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The Challenge of Nuclear Weapons

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History and Current Issues for the Classroom

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Abstaining Countries

The following countries have the potential ability to develop nuclear weapons, but have chosen not to do so. Some have installations under international inspection that could produce weapons-grade material.

Algeria, Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Chile, Egypt, Finland, Germany, Hungary, Indonesia, Italy, Japan, Mexico, Netherlands, Norway, Poland, Romania, Republic of Korea, Slovakia, South Africa, Spain, Sweden, Switzerland, Taiwan, Turkey, Ukraine.

Recent Renunciations

South Africa produced six complete nuclear bombs during the 1980's, but renounced such activities and joined the NPT in 1991. Belarus, Kazakhstan, and Ukraine acceded to the NPT as non-nuclear weapon states and returned all remaining nuclear weapons to Russia in the early 1990's.

Egypt and Sweden both had active nuclear weapon programs but terminated them prior to the founding of the NPT in 1970. After 1970, Argentina, Brazil, Libya, Iraq, Romania, South Korea, Spain, Taiwan, and Yugoslavia all had active programs researching nuclear weapons options. All of these programs were terminated by the early 1990's, except for Libya's, which was renounced in December 2003.

<table>
<thead>
<tr>
<th>Country</th>
<th>Total Nuclear Warheads</th>
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<tbody>
<tr>
<td>China</td>
<td>410</td>
</tr>
<tr>
<td>France</td>
<td>350</td>
</tr>
<tr>
<td>India</td>
<td>75-110</td>
</tr>
<tr>
<td>Israel</td>
<td>100-170</td>
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<tr>
<td>Pakistan</td>
<td>50-110</td>
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<tr>
<td>Russia</td>
<td>~16,000</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>200</td>
</tr>
<tr>
<td>United States</td>
<td>~10,300</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>~27,600</strong></td>
</tr>
</tbody>
</table>

1. India is thought to have produced enough weapons-grade plutonium to produce between 75 and 110 nuclear weapons. The number of actual weapons assembled or capable of being assembled is unknown. No weapons are known to be deployed among active military units or on missiles.
2. Israel is thought to possess enough nuclear material for between 100 and 170 nuclear weapons. The number of weapons assembled or capable of being assembled is unknown, but likely to be on the lower end of this range.
3. Pakistan may have produced enough weapons-grade uranium to produce up to 110 nuclear weapons. The number of actual weapons assembled or capable of being assembled is unknown. Pakistan's nuclear weapons are reportedly stored in component form, with the fissile core separated from the non-fissile explosives.

Introduction: A New Nuclear Threat

October 11, 2001. Exactly one month after the terrorist attacks on the United States, the White House received a report that a nuclear weapon had been smuggled into New York City. The news came from a CIA source, code-named Dragonfire, who said that al Qaeda terrorists had stolen a ten-kiloton nuclear weapon from Russia and brought it into New York.

No nuclear weapon had been used against people since the United States had dropped two on the Japanese cities of Hiroshima and Nagasaki some sixty years earlier. The weapon that Dragonfire reported had slightly less explosive power than the bomb dropped on Hiroshima, but experts knew the potential consequences would dwarf what had happened on 9/11 at the Twin Towers. A nuclear weapon detonated in the heart of New York City would kill half a million people instantly and completely flatten every building within one third of a mile from the blast site. Buildings up to three-quarters of a mile would be damaged and destroyed, and hundreds of thousands more people would die as these buildings collapsed or burned. Radiation and more fires would initially extend out to 1-½ miles from the blast site.

The National Security Council staff at the White House worried that al Qaeda could have smuggled a bomb into New York City. The CIA knew that Osama bin Laden had a long-standing interest in acquiring nuclear weapons. They also believed that he would attempt something more dramatic and horrific than the attacks of September 11.

Specially-trained government teams secretly went to New York to search for the weapon. No one in New York, including Mayor Rudy Guiliani, was informed of the threat for fear of setting off a panic. In Washington, Vice-President Cheney and hundreds of other government officials went into hiding outside of the city. They would form the core of a new government in case terrorists had also managed to smuggle a weapon into Washington D.C.

Dragonfire’s report turned out to be wrong, but government officials had taken it very seriously.

Nuclear weapons have remained unused for sixty years, but many experts believe that nuclear weapons are the greatest threat to national security. Some believe that they are simply too dangerous and that countries should agree to give them up. Others believe that they are essential for our defense. Some also worry that it is simply a matter of time before one is used against the United States. This story of Dragonfire highlights the newest threat posed by nuclear weapons.

The arguments that surround nuclear weapons are often heated. Understanding these arguments involves confronting consequences and questions that can seem overwhelming.

“In our times, thermonuclear war may seem unthinkable, immoral, insane, hideous, or highly unlikely, but it is not impossible. To act intelligently, we must learn as much as we can about the risks. We may thereby be able better to avoid nuclear war.”

—Herman Kahn, Nuclear Strategist

It is the destructive power of these weapons that requires us to learn about their risks and confront these moral dilemmas and questions. How dangerous are nuclear weapons? Who has them and how many are there? Do they make the world safer or less safe? How do we know? What needs to be done about them? Should we continue to rely on weapons that can kill millions to preserve our security?
After the terrorist attacks of September 11, 2001, the public began to fear that a terrorist group might acquire a nuclear weapon. Americans, who had not worried about nuclear weapons for a generation, began to pay attention to this danger. But the threat of nuclear weapons is not new. And while the threat of nuclear terrorism is a deep concern, the role of nuclear weapons in international politics and security is more complex than only the threat from terrorists.

In fact, nuclear weapons pose many risks and challenges for the United States and the world. Nuclear weapons are linked to our most complex and challenging foreign policy problems. For example, the United States went to war against Iraq in 2003, arguing (incorrectly) that Iraq was trying to build a nuclear weapon.

Preventing the spread of nuclear weapons (the spread of these weapons is known as proliferation) is a top priority for the United States. The United States has identified Iran and North Korea as two states that represent a threat to U.S. security because of their nuclear weapons programs. Tensions with Iran and North Korea are high.

Finally, the tens of thousands of weapons produced during the Cold War remain ready for use in the United States and Russia—an issue that some experts worry more about than the threat of nuclear terrorism. Russia and the United States have approximately 26,300 warheads of the approximately 27,600 nuclear weapons in the world. Not all are deployed with military units and ready for use. Some are kept in storage. The United States has 5,735 nuclear weapons that are deployed and ready to be used. Russia has approximately 7,200 nuclear weapons deployed and ready to be used. Both the U.S. and Russian arsenals are capable of destroying humanity.

President Ronald Reagan (1981-1989) and Soviet President Gorbachev said in a joint declaration in 1986, “A nuclear war cannot be won and must never be fought.” Nevertheless, both the United States and Rus-

Nuclear Weapons Terminology

“Nuclear weapons” is the term used throughout this reading to describe weapons that harness the power of the atom. Nuclear weapons are vastly more powerful than conventional weapons. The earliest weapons were referred to as atomic bombs or weapons and used a process called fission to produce explosive energy. In the 1950s, both the United States and the Soviet Union increased the explosive power of weapons by utilizing a process known as fusion; these weapons are known as thermonuclear bombs.

The explosive force of nuclear weapons is measured in kilotons (thousands of tons) or megatons (millions of tons) of TNT. The bomb dropped on Hiroshima had an explosive force of thirteen kilotons, equivalent to thirteen thousand tons of TNT. The largest bomb ever tested was a Soviet hydrogen bomb of fifty-nine megatons or about 4,500 times that of the Hiroshima bomb. Today most nuclear weapons are between one hundred kilotons and one megaton—ten to one hundred times more powerful than the bomb Dragonfire had incorrectly reported to be in New York City.

“[After nuclear war, the] two sides would have neither powers, nor laws, nor cities, nor cultures, nor tombs.”

—French President Charles de Gaulle,
May 31, 1960
sia currently have plans for fighting—and, if possible, winning—a nuclear war.

It seems strange to consider that countries would have so many destructive weapons if it is also accepted wisdom that a nuclear war could not be won and should never be fought. There are sharp political and moral arguments about what to do with nuclear weapons. Some believe that they serve a purpose, while others see their very existence as a threat to the world.

To understand this debate about the role of nuclear weapons in the world today it is helpful to review the history of nuclear weapons as well as some of the important ideas and beliefs behind U.S. nuclear policy. You will read about these ideas and beliefs in the following pages and then consider the arguments about nuclear weapons. Ultimately you will be asked to formulate what the future of U.S. nuclear weapons policy should be.

**When were nuclear weapons used?**

The United States developed nuclear weapons during World War II in a massive and costly effort called “The Manhattan Project.” The project involved thousands of scientists and engineers and cost more than two billion dollars (more than twenty-two billion in 2006 dollars). Germany surrendered in May 1945, before the bomb was ready, but the war against Japan continued.

The war in the Pacific against Japan had been particularly bloody; fighting killed or wounded nearly 300,000 Americans. The American military believed that it would have to invade Japan and that U.S. casualties could range between 100,000 and 500,000.

Hoping to speed the end of the war, President Harry S Truman (1945-1953) authorized dropping the bomb on Japan. The United States dropped the first nuclear bomb on the city of Hiroshima on August 6, 1945.

**What effect did the bomb have on Hiroshima?**

The Hiroshima bomb was set to detonate 1,900 feet above ground level to maximize the effects of the blast. It struck Hiroshima with an explosive force of 12,500 tons of TNT. The city was home to approximately 280,000 civilians and 43,000 soldiers. Approximately 100,000 of them died immediately or suffered injuries that killed them within a few months of the attack. Intense heat transformed thousands of people into small, charred lumps of flesh.

“I felt as though I had been struck on the back with something like a big hammer, and thrown into boiling oil.... The vicinity was in pitch darkness; from the depths of the gloom, bright red flames rise crackling, and spread moment by moment. The faces of my friends who just before were working energetically are now burned and blistered, their clothes torn to rags.”

—Hiroshima college student
The appearance of people was... well, they all had skin blackened by burns.... They had no hair because their hair was burned, and at a glance you couldn’t tell whether you were looking at them from in front or in back.... Their skin not only on their hands, but on their faces and bodies too hung down.”

—Hiroshima grocer

In addition, the radiation burns and internal damage caused by gamma rays produced lethal injuries to people as far as two miles from the center of the blast. Forty-eight thousand of Hiroshima’s seventy-six thousand buildings were totally destroyed by the atomic bomb, while another twenty-two thousand were seriously damaged.

Three days later, the United States dropped another bomb on the city of Nagasaki with similar results. Japan offered to surrender one day after the bombing of Nagasaki.

The use of a nuclear weapon against Japan demonstrated the incredible military power that a nation would have if it possessed these weapons. A country with nuclear weapons could win any war that it fought, provided that its opponent did not have them also. By October 1945, President Truman realized that an international race to acquire atomic weapons was likely.

As Americans learned about the devastation of Hiroshima and Nagasaki, a debate about the morality of such powerful weapons began. Most argued that they had shortened the war and saved American lives, while others argued that the United States had lost its position of moral leadership in the world. Scientists and others recognized that the power of nuclear weapons had changed the nature of warfare and the world.

“The lesson we should learn from all this, and the frightening thing which we did learn in the course of the war, was how easy it is to kill people when you turn your mind to it. When you turn the resources of modern science to the problem of killing people, you realize how vulnerable they really are.”

—I.I. Rabi, Manhattan Project physicist

The Cold War and the Nuclear Arms Race

Soon after the defeat of Nazi Germany, the United States faced a new challenge from its World War II ally, the Soviet Union. Despite their enormous war losses, the Soviets had built up an army of twelve million soldiers to defeat Nazi Germany. In February 1946, the Soviet leader Josef Stalin predicted that the conflict between communism and capitalism would lead to a new war. Meanwhile, his troops remained firmly in place throughout much of Eastern Europe. U.S. leaders feared that the Soviets would attempt to extend communist rule over the entire continent. Containing the influence of the Soviet Union and the spread of communism became the top priority of the United States. Thus began a conflict, known as the Cold War, which would last for more than forty years.

During the Cold War, anxiety about the Soviet Union consumed the United States. Movies, books, and television programs in the United States typically depicted the Soviets as a global menace. From Central America to southern Africa to the Middle East to Southeast Asia, Washington was locked in a deadly chess match with Moscow. Looming over the confrontation was the possibility that the Cold War might ignite a catastrophic nuclear exchange that would dwarf the devastation of Hiroshima and Nagasaki.

In March 1947, in response to Soviet attempts to influence events in Greece and Turkey, President Truman announced his intent to “support free peoples who are resisting attempted subjugation by armed minorities or by outside pressure.” Americans increasingly viewed communist aggression as a serious threat to the United States and the world. U.S. leaders and the American people saw the global struggle as a contest between
good and evil, pitting God-fearing, democratic people against godless, Communist regimes determined to extinguish the central values of Western civilization.

The United States formed a militarily alliance with ten countries of Western Europe and Canada in 1949 to create the North Atlantic Treaty Organization (NATO). The NATO Treaty committed the United States to the defense of Western Europe and pledged for the first time in history to maintain a substantial U.S. troop presence overseas.

**Why did the Soviet Union want nuclear weapons?**

Soviet leaders believed that they would not be able to defend their country or compete internationally with the United States and its allies if they could not match its military power. In September 1949, the Soviets exploded their first atomic bomb.

"The security of the country and patriotic duty demanded that we create the atomic bomb.... Who would forgive the leadership of the country if it began to create weapons only after the enemy had decided to attack? The ancients had a point when they coined the phrase, 'If you want peace, prepare for war.'"

—Nikolai Dollezal, chief designer of the first Soviet nuclear reactor

**How did Soviet nuclear weapons affect U.S. military planning?**

Moscow’s development of nuclear weapons forced American defense planners to devise a new approach to national security. President Truman increased the U.S. military presence in Western Europe in response to crises in Berlin and Czechoslovakia. American policy-makers also hoped to maintain their head start in the number of nuclear weapons they possessed. Truman ordered the development of the vastly more powerful hydrogen bomb; he ordered that four hundred hydrogen bombs be ready by 1953. This was the beginning of the nuclear arms race.

**Deterrence**

American military planners had also begun to rethink the strategy of war. For many Americans, the prospect of nuclear war was so horrible that it was difficult to consider. The U.S. Air Force formed a group of strategists whose job was to “think about the unthinkable” prospect of nuclear war. The group prided itself on its scientific approach to solving the problem of nuclear war. They devoted their efforts to developing plans to prevent nuclear war, to fighting and winning a nuclear war if necessary, and to surviving a nuclear attack should one occur.

These strategists believed that it was possible for the United States to fight and win a nuclear war. They examined various scenarios and carefully calculated the number of Americans who might die (between 2 and 160 million), and the number of years it would take the economy to recover (between 1 and 100).

The strategists came up with a plan to prevent nuclear war known as “deterrence.” Deterrence was based on the idea that the threat of nuclear retaliation could actually prevent one side from starting a nuclear war. Simply put, if one side were to attack the other with nuclear weapons, the other side would launch a nuclear response that would devastate the original attacker. Knowing that they faced certain destruction, both sides would be deterred from attacking.

"Thus far the chief goal of our military establishment has been to win wars. From now on it must be to avert them. It can have almost no other useful purpose."

—Bernard Brodie, Nuclear Strategist

As strategists thought more about deterrence, they realized that they needed to make the other side believe the United States had enough weapons to survive a surprise “first-strike” by an enemy and launch a retaliatory strike. Of course, this raised the question about how many weapons are enough. Both the
China, France, and Great Britain

While the United States and Soviet Union built their nuclear arsenals, other great powers also wanted to develop their own nuclear weapons, including two important U.S. allies. Great Britain developed a nuclear arsenal during the 1950s, in large part to emphasize its role as a great power. France, defeated in World War II, and also interested in asserting itself as a leading power, also developed nuclear weapons. Both the French and the British believed that having their own bomb could protect them from attack. China developed and tested its own nuclear bomb in 1964 in part to assert its status as a great power. The British, French, and Chinese arsenals were much smaller than the U.S. and Soviet arsenals.

