference opened, the news of the successful testing of an atomic bomb at **Trinity Site, New Mexico**, reached President Truman. The atomic bomb was now a reality.



Churchill, Truman & Stalin at Potsdam



# Potsdam Declaration



- Truman's First attempt at negotiating with Japan
- Called for Japan's unconditional surrender and an end to Militarism in Japan
- Issued on July 26

# DBQ Activity

- Why did Truman decide to use the atomic Bomb against the Japanese?
- Analyze documents and complete chart.
- Come Monday prepared!

# Good Afternoon...Bell Ringer

- What were the reasons behind Truman's decision of using the atomic bomb?
- What were the suggested targets?
- Agenda and Objective: Through discussion and partner activity, students will be able to describe the impact of the dropping of the atomic bomb on Japan.

# Reasoning for the Use of the Atom Bomb

- Japan refused the Declaration
- The USA did not want to invade Japan
- They reasoned that using the A-bomb would deliver a huge blow to Japan
- This would save the lives of hundreds of thousands of American troops

# Choosing Targets

- There were four targets to choose from: Hiroshima, Kokura, Nagasaki, and Niigata
- Hiroshima and Nagasaki were selected because they were left mostly untouched by war.

# Truman's decision

July 25 1945

We met at 11 A.M. today. That is Stalin, Churchill and the U.S. President. But I had a most important session with Lord Mountbatten & General Marshall before that. We have discovered the most terrible bomb in the history of the world. It may be the fire destruction prophesied in the Sumerian Valley Era, after Noah and his fabulous Ark.

Anyway we think we have found the way to cause a disintegration of the atom. An experiment in the New Mexico desert was startling - to put it mildly. Thirteen pounds of the explosive caused the complete disintegration of a steel tower 60 feet high, created a crater 6 feet deep and 1200 feet in diameter, knocked over a steel tower 1/2 mile away and knocked men down 10,000 yards away. The explosion was visible for more than 200 miles and audible for 40 miles and more.

This weapon is to be used against Japan between now and August 10<sup>th</sup>. Those told the Sec. of War, Mr. Stimson to use it so that military objectives and soldiers and sailors are the target and not women and children. Even if the Japs are savages, ruthless, merciless and fanatic, we as the leader of the world for the common welfare cannot drop this terrible bomb on the old Capito or the new.

He & I are in accord. The target will be a purely military one and we will issue a warning <sup>state</sup> - ment asking the Japs to surrender and save lives. I'm sure they will not do that, but we will have given them the chance. It is certainly a good thing for the world that Hitler's crowd or Stalin's did not discover this atomic bomb. It seems to be the most terrible thing ever discovered, but it can be made the most useful

# Bell Ringer...Partner activity!

- Finish- With your neighbor answer the information sheet about the dropping of the atomic bomb on Japan.
- Agenda and Objective: Through discussion and partner activity, students will be able to describe the impact of the dropping of the atomic bomb on Japan.

# Special Delivery

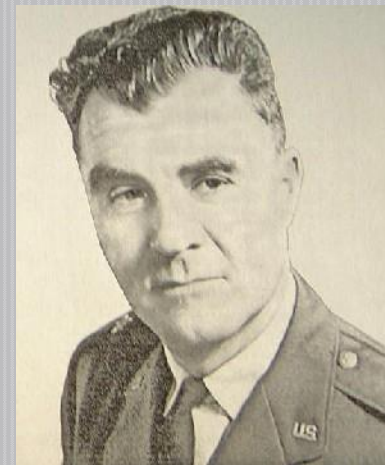
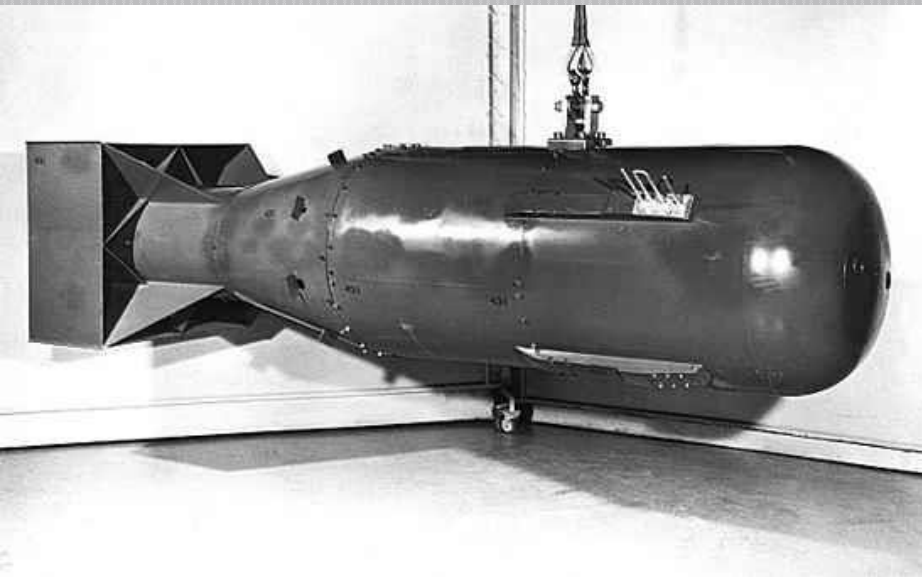
- A B-29 Super fortress bomber named the *EnolaGay* was chosen to drop the first bomb on Hiroshima



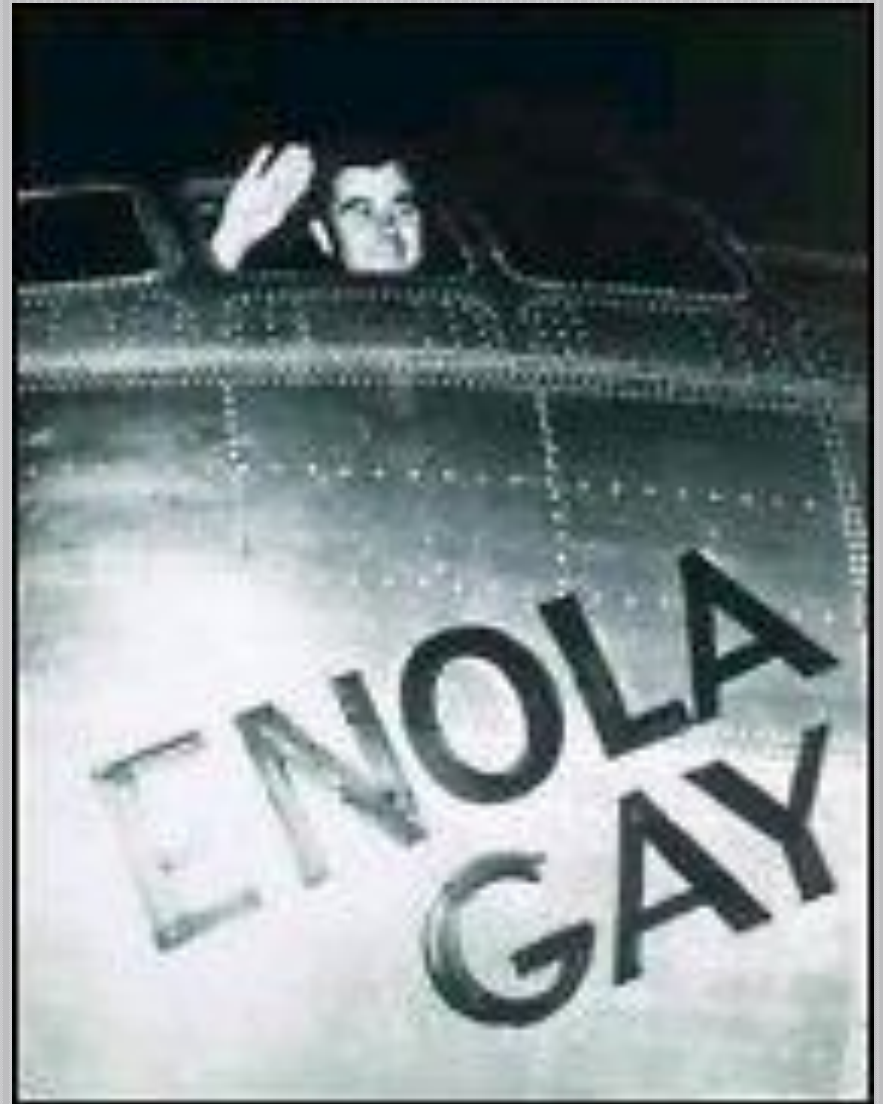
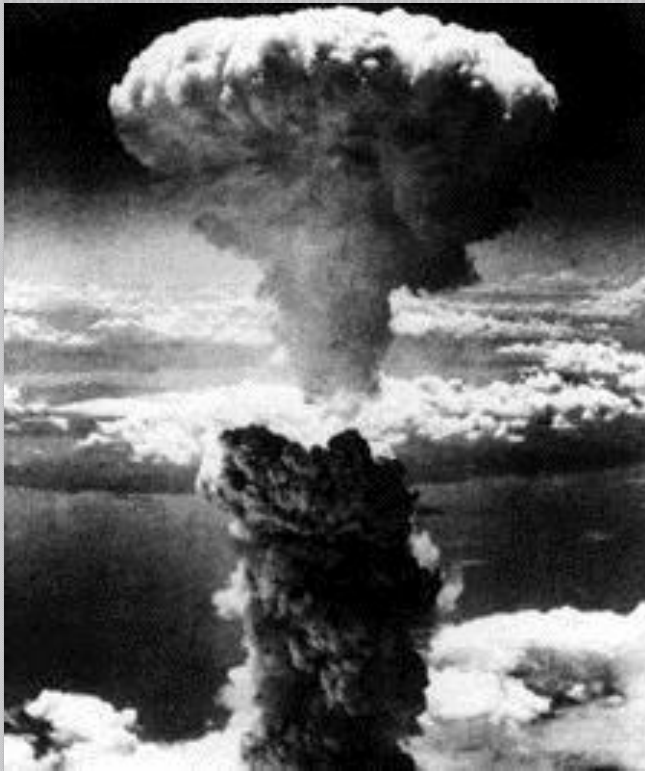