“There will be states that have the atomic bomb (and will not use it among themselves). There will be states without the bomb, which will be the battlefields. We need our atomic weapons.”

—French General Catroux

Soviets and the United States raced to produce enough weapons and found different ways to preserve the weapons from a “first-strike.”

The U.S. military strategy based on deterrence meant that the United States would go to war not only in response to an attack, but also in anticipation of one.

“An adequate program of defense... must have as a goal, the possession of superior striking power and the ability to explode at will, with greatest effectiveness, such a number of suitably designed atomic weapons as will: (a) deter a potential enemy from attack, or, (b) if he prepares an attack, overwhelm him and destroy his will and ability to make war before he can inflict significant damage upon us.”

— from The Evaluation of the Atomic Bomb as a Military Weapon, 1947

The implications of relying on deterrence were significant. Incorrectly anticipating an enemy attack and launching a preventive nuclear strike would be catastrophic. The result of failing to anticipate an actual attack or failing to prevent it would also be catastrophic. The belief in the theory of deterrence remained the central component of U.S. nuclear security strategy throughout the Cold War.

How did the United States view the Soviet Union?

While American policy-makers may have trusted themselves not to misuse nuclear weapons, they did not trust the Soviet Union. Many believed that the Soviet ideology and the desire to spread communism made the Soviets more likely to go to war and to use nuclear weapons to achieve their goal. Many Americans didn’t think the question was “if” the Soviet Union would use nuclear weapons, the question was “when.” American policy-makers believed that when the USSR developed a large enough nuclear arsenal, it would be tempted to attack the United States.

“The avowed basic intention of the USSR is to engage in competition with the US until the US is destroyed or forced to capitulate. The Soviet concept of competition with the US is—demonstrably—to wage a relentless, unceasing struggle in which any weapon or tactic which promises success is admissible.... It consequently cannot be described as merely a political struggle, or a cold war, or a limited war. In the eyes of the Kremlin, it is war in the broadest sense of the term, a war to the death.”

How did the Soviet Union view the United States?
Soviet planners assumed that a war with the United States would begin with a U.S. nuclear attack. Unwilling to be intimidated, Stalin dramatically increased Soviet forces in Europe and ordered efforts to increase the Soviet arsenal. He even ordered a military force stationed in Siberia to be prepared to invade Alaska. Tensions increased as both sides refused to be intimidated by each other. In 1950, a Soviet military expert calculated that the United States could not build enough weapons to destroy the Soviet Union’s conventional (non-nuclear) forces. Three years later the United States had tripled its inventory of weapons from three hundred to more than eleven hundred.

How did U.S. nuclear policy evolve under Eisenhower?
In his inaugural address, President Dwight D. Eisenhower (1953-1961) spoke of the danger of nuclear weapons. The development of a more powerful bomb, the thermonuclear hydrogen bomb in 1952, had increased the lethality of these weapons. Other developments also concerned Eisenhower. One month after the Soviets exploded their first atomic bomb in September 1949, communists led by Mao Zedong won control of mainland China and joined Moscow in pressing for the spread of communism worldwide. In June 1950, communist North Korean forces invaded South Korea, drawing the United States into a three-year conflict. Chinese intervention in that war led to a stalemate and to serious consideration of using nuclear weapons.

In spite of his concerns about the dangers of nuclear weapons, Eisenhower developed a policy that would rely on a larger nuclear force that was capable of responding anywhere in the world. Eisenhower realized that using U.S. conventional military forces to counter the larger Soviet and Chinese armies everywhere in the world would be expensive and difficult. As a solution, the United States decided that “massive retaliation” would be used in response to an attack by Soviet conventional forces. The plan called for a nuclear attack on 118 Soviet cities; expected Soviet casualties would be around sixty million. Eisenhower also introduced the idea of “pre-delegating” the authority for the military to use nuclear weapons if the president was unable to give the order to respond to an attack.

“The basic decision is to depend primarily on a greater [nuclear] capacity to retaliate instantly by means and at places of our choosing. As a result it is now possible to get and to share more basic security at less cost.”
—President Dwight D. Eisenhower

In response to the expanding U.S. nuclear capacity, the Soviet Union worked feverishly to increase its nuclear inventory and to produce more powerful weapons. Both the United States and the Soviet Union conducted hundreds of tests of these new weapons in the atmosphere. Thousands of civilians were exposed to radioactive fallout, the poisonous by-product of nuclear explosions, that spread throughout the atmosphere. Many would fall ill and die. Estimates of deaths in the United States and around the world from cancer due to the U.S. testing program range from 70,000 to 800,000 people. Estimates are similar for the Soviet testing program.

“If you were outdoors...you might be advised to bathe, wash you hair, dust your clothes, brush your shoes, etc. Fallout can be inconvenient, but your best action is not to be worried about [it].”

What was Sputnik?
In 1957, the Soviet Union launched Sputnik, the first satellite to orbit the earth. The reaction in the United States was one of shock, and added to fear that the United States might be falling behind the Soviet Union in
technology. The Soviet Union and the United States began a race to put nuclear warheads on intercontinental ballistic missiles (ICBMs) that could strike a target more than six thousand miles away in thirty minutes or less. During his campaign for the U.S. presidency in 1960, John F. Kennedy promised to be tough on the Soviets.

In 1961, Soviet and American tanks stood ready to fire on each other in the occupied city of Berlin. Tensions ran high. Both nations ended a moratorium in place since late 1958 and began testing nuclear weapons in the atmosphere to emphasize their strength and determination. The Soviets tested a bomb that had ten times the explosive power of the total number of explosives used during the entire Second World War.

**The Cuban Missile Crisis**

Tensions reached a high point in October 1962, when the United States discovered that the Soviets were installing nuclear missile sites on the island of Cuba, only ninety miles from Florida. President Kennedy demanded the removal of the missiles. U.S. forces were placed on high alert. American bombers took off and circled in the air, ready to deliver nuclear weapons against the Soviet Union. President Kennedy contemplated invasion of Cuba. Unknown to him, Soviet commanders in Cuba had operational (ready-to-use) nuclear weapons and had been authorized to use short-range weapons in the event of an American invasion—an event that would likely have led to a full nuclear exchange.

The U.S. 1962 nuclear plan (Strategic Integrated Operation Plan or SIOP), based on the Eisenhower doctrine of massive retaliation, called for launching more than three thousand weapons against the Soviet Union and China—even if China was not involved in the original attack. If this plan had been implemented during the missile crisis, military planners estimated the casualties would have approached three hundred million.

The Americans and Soviets struck a deal after thirteen days on the brink of nuclear war.

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**Language of the Nuclear Era**

The Cold War introduced words and phrases to the English language. The idea of deterrence spawned the phrase Mutually Assured Destruction, often referred to simply by its acronym “MAD.” The “balance of terror” referred to the standoff between the United States and the Soviet Union. The U.S. nuclear plan (SIOP or Single Integrated Operational Plan) became known as the “doomsday machine.” Planning the use of nuclear weapons became known as “thinking the unthinkable.” The phrase “better dead than red,” referred to the unwillingness to live under communism. (Communists were often referred to as “reds,” because the color red was a symbol of international communism.)
The Soviet Union would remove their missiles from Cuba if the United States promised not to invade Cuba and removed nuclear missiles from Turkey, a country that bordered the Soviet Union.

“We are both engaged in a tug of war, pulling on either end of a rope and therefore tying a knot that, once tied, neither of us will be able to undo. If war should break out, it would not be in our power to stop it—war ends when it has rolled through cities and villages, everywhere sowing death and destruction.”

—Soviet Premier Nikita Khrushchev, letter to President Kennedy, October 26, 1962

How did the Missile Crisis affect U.S.-Soviet relations?

The missile crisis had a profound effect on Kennedy and Khrushchev. While Kennedy still believed that the United States should rely on the policy of deterrence to keep the peace with the Soviet Union, he worked with Khrushchev to reduce tensions between the two countries. After the missile crisis, both sides agreed to install a “hot-line” to ease communication between U.S. and Soviet leaders in times of crisis. The arrangement featured teletype machines installed in both the Kremlin and the Pentagon. This reduced the risk of a misunderstanding causing a deadly conflict.

The missile crisis also impressed Kennedy and Khrushchev with the dangers of making nuclear threats. Having come so close to a nuclear war, leaders on both sides recognized the need to embark on a new path to prevent nuclear confrontation in the future.

“If we cannot now end our differences, at least we can help make the world safe for diversity. For, in the final analysis, our most basic common link is the fact that we all inhabit this planet. We all breathe the same air. We all cherish our children’s future. And we are all mortal.... Confident and unafraid, we labor on—not

Berlin, Germany October 1961: U.S. and Soviet tanks stare each other down across Checkpoint Charlie (a crossing point between the U.S. and Soviet sectors). The United States, the Soviet Union, Great Britain, and France each occupied sectors of Berlin after defeating Germany in World War II.

toward a strategy of annihilation, but toward a strategy of peace.”

—President Kennedy, American University Speech, June 1963

Although tensions cooled after the missile crisis, the Soviet Union and the United States remained locked in a nuclear standoff. Both sides would continue to rely on the idea of deterrence and mutually assured destruction, known as “MAD.” Arguments on how many weapons were necessary to guarantee deterrence evolved as strategists and military planners continued to adjust their strategies and both sides added new technologies and capabilities. Each development, designed to add to each country’s sense of security, contributed to an atmosphere of mistrust. These new developments also added fuel to the arms race. Both sides remained determined to have
enough weapons to maintain a credible deterrent.

**Arms Control**

The Cuban missile crisis motivated both countries to focus on arms control agreements as a means to limit the danger of nuclear weapons and war. The first agreement was the limited test ban treaty, which the United States, the Soviet Union, and the United Kingdom signed in 1963. It prohibited nuclear tests in the atmosphere, under water, and underground. France and China did not sign the treaty. Nevertheless, the treaty marked the beginning of years of U.S. efforts to control the dangers of nuclear weapons through arms control agreements and treaties.

"I see the possibility in the 1970s [of] the United States having to face a world in which fifteen or twenty or twenty-five nations may have these [nuclear] weapons. I regard that as the greatest possible danger and hazard."

—President John F. Kennedy, March 21, 1963

Kennedy also worried about the proliferation (the spread) of nuclear weapons to other countries. In 1961, Ireland had sponsored a resolution at the United Nations calling for negotiations on an international agreement. The agreement would prevent other states besides the five that already had them from acquiring nuclear weapons, but allow all states to use nuclear energy for peaceful purposes. The United States supported the idea and worked behind the scenes diplomatically to muster world-wide support for the treaty. Negotiations for the treaty that would be known as the Nuclear Non-Proliferation Treaty (NPT) would take until 1968. It would become a cornerstone of U.S. efforts to prevent the spread of nuclear weapons. The United States and the Soviet Union would cooperate extensively to control proliferation and the export of nuclear materials during the 1970s and into the 1980s. This cooperation helped strengthen the effectiveness of the NPT.

Relations improved somewhat between the Soviet Union and the United States under President Richard Nixon (1969-1974). Nixon opened an era of “détente.” Nixon hoped détente (a French word meaning “relaxation of tensions”) would produce a new set of rules for superpower conduct and prevent international crises such as the Cuban missile crisis. During Nixon’s presidency, the United States and the Soviet Union signed two important arms control agreements in an effort to limit the arms race.

One agreement was the 1972 Anti-Ballistic Missile (ABM) Treaty which limited the number of ground-based missile interceptors each side could have. Both sides believed that this was needed to preserve the deterrence provided by mutually assured destruction. The
The other treaty was the Strategic Arms Limitation Treaty (SALT) that prevented increases in the number of ballistic missiles.

The End of the Cold War

The presidency of Ronald Reagan (1981-1989) brought the nuclear issues to the forefront once again. Reagan deeply mistrusted the Soviets, who had invaded Afghanistan in 1979 and placed missiles in Eastern Europe. Reagan believed the United States had fallen behind and was losing its ability to deter a nuclear attack. In 1983, Reagan proposed building a defense against nuclear missiles known as the Strategic Defense Initiative (SDI) in part because he believed that MAD was morally wrong. The SDI proposal fueled Soviet mistrust of U.S. intentions even more. Critics believed that the SDI project would be expensive, could not guarantee security, and would violate the Anti-Ballistic Missile (ABM) Treaty. Reagan’s hostility toward the Soviet Union and his increased military spending heightened public fear of nuclear war.

Why did President Reagan shift his attitude about the Soviet Union?

Several events would lead to a change of direction for President Reagan. A practice NATO military exercise in November 1983 called Able Archer led the Soviets to believe for a short time that they were about to be attacked by nuclear weapons. Reagan was stunned to discover that the Soviets thought the United States would launch an unprovoked attack. U.S. intelligence sources uncovered additional information that the Soviets continued to fear that they were about to be attacked. Mistrust and the danger of war between the United States and the Soviet Union had reached a level unseen since the Cuban Missile Crisis.

Reagan became convinced that he needed

Protest in the Nuclear Age

Concern about nuclear weapons began almost immediately after Hiroshima and Nagasaki as a handful of Americans questioned the necessity and morality of these weapons. During the 1950s the number of anti-nuclear activists began to grow. Numerous grass roots organizations objected to atmospheric testing of nuclear weapons and questioned the wisdom and morality of nuclear weapons. Widespread protests took place in Europe, Japan, and the United States. Many notable scientists, including Albert Einstein, spoke out against them. After the Cuban missile crisis, anxiety about nuclear weapons became even more widespread.

During the Cuban missile crisis, many Americans could only hold their breath and hope that the world would not be consumed in a nuclear holocaust.

"Can you imagine not seeing another Christmas, Thanksgiving, Easter, birthday, dance, or even Halloween?...We're just too young to die."

—A Massachusetts schoolgirl, during the Cuban missile crisis

After the missile crisis, the fear of nuclear war began to have a profound effect on American popular culture. The films Dr. Strangelove and Fail-Safe, which criticized the idea that nuclear wars could be fought and won, are two examples. Writers and popular singers added their voices to the protest by focusing on the human consequences of nuclear war. As fear of nuclear war with the Soviet Union grew during the Reagan presidency, a large anti-nuclear movement developed in the United States and Western Europe. At its peak in the early 1980s, millions of protestors demonstrated in the United States and Europe and called for an end to the arms race. In the United States, a television movie called The Day After depicted what life in the United States might be like after a nuclear war.
to negotiate with the Soviets to prevent a nuclear war. Reagan’s change of heart and changes in the Soviet leadership marked the beginning of the end of the Cold War.

**How did the Cold War end?**

By the time Mikhail Gorbachev was selected to head the Soviet Communist Party in 1985, his country was struggling to keep up with its Cold War rival. At home, corruption and inefficiency hindered the Soviet economy. More significantly for Moscow’s global ambitions, Soviet science and technology were falling further behind the West. In his mid-fifties, energetic, and open to new ideas, Gorbachev stood apart from the previous generations of communist officials. Gorbachev hoped that greater contact with the West would bring new technology and investment into the Soviet Union. A key element of his strategy stressed improving Moscow’s international image. Gorbachev proposed bold arms control initiatives with the United States.

Gorbachev’s policies changed international relations. Many of the basic principles that had guided U.S. policy-makers during the Cold War were suddenly called into question by Moscow’s new outlook. Although Gorbachev had no intention of giving up the Soviet Union’s Eastern European empire, he was not willing to use military force to maintain control over Moscow’s satellite countries. In 1989, popular pressure brought down communist regimes in Poland, Hungary, East Germany, Czechoslovakia, Bulgaria, and Romania. The historical drama continued into 1990, when West and East Germany were reunified after forty-five years of division. Faced with mounting economic and political problems, Gorbachev was unable to hold the USSR together. Gorbachev resigned as Soviet president on December 25, 1991 and the Soviet Union ceased to exist.