# Special Delivery

- On **August 6, 1945**, **Paul W. Tibbets** and his crew dropped the Uranium-based Atomic bomb on Hiroshima.
- The bomb was code named "**Little Boy**."



*Little Boy* was the first nuclear weapon used in warfare. It exploded approximately 1,800 feet over Hiroshima, Japan, on the morning of August 6, 1945, with a force equal to 20,000 tons of TNT. Immediate deaths were between 70,000 to 130,000.



## The Effect Of The Atomic Bomb.



**19. Hiroshima, Japan - August 6, 1945**

**At 8:16 am the city of Hiroshima and 75,000 of it's citizens were obliterated in an instant by an atomic bomb. A man stands by a fireplace in what was a residential neighborhood.**

# Aftermath

- An estimated total of 237,000 related deaths resulted from the explosion.
- Most deaths and injuries occurred when people were trapped in their burning houses or struck by debris.





## Little Boy

After being released, it took about a minute for Little Boy to reach the point of explosion. Little Boy exploded at approximately 8:15 a.m. (Japan Standard Time) when it reached an altitude of 2,000 ft above the building that is today called the "A-Bomb Dome."

The July 24, 1995 issue of Newsweek writes:

**"A bright light filled the plane," wrote Lt. Col. Paul Tibbets, the pilot of the Enola Gay, the B-29 that dropped the first atomic bomb. "We turned back to look at Hiroshima. The city was hidden by that awful cloud...boiling up, mushrooming." For a moment, no one spoke. Then everyone was talking. "Look at that! Look at that! Look at that!" exclaimed the co-pilot, Robert Lewis, pounding on Tibbets's shoulder. Lewis said he could taste atomic fission; it tasted like lead. Then he turned away to write in his journal. "My God," he asked himself, "what have we done?" (special report, "Hiroshima: August 6, 1945")**