The Cold War had come to an end; the original reason for producing tens of thousands of nuclear weapons was no longer relevant.
Part II: Three Challenges—Cold War Arsenals, Proliferation, and Terrorism

Although the Cold War ended almost two decades ago, thousands of U.S. and Russian nuclear weapons remain on hair-trigger alert, ready to be launched within fifteen minutes if the president gives the order. Although targeting instructions are no longer in each missile, a computer can enter them in a matter of minutes. Though both Russia and the United States have reduced their arsenals, there is debate about what, if anything, needs to be done about these weapons. Many argue that nuclear weapons help preserve the peace and U.S. security, while others argue that their very existence threatens all of humanity.

There are also heated debates about the morality of nuclear weapons. For example, some argue that deterrence is immoral because it is immoral for nations to threaten the lives of hundreds of millions under any circumstances. Those who support deterrence and nuclear weapons say that it is moral to protect one’s country against possible destruction. You will explore the moral debates that form the foundation of the arguments both for and against nuclear weapons. Although these are difficult questions to ponder, try to consider the moral aspects of nuclear weapons as you read.

After you have read about those arguments, you will examine three other nuclear weapons challenges. The first challenge is how to help ensure that Russia’s large arsenal of nuclear weapons and weapons-useable material is secure and safe. The second is the issue of other countries acquiring nuclear weapons: proliferation. Finally, you will look at the threat of terrorists acquiring nuclear weapons.

What are the arguments in favor of nuclear weapons?

The principal argument for nuclear weapons today is that deterrence continues to protect the United States from aggression. The belief is that no country would risk its own existence by attacking another country that has nuclear weapons. Those who support nuclear weapons argue that nuclear weapons actually make the world safer, because countries are less willing to risk the use of force. They argue that nuclear weapons prevented the Cold War from boiling over into a hot war. Some supporters believe that if more countries had nuclear weapons, the risk of war between these countries would decrease. A fundamental assumption of this group is that countries and their leaders make rational decisions and that their primary purpose is to ensure their country’s survival.

Some members of this group support developing smaller nuclear weapons whose primary purpose is not nuclear deterrence but use in wartime. An example of this would be a “bunker-buster” weapon that could penetrate hundreds of feet below the earth’s surface to strike at a hidden command post or weapons storage site. Advocates say this might be nec-

Categories of Nuclear Weapons

The U.S. military categorizes nuclear weapons as strategic (long-range), intermediate (medium-range), or tactical (short-range). Strategic nuclear weapons include land-based ICBMs (intercontinental ballistic missiles) capable of hitting a target six thousand miles away in thirty minutes or less; submarine based SLBMs (submarine-launched ballistic missiles), which generally have shorter ranges and slightly less accuracy but are harder to attack than ICBMs; and gravity bombs in planes. Intermediate nuclear weapons are shorter-range versions of strategic weapons. Tactical nuclear weapons include nuclear land mines, artillery shells, anti-aircraft explosives, and other short-range systems. Some have explosive yields of a fraction of a kiloton, actually smaller than some non-nuclear weapons, and could be concealed in a briefcase or backpack.
necessary to guarantee the destruction of hidden biological, chemical, or nuclear weapons.

**What are the arguments against nuclear weapons?**

There are numerous arguments against nuclear weapons. Many of these arguments focus on the belief that deterrence cannot be relied upon to preserve the safety of nations. An important belief is that because imperfect human beings are involved, deterrence is not a fool-proof system. Below you will read about several cases of “human error” and nuclear weapons.

**Accidents:** Those who are opposed to relying on deterrence to prevent nuclear war argue that when human beings are involved, “accidents happen.” Although countries take many measures to prevent accidents, there have been several dozen documented accidents involving nuclear weapons. None has resulted in a detonation of the weapon. For example, U.S. planes have crashed while carrying nuclear weapons. In one remarkable instance, a technician dropped a wrench down a missile silo that punctured the fuel tank of the missile. The missile burst through its 780-ton silo door and landed one thousand feet away.

**Unauthorized Use:** The United States, France, and the United Kingdom have developed very sophisticated controls (including codes and other security methods) to prevent the unauthorized use of nuclear weapons. Even if a U.S. nuclear weapon were somehow stolen, many experts believe that it would be very difficult to bypass the safeguards and detonate the weapon. Russia also has strong safeguards built into its system to prevent unauthorized use. It is not known for certain what kind of controls China, India, or Pakistan have built into their weapons, but they are assumed not to be as good as those of the United States or Russia. In one hair-raising example in 1966, Chinese military forces decided to test a nuclear missile against a test-site target in China. The government in Beijing was powerless to stop them. The missile was launched and detonated successfully. If the military had decided to launch the missile against another country it would have been able to do so.

**False Alarms:** There have been numerous documented occasions when false alarms have led the U.S. military to believe that the United States was about to be attacked with nuclear weapons. (Russian and Soviet leaders have faced the same dilemma.) Military leaders faced with such information are forced to advise the president of the impending attack. The president then has approximately fifteen minutes to decide whether to initiate a nuclear response—known as Launch on Warning (LoW).

One such example occurred in 1979, when U.S. missile crews received warning that a massive nuclear strike was inbound from the Soviet Union. After viewing data from satellites that did not detect the missiles, military leaders discovered that someone had accidentally loaded a training tape that simulated the signals of a Soviet first strike into a computer. U.S. officials utilize numerous sensors and systems, but also rely on other information as well.

For example, in another instance, U.S. sensors mistook the rising moon for a Soviet attack. They determined it couldn’t possibly be accurate, because the Soviet leader Nikita Khrushchev was in the United States at the time.

Making the decision about nuclear response becomes even more difficult in the event of a crisis. For example, during the Cuban missile crisis, radar operators detected what they thought was a missile launch from Cuba against the United States. The launch came just thirty minutes after Khrushchev announced that he would withdraw Soviet missiles from Cuba. The U.S. radar operators confirmed and then relayed their information to their commanders. Only after the missile was supposed to reach its target and there was no nuclear explosion, did officials realize that a training tape was feeding the radar operators’ monitors.

**The Danger of State Collapse:** In addition to concerns about human error, some worry about the danger of political instabil-
The Challenge of Nuclear Weapons

Cold War Arsenals

The Cold War has ended and a nuclear war between the United States and Russia seems difficult to imagine. U.S. and Russian leaders want a cooperative relationship between the countries. Nevertheless, Russia’s large inventory of nuclear weapons puts it at the top of the foreign policy priority list for the United States. Both the United States and Russia are acutely aware of changes to the other’s nuclear forces and policies.

Why does Russia rely on nuclear weapons for its defense strategy?

Despite the reduction of nuclear warheads to lower levels, nuclear weapons occupy a more prominent place in Russia’s defensive strategy than ever. With Russia’s conventional army considerably smaller than it was during the Soviet era, Moscow relies on nuclear might to deter potential enemies.

What happened to the Soviet Union’s nuclear weapons after it collapsed?

Although tactical nuclear weapons had been widely dispersed throughout the Soviet Union, by early 1992 the authorities in Moscow had concentrated all of them in Russia. The strategic nuclear missiles presented a different problem, as most of them could not be easily moved. Eighty-five percent of the missiles were based in Russia, but that still left sizeable forces in Ukraine, Kazakhstan, and Belarus.

Ukraine, Kazakhstan, and Belarus agreed to turn their nuclear arsenals over to Russia. In addition, U.S. and Russian leaders in 1993 signed a breakthrough treaty, START II. This called for then-unprecedented cuts in nuclear weapons stockpiles.

In May 2002, Presidents Bush and Putin signed the Moscow Treaty on Strategic Offensive Reductions. This requires each country to reduce its operational (ready to be used) strategic nuclear warheads to between 1,700 and 2,200 by the end of 2012. The treaty does not cover tactical nuclear weapons and does not require that weapons that are not operational be destroyed. Instead they can simply be stored.

The Nuclear Taboo

Today, there are some who advocate developing small nuclear weapons for use against small military targets, for example weapons storage sites buried deep underground. Supporters of these weapons say that they would not be used against cities, nor would they be used to threaten the destruction of another society.

The development of new kinds of nuclear weapons worries others who believe that the destructive power of nuclear weapons created an understanding that these weapons should never be used—a taboo against their use. Those who say that there is a taboo worry that the development of smaller nuclear weapons could erode the inhibitions against the use of such weapons. They argue that such a weapon, if used, would break the nuclear taboo and make the use of nuclear weapons acceptable military practice. They worry that such a development might lead to the use of larger, more destructive weapons and encourage other countries to develop nuclear weapons.

Now that you have examined some of the arguments about nuclear weapons, you will read about three challenges of nuclear weapons: Cold War arsenals, proliferation, and nuclear terrorism.
National pride also figures into the Russian position. Russian politicians generally view nuclear weapons as a guarantee of their country’s status as a great power. In spite of President Putin’s desire to build a cooperative relationship with the United States, some in the Russian Duma (parliament) have looked on arms control treaties with suspicion. Some Russian legislators believe that the United States wants to take advantage of their country’s weakness to impose deep cuts in Russia’s nuclear strength.

Why is the potential theft of Russian nuclear weapons of such concern?

Since the end of the Cold War, Russian society has undergone a remarkable transformation. While it has become a freer and more open society, it has also become more chaotic and criminalized. A highly professional and well-trained segment of the Russian military guards its approximately sixteen thousand nuclear weapons and the nuclear materials that could produce another seventy thousand. Nevertheless, U.S. security officials worry that Russia’s economic troubles have weakened Moscow’s grip on its nuclear weapons program. Russian nuclear materials are scattered throughout a vast web of military installations, weapons laboratories and assembly factories, research institutes, naval fuel depots, nuclear waste storage facilities, and other sites.

“I really can think of nothing more important than being able to proceed with the safe dismantlement of the Soviet arsenal, with nuclear safeguards to make certain that nuclear weapons facilities and the like are well secured.... The other possibility, which is that you leave materials unsecured and you don’t take as full initiative as you can...is simply not acceptable.”

—Secretary of State Condoleezza Rice, January 18, 2005

According to Central Intelligence Agency (CIA) estimates, Russia possesses 200 tons of plutonium and 1,200 tons of highly enriched uranium. Less than ten pounds of weapons-grade plutonium is needed to make a small nuclear bomb. An even smaller amount would be sufficient to poison the water supply of a large city and kill thousands of people.

Nuclear weapons experts fear that nuclear research centers are especially vulnerable to would-be smugglers of nuclear materials.

What are the Cooperative Threat Reduction Programs?

Many experts believe that the best way to reduce the threat of stolen or illegally sold nuclear weapons is to go directly to the source. In addition to treaties intended to reduce the overall number of such weapons, the United States has sponsored Cooperative Threat Reduction programs throughout the former Soviet Union designed to help dismantle, dispose of, and safely store nuclear weapons materials. The programs, also known as Nunn-Lugar for the senators who initiated them, have deactivated more than six thousand nuclear warheads and destroyed hundreds of intercontinental ballistic missiles (ICBMs), missile silos, submarine-launched ballistic missiles, bombers, and nuclear test tunnels since 1991. The programs have cost between $400 and $500 million per year. A 2001 bipartisan report called for significant increases in these funds—an additional $30 billion over the next ten years. The U.S. Department of Energy also spends approximately $600 million to help secure nuclear facilities and materials in Russia. In June 2002, the G-8, an international organization of eight top industrial powers, pledged to match the U.S. effort with an additional $10 billion over the next ten years.

Why is the United States concerned about Russia’s nuclear scientists?

In addition to worries about nuclear materials and weapons, U.S. efforts have sought to stem the flow abroad of Russian nuclear scientists and technology. According to U.S. estimates, roughly two thousand scientists in the former Soviet Union have the technical
knowledge to make nuclear arms. Hundreds more are specialists in building long-range missiles that could be equipped with nuclear warheads.

Many of the scientists who were once elite members of the Soviet Union’s nuclear program now work at private companies that offer their services to industrializing countries.

The United States and other nations have provided more than $150 million to establish and support the International Science and Technology Center, which provides civilian employment to scientists and engineers of the former Soviet Union who helped build weapons of mass destruction.

Why did the United States withdraw from the Anti-Ballistic Missile Treaty?

In 2002, the United States withdrew from the 1972 Anti-Ballistic Missile Treaty with Russia so that it could begin to deploy a national missile defense (NMD). The purpose of the proposed system is to protect the United States against a small number of ballistic missiles, either accidentally launched against the United States or from a country with only a few ICBMs, for example China or North Korea.

Reactions to the proposed NMD were similar to those when the Strategic Defense Initiative was proposed by President Reagan some twenty years earlier. Critics note that tens of billions of dollars have been spent in the effort and that initial tests of the system have been largely unsuccessful. They believe that the resources would be better used for security against terrorist threats or increasing funding for other more promising programs like Cooperative Threat Reduction programs.

NMD supporters suggest that the system is not meant to threaten Russia. Nevertheless, Russian military experts believe that it could change the equation of deterrence because it could be used against Russian missiles. Russian President Putin stated that Russia could preserve its capability to deter the United States simply by mounting multiple warheads on each missile. Other experts worry that NMD could provoke a new arms race with China.

Preventing Proliferation

Since the early 1960s, the United States
The Challenge of Nuclear Weapons

has made it a top priority to keep other nations from acquiring these weapons. The spread of nuclear weapons is known as nuclear proliferation. Only eight nations have declared themselves to have nuclear arsenals: the United States, Russia, Great Britain, France, China, India, Pakistan, and North Korea. Experts believe that Israel has nuclear weapons, although Israel has never admitted this. In 1990, South Africa admitted that it once had nuclear weapons, but it had since dismantled them.

Many experts believe that the spread of nuclear weapons increases the chance that they will be used by one state against another. They also believe that proliferation increases the probability of an accident, of unauthorized use of those weapons, or of them falling into the hands of terrorists. A few experts argue that it makes little difference to the United States how many other countries have nuclear weapons. They argue that nuclear weapons can help keep the peace among other nations just as they did between the United States and Soviet Union.

Some states who seek nuclear weapons also argue that efforts to limit proliferation are made by large powerful states that already have the security benefit of having nuclear weapons at their disposal. They argue that they have a right to protect their own security with nuclear weapons as well.

What is the role of the NPT in preventing the spread of nuclear weapons?

Through international agreements, the international community has tried to limit the spread of nuclear weapons. Central to this effort is the Nuclear Non Proliferation Treaty (NPT), designed to limit the spread of nuclear weapons and weapons technology—189 nations have joined the treaty. The NPT is the most widely adhered-to arms control treaty.

The treaty obligates those states that had manufactured and exploded a nuclear weapon before 1967 (China, France, Russia, the United Kingdom, and the United States) not to give nuclear weapons or any nuclear weapons technology to any non-nuclear weapons state and to reduce their weapons stockpiles. The non-nuclear weapons states agree not to acquire or produce nuclear weapons in exchange for the right to acquire equipment, materials, and knowledge for peaceful purposes. All states that are parties to the NPT agree to submit to monitoring by the International Atomic Energy Agency (IAEA).

Today, India, Pakistan, North Korea, and Israel are the only states that are not parties to the NPT. Therefore, they do not consider themselves to be bound to the agreements in the treaty. North Korea, originally a member of the NPT, announced it was withdrawing from the treaty in 2002 in order to pursue a nuclear weapons program.