# Aftermath (cont)

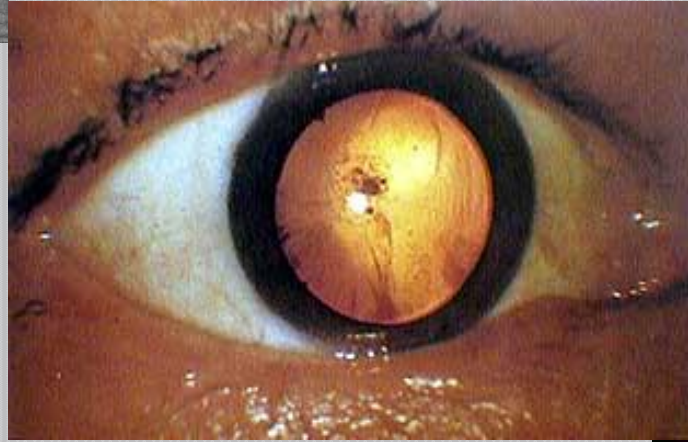
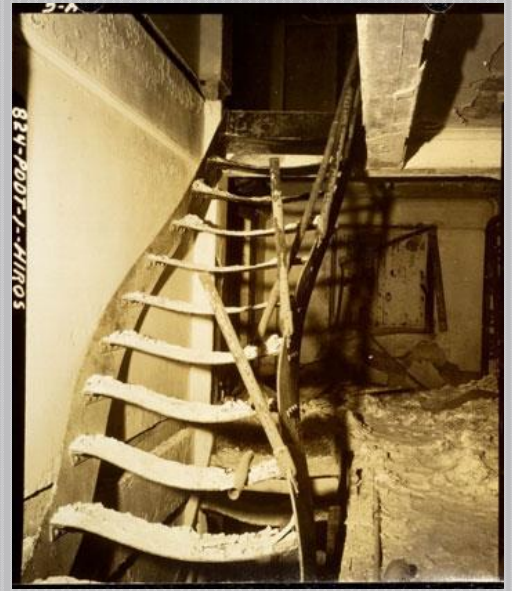
- Of the city's 90,000 buildings, 60,000 were destroyed
- This left many survivors homeless