The treaty specifies that nuclear weapons states are ultimately to pursue nuclear disarmament. Many non-nuclear states who have given up their right to nuclear weapons claim that nuclear weapons states do not take seriously the provision requiring them to disarm. Other critics note that North Korea was able to withdraw from the treaty too easily and the treaty did not prevent Iran from secretly violating the terms of the agreement for nearly two decades. Supporters state that the treaty has prevented President Kennedy’s worry of twenty-five nuclear-weapons states by the 1970s from coming true.

What is the CTBT?

For more than thirty years, the United States participated in diplomatic efforts to negotiate an end to nuclear tests. Not only do tests cause environmental damage through radioactive fallout, but they allow countries to see if the weapons work—which allows them to add them to their military arsenals. The first treaty came after the Cuban missile crisis and banned testing of nuclear weapons in the atmosphere, outer space, and under water. It was known as the Limited Test Ban Treaty of 1963. Only the United States, the Soviet Union, and the United Kingdom signed this treaty.

Since 1945, there have been more than two thousand nuclear tests. Although anti-nuclear grass-roots organizations had pushed to end
all testing for more than forty years, progress towards a comprehensive treaty came after the Cold War. With strong support from President Bill Clinton (1993-2001), the United States, the other four declared nuclear weapons states, and sixty-six other states signed the Comprehensive Test Ban Treaty (CTBT), which seeks to end all nuclear weapons testing.

In spite of the Clinton Administration’s support of the agreement, the United States Senate rejected the ratification of the treaty in October 1999. Although the United States maintains its own moratorium on testing and on making new nuclear weapons materials, some U.S. senators claim that the United States needs to be able to continue to develop and test nuclear weapons to ensure that they work. For example, they believe that the United States may need to develop smaller nuclear weapons to use against non-nuclear targets like chemical or biological weapons sites. Opponents of the CTBT believe that nuclear weapons continue to have a useful military purpose.

“We have to be assured before we approve this treaty that it is clearly going to help protect security rather than the other way around. If it creates a more dangerous environment and is an incentive for others to cheat and steal a march on the rest of the world, and puts us at risk, then we would make a bad mistake to approve the treaty.”
—Senator Thad Cochran (R-MS)

Supporters of the CTBT argue that a prohibition on nuclear testing will make it more difficult for nations who want to acquire nuclear weapons to do so, because they cannot be sure if the weapons will actually work. (Today, the United States is able to do all of the analysis to maintain its warheads without testing.) Supporters believe that ratifying the CTBT would actually help prevent the spread of nuclear weapons around the world and also limit improvements to nuclear weapons in arsenals.

“This treaty represents another useful and important step toward reducing the spread of nuclear weapons.... The CTBT is an important step down the path toward a safer world. In simple terms, the United States, the country with one of the largest and certainly the most sophisticated nuclear weapons arsenals in the world, has the most to gain from freezing the competition in place.”
—Former Senator Tom Daschle (D-ND)

Supporters of international arms control agreements assert that although the agreements may not be perfect, given the threat from rogue states and terrorists, the United States is still more secure with such treaties in force than without them. Arms control supporters believe that when agreements need to be strengthened, rather than renouncing them the United States should work with the UN and other nations to craft better agreements.

What other steps have been taken to control proliferation?
In May 2003, the United States introduced the Proliferation Security Initiative. It is not an arms-control agreement, but a cooperative international enforcement effort to stop the spread of nuclear weapons and materials that could be used to make nuclear weapons. Concern about illegal shipments from Pakistani black-marketeers, for example, have led countries to put a high priority on coordinating efforts to stop shipments of nuclear-related materials. Governments coordinate their diplomacy, law-enforcement, military, and financial resources to counter the spread of nuclear weapons.

In November 2004, the UN Security Council passed Resolution 1540. The resolution is perhaps the most important recent international measure dealing with nuclear proliferation. It is applicable to all states, and therefore represents a broader group than the Proliferation Security Initiative. It calls on states to take specific steps to institute controls to prevent terrorists and others from acquiring
The “Wal-Mart” of Nuclear Proliferation

Abdul Qadeer Khan, thought of as the father of Pakistan’s nuclear weapons program and a national hero in Pakistan, was the ringleader of an international smuggling ring that sold nuclear weapons plans and technology for nearly two decades. Khan’s network sold the equipment and knowledge needed to produce nuclear weapons to Iran, North Korea, and Libya during the 1980s and 1990s. Shortly after Iraq invaded Kuwait in 1990, Khan offered to sell equipment and bomb plans to Iraqi nuclear officials. The head of IAEA, Mohamed el Baradei, called Pakistan the “Wal-Mart of private sector proliferation.” The former director of the Central Intelligence Agency, George Tenent, said that Khan was “at least as dangerous as Osama bin Laden.”

Libya’s renunciation of its nuclear program in 2003 led to further discoveries about Khan’s network. The Pakistani government initially resisted arresting Khan, but succumbed to international pressure in early 2004. Khan received a conditional pardon, but is under house arrest and prevented from speaking to outsiders. Khan insisted that he acted alone and without government approval. Many suspect that the Pakistani government may have known and even approved what he was doing and is therefore anxious to avoid the public spectacle of a trial and public statements by Khan.

nuclear, chemical, and biological weapons. In it, all states also agree to strengthen and fully implement all international arms control agreements.

Four Proliferation Cases

India and Pakistan—A New Cold War?

Since 1947, India and Pakistan have fought three wars across the LoC—the Line of Control that separates Indian from Pakistani Kashmir. Both India and Pakistan claim the land that was divided by the partition of India in 1947. After the partition, millions of Muslims, Hindus, and Sikhs were displaced from their homes. Up to a million were killed in ensuing violence.

Since 1947, more than thirty thousand soldiers have died in Kashmir. Today, both India and Pakistan have nuclear weapons.

India conducted its first nuclear test in 1974, which it called a “peaceful nuclear explosion.” Pakistani President Zulfiqar Ali Bhutto stated that, if necessary, Pakistanis would “eat grass” in order to develop nuclear weapons of their own. On May 11 and 13, 1998, India tested five nuclear devices. On May 28 and 30, 1998, Pakistan successfully conducted its first nuclear tests.

Since 2004, India and Pakistan have made some progress toward peace, but tensions continue. Whether India and Pakistan can resolve the problem of Kashmir remains to be seen.

What evidence has emerged about Pakistan’s nuclear scientists?

Evidence has now emerged that Pakistani scientists have provided both their expertise and equipment to North Korea’s and Iran’s nuclear weapons programs. While some scientists may have acted without the government’s knowledge, it is likely that the Pakistani government authorized much of this activity. Another worry is that weapons may fall into the hands of extremists in Pakistan. Many experts believe that the greatest security threat today is the possibility of nuclear proliferation by Pakistan.

North Korea—A Bargaining Game

In the fall of 2002, North Korea stunned U.S. officials when it admitted that it had been continuing work on a nuclear weapons program for years, violating a 1994 agreement, known as the Agreed Framework, not to develop weapons. North Korea noted that the United States had also failed to live up to its half of the 1994 agreement, which was to help produce two nuclear reactors for electric power. North Korea expelled the International
Atomic Energy Agency’s (IAEA) weapons monitors from its borders, announced that it was beginning production of nuclear materials, and declared that it was withdrawing from the Nuclear Non-Proliferation Treaty.

In August 2003, North Korea claimed to be processing nuclear material to make bombs, and threatened to use them against the United States if attacked. In 2006, North Korea tested its first nuclear device. There was also concern that North Korea would sell its weapons to other states or to terrorists.

Establishing and maintaining diplomacy among the six nations involved in the talks on North Korea (China, Japan, Russia, North and South Korea, and the United States) proved very difficult. After the United States softened its approach to North Korea, among other developments, the “six-party talks” finally reached a positive outcome: North Korea agreed to disable its facilities in 2007.

Iran—A Hard Case

The United States believes that Iran has a well-established program to develop nuclear weapons. The Iranian government has claimed that it has the right to develop nuclear materials for peaceful purposes. The dilemma for the international community is that it is difficult to distinguish between “good atoms” for peaceful purposes and “bad atoms” for military purposes.

In a move supported by Washington and Europe, Russian officials proposed supplying Iran with fuel for its nuclear power plants that could be used only for peaceful purposes. Nevertheless, in 2006 Iran restarted its uranium enrichment program to produce its own fuel in a move that has heightened concern around the world. The International Atomic Energy Agency (IAEA) referred Iran to the UN Security Council for possible punitive action in early 2006. Iran has threatened to withdraw completely from the NPT. France, Germany, and
the United Kingdom have negotiated closely with Iran to encourage it to end its nuclear program. Iran’s conservative, hardline president, Mahmoud Ahmadinejad, has staunchly defended Iran’s right to a nuclear program. His public assertion that Israel should be “wiped off the map” has also heightened international anxiety about Iran’s intentions.

**Libya—A Success Story**

In December 2003, Libya announced that it would allow arms inspectors from the UN unfettered access to its weapons programs. Diplomatic relations between the U.S. and Libya, which had been cut off since 1981, were reestablished in 2004. Libya was considered a leading sponsor of terrorism, including bombing Pan Am flight 103 over Lockerbie, Scotland in 1988. Experts were aware of operational chemical weapons in Libya but were not sure of the extent of the nuclear and biological programs.

Evidence suggests that Libya had received design information from Pakistan and bomb materials from North Korea, two states at the center of proliferation concerns.

Although some were surprised by Libya’s announcement, others note that Libya had been making efforts to rehabilitate itself in the eyes of the world for several years. For
example, in 1999 Libya turned over the suspects in the Lockerbie bombing, and in 2003 Libya agreed to pay several billion dollars to compensate the victims’ families. There is debate about why Libya decided to give up its weapons program. Experts debate the role that various factors including incentives, economic sanctions, and military threats played. Libya’s strong steps suggest that international efforts to control proliferation and reform the behavior of states can work.

**Terrorism**

While no one knows if any terrorist group has acquired nuclear weapons, all are aware that any nuclear explosion would dwarf the devastation of September 11, 2001. Experts disagree on the likelihood of terrorists acquiring a nuclear weapon. Most agree that the central idea of the nuclear era—deterrence—is not likely to prevent terrorists from using a nuclear weapon. Terrorist groups differ from states in that they can be mobile and difficult to identify, therefore the threat of massive retaliation, a central part of deterrence, is unlikely to stop a terrorist from acting.

> At various times from at least as early as 1992, Osama bin Laden and others, known and unknown, made efforts to obtain the components of nuclear weapons.”

—Justice Department indictment for the 1998 U.S. embassy bombings in Africa

**How might terrorists acquire a nuclear weapon?**

There are several ways that a terrorist organization might acquire a nuclear weapon. Terrorists might choose to steal one. In one example from 1977, a German terrorist group, the Baader-Meinhof gang, attacked a U.S. military base in Germany and engaged in a gun fight with U.S. soldiers. They were unsuccessful and retreated before they could steal a weapon.

Although nuclear weapons facilities are generally well-guarded, experts point out that weapons are more vulnerable to theft when they are being transported from place to place. Another period of vulnerability might occur if a state experiences a coup, collapses, or loses control of its military.

Terrorist organizations might also try to buy a nuclear weapon. There is concern that North Korea, a country desperate for cash, might sell a nuclear weapon.

Finally, many worry that terrorists might try to produce their own bomb. Some experts point out that if a terrorist organization obtained the necessary materials, it might be able to produce a nuclear device. Others are not so sure that terrorists would be able to produce a bomb. Even if terrorists could not produce a nuclear explosion, there is concern that they could place radioactive materials around a conventional bomb. If this “dirty bomb” were to explode, it would shower poisonous radioactive materials over the surrounding area.

**How might terrorists use a nuclear bomb?**

Most experts believe it unlikely that terrorists would deliver a nuclear weapon using conventional military means—launching a missile or dropping a bomb from a plane. However, they worry that a nuclear device could be smuggled into the United States, perhaps hidden in one of the approximately seventeen thousand cargo containers entering U.S. shipping ports daily.

In 2002, the U.S. government launched a new electronic cargo security program in fifteen major ports worldwide capable of tracking one thousand containers shipped from Asia and Europe into the United States. Critics warn that despite these measures, our vulnerability remains significant.

Since the events of September 2001, attention to perceived security threats has dramatically increased. Still, some argue that the country remains seriously under-prepared for another attack.
“America remains dangerously unprepared to prevent and respond to a catastrophic terrorist attack on U.S. soil. In all likelihood, the next attack will result in even greater casualties and widespread disruption of American lives and the economy.”
—Hart-Rudman Report, October 2002

The current budget for emergency response is $28.9 billion, around $90 billion short of what a task force of experts recommended. The task force found that more funds were needed for enhanced emergency operations, communications, and hospital preparedness, among other things.

How does the threat of terrorism affect thinking about nuclear weapons?

The world has lived with the existence of nuclear weapons for more than sixty years. During this time, there have been vigorous debates about their morality and whether they actually helped keep the peace with the Soviet Union during the Cold War. The new threat of terrorism has reinvigorated the debate about the role these weapons play in the world.

While the future of nuclear weapons remains to be seen, today the theory of deterring a nuclear attack by threatening a massive response seems less than useful against an elusive terrorist group. (Al Qaeda, for example, is thought to have operations in more than sixty countries.) Are nuclear weapons so dangerous that countries should work to eliminate them, or do they still have a purpose? Should states work to prevent the spread of nuclear weapons among other states? How can the world best prevent terrorists from acquiring and using a nuclear weapon?
Options in Brief

Option 1: Eliminate Nuclear Weapons Now

Today, nuclear weapons are the world’s greatest threat. Though they have only been used during wartime twice, we have come too close to nuclear war too often. Today, tens of thousands of nuclear weapons stand at the ready, many on hair-trigger alert, threatening the lives of hundreds of millions of people and quite possibly the future of civilization itself. These weapons make us less, not more, secure.

Lack of cooperation among nations worsens the problem of nuclear weapons. As the nation with the world’s most powerful nuclear arsenal, we need to take the lead. As a first step, we should unilaterally eliminate all but five hundred of our own nuclear weapons. The resulting increase in trust and cooperation among nations will make it possible to engage in multilateral negotiations focused on the complete elimination of nuclear weapons.

Option 2: Rely on Arms Control

The world is an unstable and dangerous place. Rogue states are working to build or acquire nuclear weapons. Terrorist networks are looking for opportunities to acquire these and other weapons of mass destruction. The world’s huge stockpiles of nuclear weapons, a remnant of the Cold War, increase the risk of theft, proliferation, and even intentional use.

We must cooperate with the current nuclear powers to reduce the world’s nuclear arsenals to minimal levels. This will require using the mechanisms already in place—international arms control agreements—to reduce the number of weapons incrementally. Arms control treaties should focus on reducing the risks associated with the leftover Cold War arsenals and on stopping proliferation to unfriendly states and non-state actors. Only a small number of nuclear weapons should remain and they should be designed only to deter others from breaking out of arms agreements.

Option 3: Keep Nuclear Weapons as an Essential Part of U.S. Security

Nuclear weapons are critical to the security of the United States. Our nuclear weapons stockpile prevented the Soviet Union from overrunning Europe after the Second World War and protected us from the Soviet goal of worldwide domination. Today, our weapons remind aspiring powers like China and older nuclear weapons powers like Russia that the United States is the world’s leading military power and serve as a check on other nations’ ambitions. No rational leader of a country would dare to threaten the United States.

But deterrence is no longer enough. The threat of nuclear terrorism—whether carried out by rogue states or terrorist groups—is very real. We must preserve our right and our ability to attack before we are attacked. This might even include developing small nuclear weapons that could strike at hidden terrorist bases or rogue states producing illicit weapons that could be used against us.
Option 1: Eliminate Nuclear Weapons Now

Today, nuclear weapons are the world’s greatest threat. We have lived with the danger of nuclear weapons hanging over our heads for more than sixty years. Though they have only been used during wartime twice, we have come too close to nuclear war too often. Today, tens of thousands of nuclear weapons stand at the ready, many on hair-trigger alert, threatening the lives of hundreds of millions of people and quite possibly the future of civilization itself. As long as imperfect human beings are in charge of nuclear weapons, the continued existence of these weapons offers too many possibilities for accident or miscalculation. These weapons make us less, not more, secure.

Lack of cooperation among nations worsens the problem of nuclear weapons. We should begin a coordinated diplomatic effort to reduce the risks of nuclear weapons associated with the leftover Cold War arsenals, terrorism, and proliferation. We should work with other nations to completely eliminate nuclear weapons. As the nation with the world’s most powerful nuclear arsenal, we need to take the lead. As a first step, we should unilaterally eliminate all but five hundred of our own nuclear weapons. This step will put us on a more even playing field with other nuclear powers, and demonstrate immediately to the rest of the world that we are prepared to stand down from the nuclear brink. The resulting increase in trust and cooperation among nations will make it possible to engage in multilateral negotiations focused on the complete elimination of nuclear weapons.

Option 1 is based on the following beliefs

• The biggest problems we face today are global problems, and they can only be solved through global cooperation. Trying to deal with the challenge of nuclear weapons without the involvement of all nations will be impossible.

• Deterrence may work sometimes, but on balance it is too dangerous and largely inappropriate for the post-Cold War security environment. We cannot afford to continue to gamble with our safety. We will not be free of the dangers of nuclear weapons until they are completely abolished.

• It is immoral to threaten the lives of hundreds of millions even if the reason given is to preserve peace.

• Our possession of nuclear weapons makes other nations anxious. Nuclear weapons do not make us more secure by making others feel less so.

What should we do?

• We should announce that we will lead a multilateral campaign to completely abolish nuclear weapons.

• We should announce immediately that we are reducing our nuclear weapons to about five hundred in order to jump-start serious discussions leading to the elimination of nuclear weapons.

• We should take all of our nuclear weapons off hair-trigger alert to reduce the risk of inadvertent use, and encourage all other nuclear states to do the same.

• We should discontinue all work on the National Missile Defense. This program is not only expensive and unfeasible, but it also communicates to the world that the United States intends to make nuclear war winnable.

• We should increase our funding of programs around the world to dismantle existing weapons and convert weapons programs for peaceful purposes.
Arguments for

• Since the United States possesses such overwhelming conventional forces, the only thing that can really threaten us on the battlefield is nuclear weapons. Therefore, we should work to rid the world of them.

• The dangers posed by nuclear weapons are present today. Working only through already-established treaties and agreements will take too long. It is unlikely to produce meaningful reductions at the pace needed.

• Others will not be willing to negotiate the elimination of nuclear weapons unless we demonstrate that we are prepared to join them as equals in this process. Unilaterally reducing our arsenal to five hundred will indicate that we are serious.

• The United States does not need nuclear weapons as it possesses adequate conventional alternatives to meet most military requirements.

• Five hundred nuclear weapons are more than enough to guarantee our safety while we negotiate with other countries.

• Reducing the number of nuclear weapons around the world will reduce the likelihood that terrorist groups will acquire them.

• International cooperation can do more to deter rogue states than acting on our own.

• Increasing international cooperation on nuclear weapons will pave the way for solving other global issues.

Arguments against

• Disarmament is not feasible. Nuclear weapons cannot be “uninvented.” If the whole world disarms, some rogue state may secretly build them. Then we would be left vulnerable.

• Deterrence works; nuclear weapons have played a critical role in guaranteeing our security and that of our allies for sixty years.

• Leaders have a moral responsibility to protect their citizens, and nuclear weapons provide that security.

• We can increase our security by supporting the important agreements found in current arms control treaties such as the Nuclear Non-Proliferation Treaty (NPT) and the Comprehensive Test Ban Treaty (CTBT) and by carefully negotiating additional agreements; not by rashly disarming and hoping for the best.

• If the United States reduces its weapons stockpile to five hundred, we will be on equal footing with China, France, and the United Kingdom and well below that of Russia. The United States will lose its military advantage, and this will compromise our international standing not only on military matters but also on a range of other international issues.

• If we unilaterally reduce our weapons stock to five hundred we could be vulnerable to international blackmail. With so many nuclear weapons around the world, five hundred weapons may not be enough to deter an attack.

• History has shown that the United States cannot rely on international cooperation to guarantee our security. Rather, we need to retain control over our weapons to deter attacks against us.
Option 2: Rely on Arms Control

The world is an unstable and dangerous place. Rogue states are working to build or acquire nuclear weapons. Terrorist networks are looking for opportunities to acquire these and other weapons of mass destruction. The world’s huge stockpiles of nuclear weapons, a remnant of the Cold War, increase the risk of theft, proliferation, and even intentional use. We must strengthen arms control treaties in order to reduce the risks posed by the thousands of nuclear weapons around the world, many on hair-trigger alert. However, we can not eliminate nuclear weapons completely. It is reasonable and prudent to maintain some nuclear weapons in order to preserve our ability to deter a nuclear attack against us.

We must cooperate with the current nuclear powers to reduce the world’s nuclear arsenals to minimal levels. This will require using the mechanisms already in place—international arms control agreements—to reduce the number of weapons incrementally. This process must be systematic and methodical. Arms control treaties should focus on reducing the risks associated with the leftover Cold War arsenals and on stopping proliferation to unfriendly states and non-state actors. We must offer our technology and security expertise to other nuclear states to help them safeguard their weapons from theft or misuse. Only a small number of nuclear weapons should remain and they should be designed only to deter others from breaking arms agreements.

Option 2 is based on the following beliefs

• Nuclear weapons prevented the Cold War from becoming a hot war. Although we must never use them, nuclear weapons retain their ability to deter attacks by other nuclear states. We must keep a few in order to maintain that deterrent.

• Thousands of nuclear weapons are no longer necessary. We must begin to reduce carefully their role in our national security.

• Nuclear weapons should ultimately be reduced to very low numbers, perhaps a thousand worldwide. The safest way to dismantle the current weapons stockpile is to work with international agreements and systems already in place.

  • Carefully-negotiated international arms control agreements are the best way to prevent the theft and proliferation of nuclear weapons.

  • The United States sets an important example. Other states make their nuclear weapons policy based on what we do with our nuclear weapons.

What should we do?

• We should lead an international diplomatic effort to strengthen the NPT, including increasing the monitoring capacity of the International Atomic Energy Agency (IAEA).

  • We and the international community should use everything at our disposal to bring states that are not parties to the NPT into compliance with its controls.

  • We should drop our objections to the Comprehensive Test Ban Treaty (CTBT) and ratify it immediately.

  • We should reactivate the ABM treaty with Russia. This would mean abandoning the unworkable National Missile Defense program.

  • We should abandon any plans to develop “bunker-buster” nukes and mini-nukes for use during a limited war.

  • We should seek to increase cooperation among (and funding for) international law enforcement and intelligence services to identify and secure all potential sources of nuclear materials.
Arguments for

- International arms agreements play an important role in controlling the risks posed by nuclear weapons.
- Reducing the number of nuclear weapons reduces the risk they pose to humanity and the planet.
- Other states make policy on nuclear weapons in the context of what the United States does. We serve as an important example to others.
- Deterrence should be preserved, but it does not require large numbers. If we can reduce the overall number and the type of nuclear weapons in existence, then it will only take a small number to deter the possibility of others using them.
- The only way to deal with terrorism is through the cooperation of states to control their nuclear materials. This is most effectively done through international agreements.
- Nuclear weapons are expensive to maintain. We do not need to spend hundreds of billions of dollars to maintain thousands of weapons we hope never to use when we can get by with far fewer.
- Rogue states like North Korea can be best contained through the diplomatic efforts of the nuclear powers. Even a minimal nuclear force would be sufficient to deter a small country like North Korea from using nuclear weapons against the United States or its friends and allies.
- International agreements like the Nuclear Non-Proliferation Treaty (NPT) and the Comprehensive Test Ban Treaty are already in place. Renewed U.S. support of such agreements is important to meeting the challenges of nuclear weapons.

Arguments against

- In the short term, arms control agreements do nothing to protect us from terrorist groups. We need to retain our ability to strike with small nuclear weapons against terrorist groups.
- We do not have enough time to rely on a slow process of negotiating international arms control agreements to solve the immediate challenges of nuclear weapons.
- It is immoral to continue to threaten millions of people with nuclear weapons.
- The potential effects of nuclear weapons are so devastating that relying on the risky theory of deterrence is irresponsible.
- Until the United States asserts its moral leadership by demonstrating its commitment to disarmament, other nations will remain uncommitted to fulfilling treaty obligations.
- History has shown that relying on international agreements and cooperation for security is naive and dangerous. Rather, retaining our nuclear weapons and control over how we might use them is the best deterrent against attack.
- The ABM treaty is outdated and prevents us from developing an effective National Missile Defense, which we need to protect ourselves from smaller nuclear attacks.
- It would be dangerous to depend upon nuclear weapons (no matter how few) for deterrence and yet not modernize and test them regularly.
Option 3: Keep Nuclear Weapons as an Essential Part of U.S. Security

Nuclear weapons are critical to the security of the United States. Our nuclear weapons stockpile prevented the Soviet Union from overrunning Europe after the Second World War and protected us from the Soviet goal of worldwide domination. Today, our weapons remind aspiring powers like China and older nuclear powers like Russia that the United States is the world’s leading military power and serve as a check on other nations’ ambitions. No rational leader of a country would dare to threaten the United States. We must not let any irrational nuclear phobias influence us—nuclear weapons make conflict less likely.

But deterrence is no longer enough. Not all states are rational. In addition, in today’s world we must also protect against terrorists. In this environment the threat of nuclear terrorism—whether carried out by rogue states or terrorist groups—is very real. We must preserve our right and our ability to attack before we are attacked. This might even include developing small nuclear weapons that could strike at hidden terrorist bases or rogue states producing illicit weapons that could be used against us.

Option 3 is based on the following beliefs

- Nuclear weapons have successfully protected the United States for sixty years. They remain critical to our defense.
- Proliferation of nuclear weapons is inevitable and cannot be managed or stopped by international agreements.
- We cannot afford to turn a blind eye to the dangers posed by rogue states and terrorist networks. We have a right, and a moral responsibility, to protect ourselves from the threats they pose before such threats materialize against us.
- Maintaining a credible stockpile of modern and reliable nuclear weapons that could be used does not increase the likelihood of full-scale nuclear war; on the contrary, it decreases it.
- The risk of accidental use is lower than critics claim. And we can develop safeguards such as a National Missile Defense (NMD) to address this danger.

What should we do?

- We should modernize our nuclear weapons stockpiles. This includes developing and testing weapons to be sure that they work.
- We should develop a range of bunker-busters and mini nuclear weapons that are capable of destroying deeply-buried WMD facilities or striking at hidden terrorist bases.
- We should continue to develop a National Missile Defense to protect us from smaller attacks.
- We should recognize that nuclear proliferation is inevitable and work to see that it is managed carefully.
- We should keep all of our nuclear options open, including the possibility of preemptive strikes to protect the United States.
Arguments for

• Nuclear weapons guarantee our security by discouraging others from risky military adventures against us.

• Nuclear weapons cannot be “uninvented,” and total nuclear disarmament, even if it was a good idea, is not feasible. Therefore, we should remain the strongest in nuclear weapons.

• U.S. nuclear policy does not influence the decisions of other nations on this issue. They will make their own decisions.

• As a last resort, we may need to use nuclear weapons to protect the United States. To do this, we may need to update our nuclear arsenal. We need nuclear weapons that are appropriate to the job, whether it is small, precise weapons to strike hidden terrorist bases or large “bunker busters” that can destroy protected sites.

• Nuclear weapons make the behavior of states more predictable and encourage international stability.

• Maintaining a deterrent capability without nuclear weapons would be financially impossible because of the costs of developing so many equally powerful conventional weapons.

Arguments against

• Nuclear weapons in the hands of more states makes the world more dangerous and unpredictable.

• By reducing the number of nuclear weapons that could be bought or stolen we would reduce the risk of nuclear terrorism. New nuclear states would increase this risk.

• We were lucky to avoid nuclear war during the Cuban missile crisis. Rationality did not save us; it was luck.

• Deterrence will not work against terrorists. It is also impossible to predict what an irrational and cornered political or military leader with nuclear weapons might do.

• International treaties about weapons, while imperfect, provide a means for cooperating and solving problems together with other states.

• Testing and developing new nuclear weapons will only heighten the anxiety of other states, thus increasing international instability.

• It is immoral to continue to threaten millions of people with nuclear weapons.
Supplementary Documents

NSC-68: United States Objectives and Programs for National Security [Excerpts]

President Harry S Truman directed the National Security Council to prepare a report regarding the growing confrontation with the Soviet Union. Below are the conclusions and recommendations which would form the basis of U.S. policy during the Cold War.

(April 14, 1950)

A Report to the President

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

The foregoing analysis indicates that the probable fission bomb capability and possible thermonuclear bomb capability of the Soviet Union have greatly intensified the Soviet threat to the security of the United States. This threat is of the same character as that described in NSC 20/4 (approved by the President on November 24, 1948) but is more immediate than had previously been estimated. In particular, the United States now faces the contingency that within the next four or five years the Soviet Union will possess the military capability of delivering a surprise atomic attack of such weight that the United States must have substantially increased general air, ground, and sea strength, atomic capabilities, and air and civilian defenses to deter war and to provide reasonable assurance, in the event of war, that it could survive the initial blow and go on to the eventual attainment of its objectives. In return, this contingency requires the intensification of our efforts in the fields of intelligence and research and development.

Allowing for the immediacy of the danger, the following statement of Soviet threats, contained in NSC 20/4, remains valid:

14. The gravest threat to the security of the United States within the foreseeable future stems from the hostile designs and formidable power of the USSR, and from the nature of the Soviet system.

15. The political, economic, and psychological warfare which the USSR is now waging has dangerous potentialities for weakening the relative world position of the United States and disrupting its traditional institutions by means short of war, unless sufficient resistance is encountered in the policies of this and other non-communist countries.

16. The risk of war with the USSR is sufficient to warrant, in common prudence, timely and adequate preparation by the United States.

a. Even though present estimates indicate that the Soviet leaders probably do not intend deliberate armed action involving the United States at this time, the possibility of such deliberate resort to war cannot be ruled out.

b. Now and for the foreseeable future there is a continuing danger that war will arise either through Soviet miscalculation of the determination of the United States to use all the means at its command to safeguard its security, through Soviet misinterpretation of our intentions, or through U.S. miscalculation of Soviet reactions to measures which we might take.

17. Soviet domination of the potential power of Eurasia, whether achieved by armed aggression or by political and subversive means, would be strategically and politically unacceptable to the United States.

18. The capability of the United States either in peace or in the event of war to cope with threats to its security or to gain its objectives would be severely weakened by internal development, important among which are:

a. Serious espionage, subversion and sabotage, particularly by concerted and well-directed communist activity.

b. Prolonged or exaggerated economic instability.

c. Internal political and social disunity.

d. Inadequate or excessive armament or
foreign aid expenditures.

e. An excessive or wasteful usage of our resources in time of peace.

f. Lessening of U.S. prestige and influence through vacillation of appeasement or lack of skill and imagination in the conduct of its foreign policy or by shirking world responsibilities.

g. Development of a false sense of security through a deceptive change in Soviet tactics.

Although such developments as those indicated in paragraph 18 above would severely weaken the capability of the United States and its allies to cope with the Soviet threat to their security, considerable progress has been made since 1948 in laying the foundation upon which adequate strength can now be rapidly built.