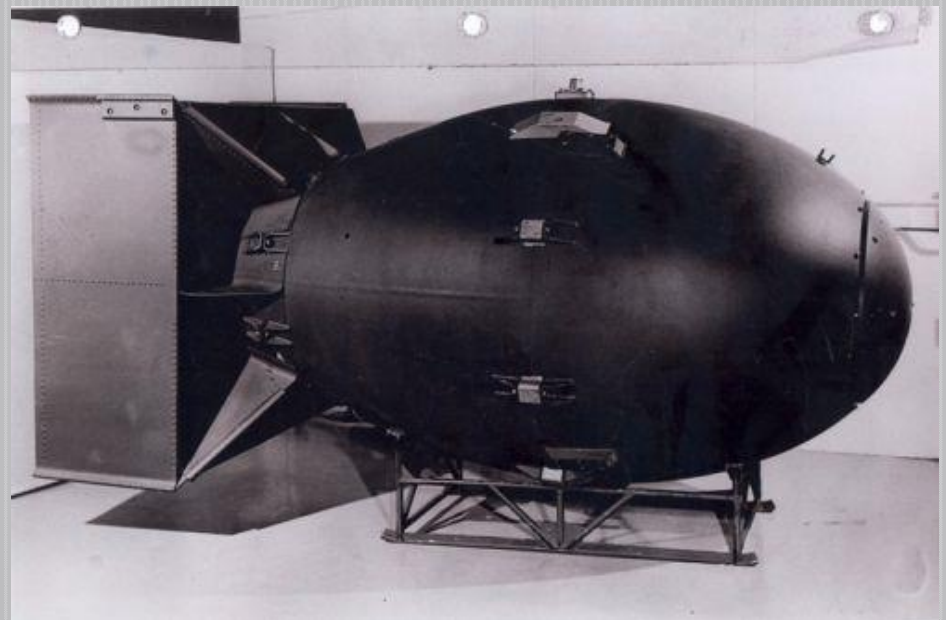




# Round 2



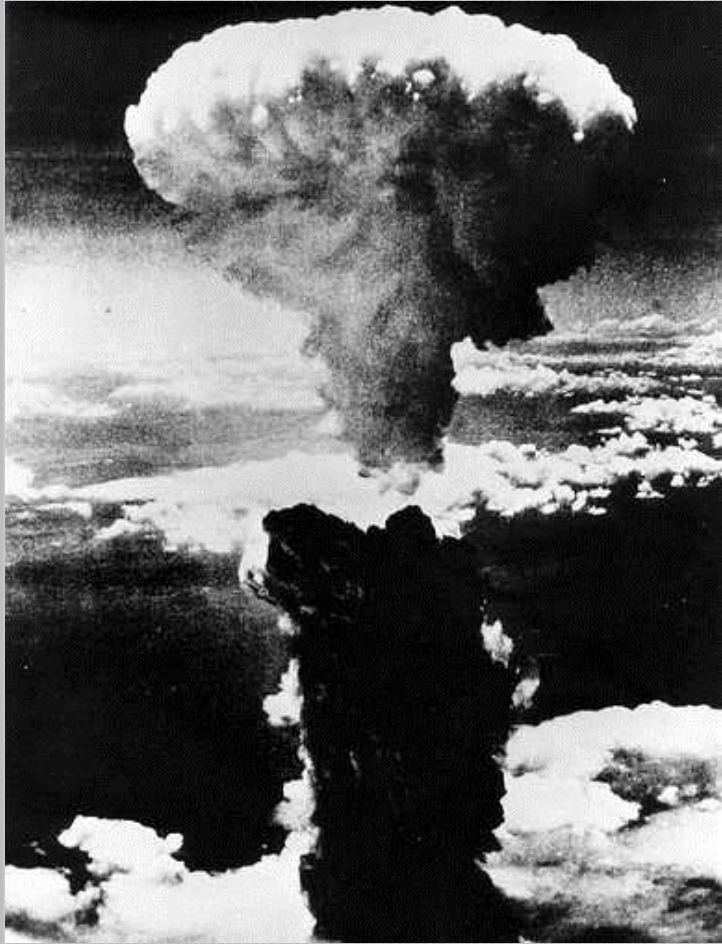
- Another B-29 named *Bockscar* dropped the “Fat Man” on Nagasaki on August 9, 1945



# Aftermath

- The death toll (of all related deaths) was about 135,000





# Bell Ringer

- What city was attacked on August 6, 1945?
- What city was attacked on August 9, 1945?
- Name of the plane for the first attack?
- Name of the second plane of the second attack?
- Quiz on Wednesday!

# Peace

- Japan surrendered to the Allied Powers on August 14, 1945
- Emperor Hirohito accepted the Potsdam Declaration
- V-J Day 8/15/45



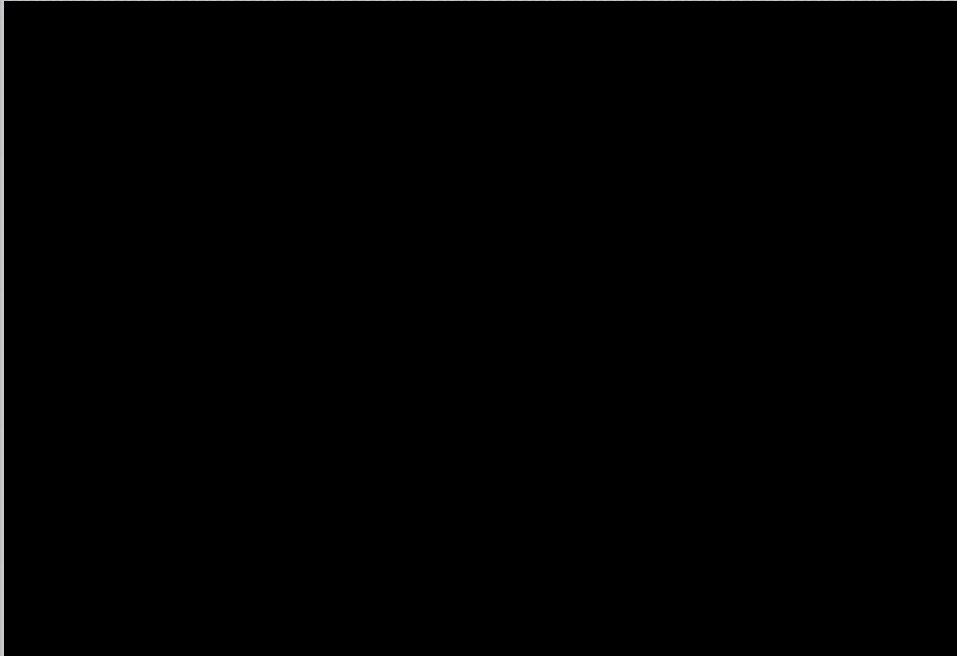
# Other reactions...