The analysis also confirms that our objectives with respect to the Soviet Union, in time of peace as well as in time of war, as stated in NSC 20/4 (para. 19), are still valid, as are the aims and measures stated therein (paras. 20 and 21). Our current security programs and strategic plans are based upon these objectives, aims, and measures:

19.

a. To reduce the power and influence of the USSR to limits which no longer constitute a threat to the peace, national independence, and stability of the world family of nations.

b. To bring about a basic change in the conduct of international relations by the government in power in Russia, to conform with the purposes and principles set forth in the UN Charter.

In pursuing these objectives, due care must be taken to avoid permanently impairing our economy and the fundamental values and institutions inherent in our way of life.

20. We should endeavor to achieve our general objectives by methods short of war through the pursuit of the following aims:

a. To encourage and promote the gradual retraction of undue Russian power and influence from the present perimeter areas around traditional Russian boundaries and the emergence of the satellite countries as entities independent of the USSR.

b. To encourage the development among the Russian peoples of attitudes which may help to modify current Soviet behavior and permit a revival of the national life of groups evidencing the ability and determination to achieve and maintain national independence.

c. To eradicate the myth by which people remote from Soviet military influence are held in a position of subservience to Moscow and to cause the world at large to see and understand the true nature of the USSR and the Soviet-directed world communist party, and to adopt a logical and realistic attitude toward them.

d. To create situations which will compel the Soviet Government to recognize the practical undesirability of acting on the basis of its present concepts and the necessity of behaving in accordance with precepts of international conduct, as set forth in the purposes and principles of the UN Charter.

21. Attainment of these aims requires that the United States:

a. Develop a level of military readiness which can be maintained as long as necessary as a deterrent to Soviet aggression, as indispensable support to our political attitude toward the USSR, as a source of encouragement to nations resisting Soviet political aggression, and as an adequate basis for immediate military commitments and for rapid mobilization should war prove unavoidable.

b. Assure the internal security of the United States against dangers of sabotage, subversion, and espionage.

c. Maximize our economic potential, including the strengthening of our peacetime economy and the establishment of essential reserves readily available in the event of war.

d. Strengthen the orientation toward the United States of the non-Soviet nations; and help such of those nations as are able and willing to make an important contribution to U.S. security, to increase their economic and political stability and their military capability.
e. Place the maximum strain on the Soviet structure of power and particularly on the relationships between Moscow and the satellite countries.

f. Keep the U.S. public fully informed and cognizant of the threats to our national security so that it will be prepared to support the measures which we must accordingly adopt.

In the light of present and prospective Soviet atomic capabilities, the action which can be taken under present programs and plans, however, becomes dangerously inadequate, in both timing and scope, to accomplish the rapid progress toward the attainment of the United States political, economic, and military objectives which is now imperative.

A continuation of present trends would result in a serious decline in the strength of the free world relative to the Soviet Union and its satellites. This unfavorable trend arises from the inadequacy of current programs and plans rather than from any error in our objectives and aims. These trends lead in the direction of isolation, not by deliberate decision but by lack of the necessary basis for a vigorous initiative in the conflict with the Soviet Union.

Our position as the center of power in the free world places a heavy responsibility upon the United States for leadership. We must organize and enlist the energies and resources of the free world in a positive program for peace which will frustrate the Kremlin design for world domination by creating a situation in the free world to which the Kremlin will be compelled to adjust. Without such a cooperative effort, led by the United States, we will have to make gradual withdrawals under pressure until we discover one day that we have sacrificed positions of vital interest.

It is imperative that this trend be reversed by a much more rapid and concerted build-up of the actual strength of both the United States and the other nations of the free world. The analysis shows that this will be costly and will involve significant domestic financial and economic adjustments.

The execution of such a build-up, however, requires that the United States have an affirmative program beyond the solely defensive one of countering the threat posed by the Soviet Union. This program must light the path to peace and order among nations in a system based on freedom and justice, as contemplated in the Charter of the United Nations. Further, it must envisage the political and economic measures with which and the military shield behind which the free world can work to frustrate the Kremlin design by the strategy of the cold war; for every consideration of devotion to our fundamental values and to our national security demands that we achieve our objectives by the strategy of the cold war, building up our military strength in order that it may not have to be used. The only sure victory lies in the frustration of the Kremlin design by the steady development of the moral and material strength of the free world and its projection into the Soviet world in such a way as to bring about an internal change in the Soviet system. Such a positive program—harmonious with our fundamental national purpose and our objectives—is necessary if we are to regain and retain the initiative and to win and hold the necessary popular support and cooperation in the United States and the rest of the free world.

This program should include a plan for negotiation with the Soviet Union, developed and agreed with our allies and which is consonant with our objectives. The United States and its allies, particularly the United Kingdom and France, should always be ready to negotiate with the Soviet Union on terms consistent with our objectives. The present world situation, however, is one which militates against successful negotiations with the Kremlin—for the terms of agreements on important pending issues would reflect present realities and would therefore be unacceptable, if not disastrous, to the United States and the rest of the free world. After a decision and a start on building up the strength of the free world has been made, it might then be desirable for the United States to take an initiative in seeking negotiations in the hope that it might facilitate the process of accommodation by the Kremlin to the new situation. Failing that, the unwill-
ingness of the Kremlin to accept equitable terms or its bad faith in observing them would assist in consolidating popular opinion in the free world in support of the measures necessary to sustain the build-up.

In summary, we must, by means of a rapid and sustained build-up of the political, economic, and military strength of the free world, and by means of an affirmative program intended to wrest the initiative from the Soviet Union, confront it with convincing evidence of the determination and ability of the free world to frustrate the Kremlin design of a world dominated by its will. Such evidence is the only means short of war which eventually may force the Kremlin to abandon its present course of action and to negotiate acceptable agreements on issues of major importance.

The whole success of the proposed program hangs ultimately on recognition by this Government, the American people, and all free peoples, that the cold war is in fact a real war in which the survival of the free world is at stake. Essential prerequisites to success are consultations with Congressional leaders designed to make the program the object of non-partisan legislative support, and a presentation to the public of a full explanation of the facts and implications of the present international situation. The prosecution of the program will require of us all the ingenuity, sacrifice, and unity demanded by the vital importance of the issue and the tenacity to persevere until our national objectives have been attained.

Recommendations

That the President:

a. Approve the foregoing Conclusions.

b. Direct the National Security Council, under the continuing direction of the President, and with the participation of other Departments and Agencies as appropriate, to coordinate and insure the implementation of the Conclusions herein on an urgent and continuing basis for as long as necessary to achieve our objectives. For this purpose, representatives of the member Departments and Agencies, the Joint Chiefs of Staff or their deputies, and other Departments and Agencies as required should be constituted as a revised and strengthened staff organization under the National Security Council to develop coordinated programs for consideration by the National Security Council.

NOTES

1. Marshal Tito, the Communist leader of Yugoslavia, broke away from the Soviet bloc in 1948.

2. The Secretary of State listed seven areas in which the Soviet Union could modify its behavior in such a way as to permit co-existence in reasonable security. These were:
   - Treaties of peace with Austria, Germany, Japan and relaxation of pressures in the Far East;
   - Withdrawal of Soviet forces and influence from satellite area;
   - Cooperation in the United Nations;
   - Control of atomic energy and of conventional armaments;
   - Abandonment of indirect aggression;
   - Proper treatment of official representatives of the U.S.;
   - Increased access to the Soviet Union of persons and ideas from other countries.

[Footnote in the source text. For the text of the address delivered by Secretary Acheson at the University of California, Berkeley, on March 16, 1950, concerning United States—Soviet relations, see Department of State Bulletin, March 27, 1950, pp. 473-478.]

John F. Kennedy Inaugural Address, January 20, 1961

Vice President Johnson, Mr. Speaker, Mr. Chief Justice, President Eisenhower, Vice President Nixon, President Truman, Reverend Clergy, fellow citizens:

We observe today not a victory of party but a celebration of freedom—symbolizing an end as well as a beginning—signifying renewal as well as change. For I have sworn before you
and Almighty God the same solemn oath our forbears prescribed nearly a century and three-quarters ago.

The world is very different now. For man holds in his mortal hands the power to abolish all forms of human poverty and all forms of human life. And yet the same revolutionary beliefs for which our forebears fought are still at issue around the globe—the belief that the rights of man come not from the generosity of the state but from the hand of God.

We dare not forget today that we are the heirs of that first revolution. Let the word go forth from this time and place, to friend and foe alike, that the torch has been passed to a new generation of Americans—born in this century, tempered by war, disciplined by a hard and bitter peace, proud of our ancient heritage—and unwilling to witness or permit the slow undoing of those human rights to which this nation has always been committed, and to which we are committed today at home and around the world.

Let every nation know, whether it wishes us well or ill, that we shall pay any price, bear any burden, meet any hardship, support any friend, oppose any foe to assure the survival and the success of liberty.

This much we pledge—and more.

To those old allies whose cultural and spiritual origins we share, we pledge the loyalty of faithful friends. United there is little we cannot do in a host of cooperative ventures. Divided there is little we can do—for we dare not meet a powerful challenge at odds and split asunder.

To those new states whom we welcome to the ranks of the free, we pledge our word that one form of colonial control shall not have passed away merely to be replaced by a far more iron tyranny. We shall not always expect to find them supporting our view. But we shall always hope to find them strongly supporting their own freedom—and to remember that, in the past, those who foolishly sought power by riding the back of the tiger ended up inside.

To those people in the huts and villages of half the globe struggling to break the bonds of mass misery, we pledge our best efforts to help them help themselves, for whatever period is required—not because the communists may be doing it, not because we seek their votes, but because it is right. If a free society cannot help the many who are poor, it cannot save the few who are rich.

To our sister republics south of our border, we offer a special pledge—to convert our good words into good deeds—in a new alliance for progress—to assist free men and free governments in casting off the chains of poverty. But this peaceful revolution of hope cannot become the prey of hostile powers. Let all our neighbors know that we shall join with them to oppose aggression or subversion anywhere in the Americas. And let every other power know that this Hemisphere intends to remain the master of its own house.

To that world assembly of sovereign states, the United Nations, our last best hope in an age where the instruments of war have far outpaced the instruments of peace, we renew our pledge of support—to prevent it from becoming merely a forum for invective—to strengthen its shield of the new and the weak—and to enlarge the area in which its writ may run.

Finally, to those nations who would make themselves our adversary, we offer not a pledge but a request: that both sides begin anew the quest for peace, before the dark powers of destruction unleashed by science engulf all humanity in planned or accidental self-destruction.

We dare not tempt them with weakness. For only when our arms are sufficient beyond doubt can we be certain beyond doubt that they will never be employed.

But neither can two great and powerful groups of nations take comfort from our present course—both sides overburdened by the cost of modern weapons, both rightly alarmed by the steady spread of the deadly atom, yet both racing to alter that uncertain balance of terror that stays the hand of mankind’s final war.
So let us begin anew—remembering on both sides that civility is not a sign of weakness, and sincerity is always subject to proof. Let us never negotiate out of fear. But let us never fear to negotiate.

Let both sides explore what problems unite us instead of belaboring those problems which divide us.

Let both sides, for the first time, formulate serious and precise proposals for the inspection and control of arms—and bring the absolute power to destroy other nations under the absolute control of all nations.

Let both sides seek to invoke the wonders of science instead of its terrors. Together let us explore the stars, conquer the deserts, eradicate disease, tap the ocean depths and encourage the arts and commerce.

Let both sides unite to heed in all corners of the earth the command of Isaiah—to “undo the heavy burdens . . . (and) let the oppressed go free.”

And if a beachhead of cooperation may push back the jungle of suspicion, let both sides join in creating a new endeavor, not a new balance of power, but a new world of law, where the strong are just and the weak secure and the peace preserved.

All this will not be finished in the first one hundred days. Nor will it be finished in the first one thousand days, nor in the life of this Administration, nor even perhaps in our lifetime on this planet. But let us begin.

In your hands, my fellow citizens, more than mine, will rest the final success or failure of our course. Since this country was founded, each generation of Americans has been summoned to give testimony to its national loyalty. The graves of young Americans who answered the call to service surround the globe.

Now the trumpet summons us again—not as a call to bear arms, though arms we need—not as a call to battle, though embattled we are—but a call to bear the burden of a long twilight struggle, year in and year out, “rejoicing in hope, patient in tribulation”—a struggle against the common enemies of man: tyranny, poverty, disease and war itself.

Can we forge against these enemies a grand and global alliance, North and South, East and West, that can assure a more fruitful life for all mankind? Will you join in that historic effort?

In the long history of the world, only a few generations have been granted the role of defending freedom in its hour of maximum danger. I do not shrink from this responsibility—I welcome it. I do not believe that any of us would exchange places with any other people or any other generation. The energy, the faith, the devotion which we bring to this endeavor will light our country and all who serve it—and the glow from that fire can truly light the world.

And so, my fellow Americans: ask not what your country can do for you—ask what you can do for your country.

My fellow citizens of the world: ask not what America will do for you, but what together we can do for the freedom of man.

Finally, whether you are citizens of America or citizens of the world, ask of us here the same high standards of strength and sacrifice which we ask of you. With a good conscience our only sure reward, with history the final judge of our deeds, let us go forth to lead the land we love, asking His blessing and His help, but knowing that here on earth God’s work must truly be our own.

Letter from Prime Minister Castro to Chairman Khrushchev, October 26, 1962

Dear Comrade Khrushchev:

Given the analysis of the situation and the reports which have reached us, [I] consider an attack to be almost imminent—within the next 24 to 72 hours. There are two possible variants: the first and most probable one is an air attack against certain objectives with the limited aim of destroying them; the second, and though less probable, still possible, is a full invasion. This would require a large force
and is the most repugnant form of aggression, which might restrain them.

You can be sure that we will resist with determination, whatever the case. The Cuban people’s morale is extremely high and the people will confront aggression heroically.

I would like to briefly express my own personal opinion.

If the second variant takes place and the imperialists invade Cuba with the aim of occupying it, the dangers of their aggressive policy are so great that after such an invasion the Soviet Union must never allow circumstances in which the imperialists could carry out a nuclear first strike against it.

I tell you this because I believe that the imperialists’ aggressiveness makes them extremely dangerous, and that if they manage to carry out an invasion of Cuba—a brutal act in violation of universal and moral law—then that would be the moment to eliminate this danger forever, in an act of the most legitimate self-defense. However harsh and terrible the solution, there would be no other.

This opinion is shaped by observing the development of their aggressive policy. The imperialists, without regard for world opinion and against laws and principles, have blockaded the seas, violated our air-space, and are preparing to invade, while at the same time blocking any possibility of negotiation, even though they understand the gravity of the problem.

You have been, and are, a tireless defender of peace, and I understand that these moments, when the results of your superhuman efforts are so seriously threatened, must be bitter for you. We will maintain our hopes for saving the peace until the last moment, and we are ready to contribute to this in any way we can. But, at the same time, we are serene and ready to confront a situation which we see as very real and imminent.

I convey to you the infinite gratitude and admiration to you personally. We wish you success with the enormous task and great responsibilities which are in your hands.