- official signing of the surrender took place on **September 2, 1945** aboard the USS Missouri in Tokyo Bay,



# In his own words...



- “We knew the world would not be the same. A few people laughed, a few people cried. Most people were silent. I remembered the line from the Hindu scripture, the Bhagavad-Gita; Vishnu is trying to persuade the Prince that he should do his duty, and to impress him, takes on his multi-armed form and says, 'Now I am become Death, the destroyer of worlds.' I suppose we all thought that, one way or another.”



# Activity...Debate

- Look over the argument that you have been given...
- List 3 reasons for the argument
- List 3 reasons against the argument

# Good afternoon

- Bell Ringer....look over notes, Atomic Bomb questions for review
- Agenda Objective: Review and debate!
- Tomorrow: quiz
- Thursday: Books!

# The arguments....

A Time for Peace	Taking Responsibility	Push to Final Victory

# Your essay...at least 1 page

- Prompt: Was the United States justified in dropping the atomic bomb?
- Discuss your arguments that support your position. Refute arguments that go against your position.

## Hiroshima- A Survivor's Story

Four years after arriving in Japan, only 15-year-old Mitsuo and his mother still live in Hiroshima. His eldest brother, Toshio, is in the Japanese merchant marines.

It's a bright, clear day. Mitsuo leaves his house around 7:30 a.m. and walks to work. He gets there about 8 a.m. He and his friends gather outside, waiting for their supervisor to give today's pep talk.

Mitsuo's mother leaves for work. Every day, she takes the same streetcar. But today she realizes she has forgotten some papers. She runs back into the house to get them. Mitsuo's mother misses her usual streetcar, and has to wait for the next one.

It's nearly 8:15 a.m. American B-29 bombers appear overhead. The sirens wail, but Mitsuo and his co-workers ignore them, as usual. The planes are headed in the direction of Tokyo. Then, for the first time ever, Mitsuo sees the planes reappear over Hiroshima. They're in position now. Looking in the sky, Mitsuo sees an object. In the instant it takes for the bomb to drop, he feels no fear, only curiosity about this thing that glistens in the sun.



Mitsuo watches the object fall behind a mountain, Mount Hiji. The exact spot where the bomb explodes is called "ground zero." Mitsuo is about two miles away, with the mountain in between. At the moment of explosion, he sees a blinding flash of light. Then the shock wave hits. Mitsuo is blown several feet into the air and knocked briefly unconscious. He awakens to see a giant mushroom cloud rising into the air. Mitsuo is a witness to the first atomic bombing in history. And Mount Hiji, which shields him from the radiation, will help him live to tell about it.

Mitsuo's mother is outside when the bomb explodes. She is about three miles from ground zero. She is not injured except for a burn on her neck. In another 20 years, cancer will develop in that spot, and she'll die from it in 1969. Still, Mitsuo's mother is luckier than the people on the street car that she missed. They all die in the blast.



These Pictures show the injuries of some of the survivors of the atomic blast.



Bombing victim. Her skin is burned in a pattern corresponding to the dark and light portions of the kimono she was wearing.