Fidel Castro

Treaty On The Non-proliferation Of Nuclear Weapons

Signed at Washington, London, and Moscow July 1, 1968

Ratification advised by U.S. Senate March 13, 1969

Ratified by U.S. President November 24, 1969

U.S. ratification deposited at Washington, London, and Moscow March 5, 1970

Proclaimed by U.S. President March 5, 1970

Entered into force March 5, 1970

The States concluding this Treaty, hereinafter referred to as the “Parties to the Treaty”,

Considering the devastation that would be visited upon all mankind by a nuclear war and the consequent need to make every effort to avert the danger of such a war and to take measures to safeguard the security of peoples,

Believing that the proliferation of nuclear weapons would seriously enhance the danger of nuclear war,

In conformity with resolutions of the United Nations General Assembly calling for the conclusion of an agreement on the prevention of wider dissemination of nuclear weapons,

Undertaking to cooperate in facilitating the application of International Atomic Energy Agency safeguards on peaceful nuclear activities,

Expressing their support for research, development and other efforts to further the application, within the framework of the International Atomic Energy Agency safeguards system, of the principle of safeguarding effectively the flow of source and special fissionable materials by use of instruments and
other techniques at certain strategic points,

Affirming the principle that the benefits of peaceful applications of nuclear technology, including any technological by-products which may be derived by nuclear-weapon States from the development of nuclear explosive devices, should be available for peaceful purposes to all Parties of the Treaty, whether nuclear-weapon or non-nuclear weapon States,

Convinced that, in furtherance of this principle, all Parties to the Treaty are entitled to participate in the fullest possible exchange of scientific information for, and to contribute alone or in cooperation with other States to, the further development of the applications of atomic energy for peaceful purposes,

Declaring their intention to achieve at the earliest possible date the cessation of the nuclear arms race and to undertake effective measures in the direction of nuclear disarmament,

Urging the cooperation of all States in the attainment of this objective,

Recalling the determination expressed by the Parties to the 1963 Treaty banning nuclear weapon tests in the atmosphere, in outer space and under water in its Preamble to seek to achieve the discontinuance of all test explosions of nuclear weapons for all time and to continue negotiations to this end,

Desiring to further the easing of international tension and the strengthening of trust between States in order to facilitate the cessation of the manufacture of nuclear weapons, the liquidation of all their existing stockpiles, and the elimination from national arsenals of nuclear weapons and the means of their delivery pursuant to a Treaty on general and complete disarmament under strict and effective international control,

Recalling that, in accordance with the Charter of the United Nations, States must refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any State, or in any other manner inconsistent with the Purposes of the United Nations, and that the establishment and maintenance of international peace and security are to be promoted with the least diversion for armaments of the worlds human and economic resources,

Have agreed as follows:

Article I

Each nuclear-weapon State Party to the Treaty undertakes not to transfer to any recipient whatsoever nuclear weapons or other nuclear explosive devices or control over such weapons or explosive devices directly, or indirectly; and not in any way to assist, encourage, or induce any non-nuclear weapon State to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices, or control over such weapons or explosive devices.

Article II

Each non-nuclear-weapon State Party to the Treaty undertakes not to receive the transfer from any transfer or whatsoever of nuclear weapons or other nuclear explosive devices or of control over such weapons or explosive devices directly, or indirectly; not to manufacture or otherwise acquire nuclear weapons or other nuclear explosive devices; and not to seek or receive any assistance in the manufacture of nuclear weapons or other nuclear explosive devices.

Article III

1. Each non-nuclear-weapon State Party to the Treaty undertakes to accept safeguards, as set forth in an agreement to be negotiated and concluded with the International Atomic Energy Agency in accordance with the Statute of the International Atomic Energy Agency and the Agency’s safeguards system, for the exclusive purpose of verification of the fulfillment of its obligations assumed under this Treaty with a view to preventing diversion of nuclear energy from peaceful uses to nuclear weapons or other nuclear explosive devices. Procedures for the safeguards required by this article shall be followed with respect to source or special fissionable material whether it is being produced, processed or used in any principal nuclear facility or is outside any such facility.
The safeguards required by this article shall be applied to all source or special fissionable material in all peaceful nuclear activities within the territory of such State, under its jurisdiction, or carried out under its control anywhere.

2. Each State Party to the Treaty undertakes not to provide: (a) source or special fissionable material, or (b) equipment or material especially designed or prepared for the processing, use or production of special fissionable material, to any non-nuclear-weapon State for peaceful purposes, unless the source or special fissionable material shall be subject to the safeguards required by this article.

3. The safeguards required by this article shall be implemented in a manner designed to comply with article IV of this Treaty, and to avoid hampering the economic or technological development of the Parties or international cooperation in the field of peaceful nuclear activities, including the international exchange of nuclear material and equipment for the processing, use or production of nuclear material for peaceful purposes in accordance with the provisions of this article and the principle of safeguarding set forth in the Preamble of the Treaty.

4. Non-nuclear-weapon States Party to the Treaty shall conclude agreements with the International Atomic Energy Agency to meet the requirements of this article either individually or together with other States in accordance with the Statute of the International Atomic Energy Agency. Negotiation of such agreements shall commence within 180 days from the original entry into force of this Treaty. For States depositing their instruments of ratification or accession after the 180-day period, negotiation of such agreements shall commence not later than the date of such deposit. Such agreements shall enter into force not later than eighteen months after the date of initiation of negotiations.

Article IV

1. Nothing in this Treaty shall be interpreted as affecting the inalienable right of all the Parties to the Treaty to develop research, production and use of nuclear energy for peaceful purposes without discrimination and in conformity with articles I and II of this Treaty.

2. All the Parties to the Treaty undertake to facilitate, and have the right to participate in, the fullest possible exchange of equipment, materials and scientific and technological information for the peaceful uses of nuclear energy. Parties to the Treaty in a position to do so shall also cooperate in contributing alone or together with other States or international organizations to the further development of the applications of nuclear energy for peaceful purposes, especially in the territories of non-nuclear-weapon States Party to the Treaty, with due consideration for the needs of the developing areas of the world.

Article V

Each party to the Treaty undertakes to take appropriate measures to ensure that, in accordance with this Treaty, under appropriate international observation and through appropriate international procedures, potential benefits from any peaceful applications of nuclear explosions will be made available to non-nuclear-weapon States Party to the Treaty on a nondiscriminatory basis and that the charge to such Parties for the explosive devices used will be as low as possible and exclude any charge for research and development. Non-nuclear-weapon States Party to the Treaty shall be able to obtain such benefits, pursuant to a special international agreement or agreements, through an appropriate international body with adequate representation of non-nuclear-weapon States. Negotiations on this subject shall commence as soon as possible after the Treaty enters into force. Non-nuclear-weapon States Party to the Treaty so desiring may also obtain such benefits pursuant to bilateral agreements.

Article VI

Each of the Parties to the Treaty undertakes to pursue negotiations in good faith on effective measures relating to cessation of the nuclear arms race at an early date and to nuclear disarmament, and on a Treaty on general and complete disarmament under strict and effective international control.
Article VII

Nothing in this Treaty affects the right of any group of States to conclude regional treaties in order to assure the total absence of nuclear weapons in their respective territories.

Article VIII

1. Any Party to the Treaty may propose amendments to this Treaty. The text of any proposed amendment shall be submitted to the Depositary Governments which shall circulate it to all Parties to the Treaty. Thereupon, if requested to do so by one-third or more of the Parties to the Treaty, the Depositary Governments shall convene a conference, to which they shall invite all the Parties to the Treaty, to consider such an amendment.

2. Any amendment to this Treaty must be approved by a majority of the votes of all the Parties to the Treaty, including the votes of all nuclear-weapon States Party to the Treaty and all other Parties which, on the date the amendment is circulated, are members of the Board of Governors of the International Atomic Energy Agency. The amendment shall enter into force for each Party that deposits its instrument of ratification of the amendment upon the deposit of such instruments of ratification by a majority of all the Parties, including the instruments of ratification of all nuclear-weapon States Party to the Treaty and all other Parties which, on the date the amendment is circulated, are members of the Board of Governors of the International Atomic Energy Agency. Thereafter, it shall enter into force for any other Party upon the deposit of its instrument of ratification of the amendment.

3. Five years after the entry into force of this Treaty, a conference of Parties to the Treaty shall be held in Geneva, Switzerland, in order to review the operation of this Treaty with a view to assuring that the purposes of the Preamble and the provisions of the Treaty are being realized. At intervals of five years thereafter, a majority of the Parties to the Treaty may obtain, by submitting a proposal to this effect to the Depositary Governments, the convening of further conferences with the same objective of reviewing the operation of the Treaty.

Article IX

1. This Treaty shall be open to all States for signature. Any State which does not sign the Treaty before its entry into force in accordance with paragraph 3 of this article may accede to it at any time.

2. This Treaty shall be subject to ratification by signatory States. Instruments of ratification and instruments of accession shall be deposited with the Governments of the United States of America, the United Kingdom of Great Britain and Northern Ireland and the Union of Soviet Socialist Republics, which are hereby designated the Depositary Governments.

3. This Treaty shall enter into force after its ratification by the States, the Governments of which are designated Depositaries of the Treaty, and forty other States signatory to this Treaty and the deposit of their instruments of ratification. For the purposes of this Treaty, a nuclear-weapon State is one which has manufactured and exploded a nuclear weapon or other nuclear explosive device prior to January 1, 1967.

4. For States whose instruments of ratification or accession are deposited subsequent to the entry into force of this Treaty, it shall enter into force on the date of the deposit of their instruments of ratification or accession.

5. The Depositary Governments shall promptly inform all signatory and acceding States of the date of each signature, the date of deposit of each instrument of ratification or of accession, the date of the entry into force of this Treaty, and the date of receipt of any requests for convening a conference or other notices.

6. This Treaty shall be registered by the Depositary Governments pursuant to article 102 of the Charter of the United Nations.

Article X

1. Each Party shall in exercising its national sovereignty have the right to withdraw from the Treaty if it decides that extraordinary events, related to the subject matter of this
Treaty, have jeopardized the supreme interests of its country. It shall give notice of such withdrawal to all other Parties to the Treaty and to the United Nations Security Council three months in advance. Such notice shall include a statement of the extraordinary events it regards as having jeopardized its supreme interests.

2. Twenty-five years after the entry into force of the Treaty, a conference shall be convened to decide whether the Treaty shall continue in force indefinitely, or shall be extended for an additional fixed period or periods. This decision shall be taken by a majority of the Parties to the Treaty.

Article XI

This Treaty, the English, Russian, French, Spanish and Chinese texts of which are equally authentic, shall be deposited in the archives of the Depositary Governments. Duly certified copies of this Treaty shall be transmitted by the Depositary Governments to the Governments of the signatory and acceding States.

IN WITNESS WHEREOF the undersigned, duly authorized, have signed this Treaty.

DONE in triplicate, at the cities of Washington, London and Moscow, this first day of July one thousand nine hundred sixty-eight.

Mohamed El Baradei, Director General International Atomic Energy Agency, Nobel Peace Prize Lecture, December 10, 2005

Your Majesties, Your Royal Highness, Honourable Members of the Norwegian Nobel Committee, Excellencies, Ladies and Gentlemen.

The International Atomic Energy Agency and I are humbled, proud, delighted and above all strengthened in our resolve by this most worthy of honours.

My sister-in-law works for a group that supports orphanages in Cairo. She and her colleagues take care of children left behind by circumstances beyond their control. They feed these children, clothe them and teach them to read.

At the International Atomic Energy Agency, my colleagues and I work to keep nuclear materials out of the reach of extremist groups. We inspect nuclear facilities all over the world, to be sure that peaceful nuclear activities are not being used as a cloak for weapons programmes.

My sister-in-law and I are working towards the same goal, through different paths: the security of the human family.

But why has this security so far eluded us? I believe it is because our security strategies have not yet caught up with the risks we are facing. The globalization that has swept away the barriers to the movement of goods, ideas and people has also swept with it barriers that confined and localized security threats.

A recent United Nations High-Level Panel identified five categories of threats that we face:

1. Poverty, Infectious Disease, and Environmental Degradation;
2. Armed Conflict—both within and among states;
3. Organized Crime;
4. Terrorism; and

These are all ‘threats without borders’—where traditional notions of national security have become obsolete. We cannot respond to these threats by building more walls, developing bigger weapons, or dispatching more troops. Quite to the contrary. By their very nature, these security threats require primarily multinational cooperation.

But what is more important is that these are not separate or distinct threats. When we scratch the surface, we find them closely connected and interrelated.

We are 1,000 people here today in this august hall. Imagine for a moment that we represent the world’s population. These 200 people on my left would be the wealthy of the
world, who consume 80 per cent of the available resources. And these 400 people on my right would be living on an income of less than $2 per day.

This underprivileged group of people on my right is no less intelligent or less worthy than their fellow human beings on the other side of the aisle. They were simply born into this fate.

In the real world, this imbalance in living conditions inevitably leads to inequality of opportunity, and in many cases loss of hope. And what is worse, all too often the plight of the poor is compounded by and results in human rights abuses, a lack of good governance, and a deep sense of injustice. This combination naturally creates a most fertile breeding ground for civil wars, organized crime, and extremism in its different forms.

In regions where conflicts have been left to fester for decades, countries continue to look for ways to offset their insecurities or project their ‘power’. In some cases, they may be tempted to seek their own weapons of mass destruction, like others who have preceded them.

*Ladies and Gentlemen.*

Fifteen years ago, when the Cold War ended, many of us hoped for a new world order to emerge. A world order rooted in human solidarity—a world order that would be equitable, inclusive and effective.

But today we are nowhere near that goal. We may have torn down the walls between East and West, but we have yet to build the bridges between North and South—the rich and the poor.

Consider our development aid record. Last year, the nations of the world spent over $1 trillion on armaments. But we contributed less than 10 per cent of that amount—a mere $80 billion—as official development assistance to the developing parts of the world, where 850 million people suffer from hunger.

My friend James Morris heads the World Food Programme, whose task it is to feed the hungry. He recently told me, “If I could have just 1 per cent of the money spent on global armaments, no one in this world would go to bed hungry.”

It should not be a surprise then that poverty continues to breed conflict. Of the 13 million deaths due to armed conflict in the last ten years, 9 million occurred in sub-Saharan Africa, where the poorest of the poor live.

Consider also our approach to the sanctity and value of human life. In the aftermath of the September 2001 terrorist attacks in the United States, we all grieved deeply, and expressed outrage at this heinous crime—and rightly so. But many people today are unaware that, as the result of civil war in the Democratic Republic of the Congo, 3.8 million people have lost their lives since 1998.

Are we to conclude that our priorities are skewed, and our approaches uneven?

*Ladies and Gentlemen.* With this ‘big picture’ in mind, we can better understand the changing landscape in nuclear non-proliferation and disarmament.

There are three main features to this changing landscape: the emergence of an extensive black market in nuclear material and equipment; the proliferation of nuclear weapons and sensitive nuclear technology; and the stagnation in nuclear disarmament.

Today, with globalization bringing us ever closer together, if we choose to ignore the insecurities of some, they will soon become the insecurities of all.

Equally, with the spread of advanced science and technology, as long as some of us choose to rely on nuclear weapons, we continue to risk that these same weapons will become increasingly attractive to others.

I have no doubt that, if we hope to escape self-destruction, then nuclear weapons should have no place in our collective conscience, and no role in our security.

To that end, we must ensure—absolutely—that no more countries acquire these deadly weapons.
We must see to it that nuclear-weapon states take concrete steps towards nuclear disarmament.

And we must put in place a security system that does not rely on nuclear deterrence.

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Are these goals realistic and within reach? I do believe they are. But then three steps are urgently required.

First, keep nuclear and radiological material out of the hands of extremist groups. In 2001, the IAEA together with the international community launched a worldwide campaign to enhance the security of such material. Protecting nuclear facilities. Securing powerful radioactive sources. Training law enforcement officials. Monitoring border crossings. In four years, we have completed perhaps 50 per cent of the work. But this is not fast enough, because we are in a race against time.

Second, tighten control over the operations for producing the nuclear material that could be used in weapons. Under the current system, any country has the right to master these operations for civilian uses. But in doing so, it also masters the most difficult steps in making a nuclear bomb.

To overcome this, I am hoping that we can make these operations multinational—so that no one country can have exclusive control over any such operation. My plan is to begin by setting up a reserve fuel bank, under IAEA control, so that every country will be assured that it will get the fuel needed for its bona fide peaceful nuclear activities. This assurance of supply will remove the incentive—and the justification—for each country to develop its own fuel cycle. We should then be able to agree on a moratorium on new national facilities, and to begin work on multinational arrangements for enrichment, fuel production, waste disposal and reprocessing.

We must also strengthen the verification system. IAEA inspections are the heart and soul of the nuclear non-proliferation regime. To be effective, it is essential that we are provided with the necessary authority, information, advanced technology, and resources. And our inspections must be backed by the UN Security Council, to be called on in cases of non-compliance.

Third, accelerate disarmament efforts. We still have eight or nine countries who possess nuclear weapons. We still have 27,000 warheads in existence. I believe this is 27,000 too many.

A good start would be if the nuclear-weapon states reduced the strategic role given to these weapons. More than 15 years after the end of the Cold War, it is incomprehensible to many that the major nuclear-weapon states operate with their arsenals on hair-trigger alert—such that, in the case of a possible launch of a nuclear attack, their leaders could have only 30 minutes to decide whether to retaliate, risking the devastation of entire nations in a matter of minutes.

These are three concrete steps that, I believe, can readily be taken. Protect the material and strengthen verification. Control the fuel cycle. Accelerate disarmament efforts.

But that is not enough. The hard part is: how do we create an environment in which nuclear weapons—like slavery or genocide—are regarded as a taboo and a historical anomaly?

* * * * * *

Ladies and Gentlemen.

Whether one believes in evolution, intelligent design, or Divine Creation, one thing is certain. Since the beginning of history, human beings have been at war with each other, under the pretext of religion, ideology, ethnicity and other reasons. And no civilization has ever willingly given up its most powerful weapons. We seem to agree today that we can share modern technology, but we still refuse to acknowledge that our values—at their very core—are shared values.

I am an Egyptian Muslim, educated in Cairo and New York, and now living in Vienna. My wife and I have spent half our lives in the North, half in the South. And we have experienced first hand the unique nature of
the human family and the common values we all share.

Shakespeare speaks of every single member of that family in The Merchant of Venice, when he asks: “If you prick us, do we not bleed? If you tickle us, do we not laugh? If you poison us, do we not die? And if you wrong us, shall we not revenge?”

And lest we forget:

There is no religion that was founded on intolerance—and no religion that does not value the sanctity of human life.

Judaism asks that we value the beauty and joy of human existence.

Christianity says we should treat our neighbours as we would be treated.

Islam declares that killing one person unjustly is the same as killing all of humanity.

Hinduism recognizes the entire universe as one family.

Buddhism calls on us to cherish the oneness of all creation.

Some would say that it is too idealistic to believe in a society based on tolerance and the sanctity of human life, where borders, nationalities and ideologies are of marginal importance. To those I say, this is not idealism, but rather realism, because history has taught us that war rarely resolves our differences. Force does not heal old wounds; it opens new ones.

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Ladies and Gentlemen.

I have talked about our efforts to combat the misuse of nuclear energy. Let me now tell you how this very same energy is used for the benefit of humankind.

At the IAEA, we work daily on every continent to put nuclear and radiation techniques in the service of humankind. In Vietnam, farmers plant rice with greater nutritional value that was developed with IAEA assistance. Throughout Latin America, nuclear technology is being used to map underground aquifers, so that water supplies can be managed sustainably. In Ghana, a new radiotherapy machine is offering cancer treatment to thousands of patients. In the South Pacific, Japanese scientists are using nuclear techniques to study climate change. In India, eight new nuclear plants are under construction, to provide clean electricity for a growing nation—a case in point of the rising expectation for a surge in the use of nuclear energy worldwide.

These projects, and a thousand others, exemplify the IAEA ideal: Atoms for Peace.

But the expanding use of nuclear energy and technology also makes it crucial that nuclear safety and security are maintained at the highest level.

Since the Chernobyl accident, we have worked all over the globe to raise nuclear safety performance. And since the September 2001 terrorist attacks, we have worked with even greater intensity on nuclear security. On both fronts, we have built an international network of legal norms and performance standards. But our most tangible impact has been on the ground. Hundreds of missions, in every part of the world, with international experts making sure nuclear activities are safe and secure.

I am very proud of the 2,300 hard-working men and women that make up the IAEA staff—the colleagues with whom I share this honour. Some of them are here with me today. We come from over 90 countries. We bring many different perspectives to our work. Our diversity is our strength.

We are limited in our authority. We have a very modest budget. And we have no armies.

But armed with the strength of our convictions, we will continue to speak truth to power. And we will continue to carry out our mandate with independence and objectivity.

The Nobel Peace Prize is a powerful message for us—to endure in our efforts to work for security and development. A durable peace is not a single achievement, but an environment, a process and a commitment.

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Ladies and Gentlemen.
The picture I have painted today may have seemed somewhat grim. Let me conclude by telling you why I have hope.

I have hope because the positive aspects of globalization are enabling nations and peoples to become politically, economically and socially interdependent, making war an increasingly unacceptable option.

Among the 25 members of the European Union, the degree of economic and socio-political dependencies has made the prospect of the use of force to resolve differences almost absurd. The same is emerging with regard to the Organization for Security and Co-operation in Europe, with some 55 member countries from Europe, Central Asia and North America. Could these models be expanded to a world model, through the same creative multilateral engagement and active international cooperation, where the strong are just and the weak secure?

I have hope because civil society is becoming better informed and more engaged. They are pressing their governments for change—to create democratic societies based on diversity, tolerance and equality. They are proposing creative solutions. They are raising awareness, donating funds, working to transform civic spirit from the local to the global. Working to bring the human family closer together.

We now have the opportunity, more than at any time before, to give an affirmative answer to one of the oldest questions of all time: “Am I my brother’s keeper?”

What is required is a new mindset and a change of heart, to be able to see the person across the ocean as our neighbor.

Finally, I have hope because of what I see in my children, and some of their generation.

I took my first trip abroad at the age of 19. My children were even more fortunate than I. They had their first exposure to foreign culture as infants, and they were raised in a multicultural environment. And I can say absolutely that my son and daughter are oblivious to color and race and nationality. They see no difference between their friends Noriko, Mafupo, Justin, Saulo and Hussam; to them, they are only fellow human beings and good friends.

Globalization, through travel, media and communication, can also help us—as it has with my children and many of their peers—to see each other simply as human beings.

Your Majesties, Your Royal Highness, Ladies and Gentlemen.

Imagine what would happen if the nations of the world spent as much on development as on building the machines of war. Imagine a world where every human being would live in freedom and dignity. Imagine a world in which we would shed the same tears when a child dies in Darfur or Vancouver. Imagine a world where we would settle our differences through diplomacy and dialogue and not through bombs or bullets. Imagine if the only nuclear weapons remaining were the relics in our museums. Imagine the legacy we could leave to our children.

Imagine that such a world is within our grasp.
Supplementary Resources

Books


World Wide Web
The Carnegie Endowment for International Peace
<http://www.carnegieendowment.org/npp/weapons/index.cfm?fa=view&id=3000059>
Extensive resources on the issues surrounding nuclear weapons.

The Center for Defense Information
<http://www.cdi.org/program/index.cfm?programid=32>
A source for fact and figures as well as the latest international news on nuclear weapons and policies.

Center for Non Proliferation Studies
<http://cns.miis.edu/cns/resources.htm>
Comprehensive data and tutorials on nuclear, biological, and chemical weapons.

The Federation of American Scientists
<http://www.fas.org/nuke/index.html>
A source with numerous links to resources regarding weapons of mass destruction.

The National Security Archive
<http://www.gwu.edu/~nsarchiv/NSAEBB/index.html#Nuclear%20History>
A collection of declassified documents on many aspects of U.S. nuclear policy and nuclear crises including the Cuban Missile Crisis.

The News Hour
<http://www.pbs.org/newshour/bb/military/nmd_splash.html>
Explores the issues surrounding National Missile Defense.
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- War of 1812
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- League of Nations
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- Hiroshima
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Choices Education Program
Watson Institute for International Studies
Box 1948, Brown University, Providence, RI 02912

Please visit our website at <www.choices.edu>. 
The Challenge of Nuclear Weapons

*The Challenge of Nuclear Weapons* introduces students to the issues of nuclear weapons. Students examine the development of U.S. nuclear policy during the Cold War. They then explore the challenges of today including the nuclear legacies of the Cold War, the threat of terrorism, and proliferation. Students are asked to consider what role nuclear weapons should play in U.S. policy in the future.

*The Challenge of Nuclear Weapons* is part of a continuing series on current and historical international issues published by the Choices for the 21st Century Education Program at Brown University. Choices materials place special emphasis on the importance of educating students in their participatory role as citizens.
The Challenge of Nuclear Weapons

THE CHOICES PROGRAM
Explore the Past... Shape the Future
History and Current Issues for the Classroom

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Acknowledgments

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The Challenge of Nuclear Weapons is part of a continuing series on international public policy issues. New units are published each academic year and all units are updated regularly.

Visit us on the World Wide Web — www.choices.edu
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The Choices for the 21st Century Education Program is a program of the Watson Institute for International Studies at Brown University. Choices was established to help citizens think constructively about foreign policy issues, to improve participatory citizenship skills, and to encourage public judgement on policy issues.

The Watson Institute for International Studies was established at Brown University in 1986 to serve as a forum for students, faculty, visiting scholars, and policy practitioners who are committed to analyzing contemporary global problems and developing initiatives to address them.

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The Choices Approach to Current Issues

Choices curricula are designed to make complex international issues understandable and meaningful for students. Using a student-centered approach, Choices units develop critical thinking and an understanding of the significance of history in our lives today—essential ingredients of responsible citizenship.

Teachers say the collaboration and interaction in Choices units are highly motivating for students. Studies consistently demonstrate that students of all abilities learn best when they are actively engaged with the material. Cooperative learning invites students to take pride in their own contributions and in the group product, enhancing students’ confidence as learners. Research demonstrates that students using the Choices approach learn the factual information presented as well as or better than those using a lecture-discussion format. Choices units offer students with diverse abilities and learning styles the opportunity to contribute, collaborate, and achieve.

Choices units on current issues include student readings, a framework of policy options, suggested lesson plans, and resources for structuring cooperative learning, role plays, and simulations. Students are challenged to:

- recognize relationships between history and current issues
- analyze and evaluate multiple perspectives on an issue
- understand the internal logic of a viewpoint
- identify and weigh the conflicting values represented by different points of view
- engage in informed discussion
- develop and articulate original viewpoints on an issue
- communicate in written and oral presentations
- collaborate with peers

Choices curricula offer teachers a flexible resource for covering course material while actively engaging students and developing skills in critical thinking, deliberative discourse, persuasive writing, and informed civic participation. The instructional activities that are central to Choices units can be valuable components in any teacher’s repertoire of effective teaching strategies.

The Organization of a Choices Unit

Introducing the Background: Each Choices curriculum resource provides historical background and student-centered lesson plans that explore critical issues. This historical foundation prepares students to analyze a range of perspectives and then to deliberate about possible approaches to contentious policy issues.

Exploring Policy Alternatives: Each Choices unit has a framework of three or four divergent policy options that challenges students to consider multiple perspectives. Students understand and analyze the options through a role play and the dialogue that follows.

- Role Play: The setting of the role play varies, and may be a Congressional hearing, a meeting of the National Security Council, or an election campaign forum. In groups, students explore their assigned options and plan short presentations. Each group, in turn, is challenged with questions from classmates.

- Deliberation: After the options have been presented and students clearly understand the differences among them, students enter into deliberative dialogue in which they analyze together the merits and trade-offs of the alternatives presented; explore shared concerns as well as conflicting values, interests, and priorities; and begin to articulate their own views.

For further information see <www.choices.edu/deliberation.cfm>.

Exercising Citizenship: Armed with fresh insights from the role play and the deliberation, students articulate original, coherent policy options that reflect their own values and goals. Students’ views can be expressed in letters to Congress or the White House, editorials for the school or community newspaper, persuasive speeches, or visual presentations.
Today, the world faces many complex challenges. Climate change, terrorism, and international pandemics crowd the headlines of the newspapers. For many, understanding the challenges facing the world is overwhelming. Perhaps no issue can seem more overwhelming than nuclear weapons. We can see the results of terrorism, environmental issues, and disease, yet for most of us nuclear weapons remain out of sight and out of mind. For many, the abstract theories and jargon that surround nuclear weapons combined with the unimaginable consequences make thinking about nuclear weapons difficult. Indeed, this unit raises disturbing issues for students. It will be important to recognize and address students’ concerns while using this unit.

The Challenge of Nuclear Weapons gives students the tools they need to wrestle with the questions that surround the future of nuclear weapons. Part I introduces students to the history of nuclear weapons and the concept of deterrence. Part II examines some of the arguments for and against nuclear weapons and then looks at three challenges: the leftover arsenals of the Cold War, proliferation, and the threat of nuclear terrorism.

At the core of The Challenge of Nuclear Weapons is a framework of options for U.S. foreign policy concerning nuclear weapons. These options, reflect three fundamentally different ways of considering the issues surrounding nuclear weapons. By exploring three clearly defined alternatives and the beliefs underlying them, students will gain a deeper understanding of the values of specific policy recommendations and the trade-offs that accompany each of the choices.

Suggested Five-Day Lesson Plan: The Teacher Resource Book accompanying The Challenge of Nuclear Weapons contains a day-by-day lesson plan and student activities. Day One’s lesson helps students to understand the Soviet threat as it was perceived during the Cold War. The second day of the lesson plan maps the nuclear world today. The third and fourth days are devoted to a simulation in which students act as advocates of the three options or take on the role of members of the Senate Committee on Foreign Relations. On the fifth day, students wrestle with the moral dilemmas of nuclear weapons and design their own “Option Four.” The unit also contains four optional lessons. One examines songs of the nuclear era; another provides a guide to exploring films about nuclear weapons; the third is a student dramatization that illustrates the time-pressure of nuclear decision making. The fourth introduces biological and chemical weapons and explores reliability and bias in internet sources.

• Alternative Study Guides: Each section of reading is accompanied by two study guides. The standard study guide helps students harvest the information from the readings in preparation for analysis and synthesis in class. The advanced study guide requires the student to tackle analysis and synthesis in more depth prior to class activities.

• Vocabulary and Concepts: The reading addresses subjects that are complex and challenging. To help your students get the most out of the text, you may want to review with them “Key Terms” found in the Teacher Resource Book (TRB) on page TRB-49 before they begin their assignment. An “Issues Toolbox” is also included on page TRB-50. This provides additional information on key concepts.

• Primary Source Documents: Materials are included in the student text (pages 32-46) that can be used to supplement lessons.

• Additional Resources: More resources including videos of scholars, additional lessons, maps, and images are available at <www.choices.edu/nukematerials>.

The lesson plans offered here are provided as a guide. Many teachers choose to devote additional time to certain activities. We hope that these suggestions help you tailor the unit to fit the needs of your classroom.
Integrating This Unit into Your Curriculum

Units produced by the Choices for the 21st Century Education Program are designed to be integrated into a variety of social studies courses. Below are a few ideas about where The Challenge of Nuclear Weapons might fit into your curriculum.

**World History**: Students studying the twentieth century inevitably must examine the Cold War. During this period, the existence of nuclear weapons reshaped the nature of international conflict and heightened the pressures of national leadership. The strategies, goals, and dangers of the foreign policies of the superpowers emerge clearly in this curriculum unit. The unit also explores the lessons and issues that surround nuclear weapons that transcend the Cold War and persist to this day.

**U.S. History**: The U.S. use of the atomic bomb is central to U.S. history classes as is the decades-long confrontation with the Soviet Union. These materials allows students to analyze the evolution of U.S. nuclear policy over the last six decades in the context of U.S. history. At the end of this unit, students should have a firm foundation and be able to apply what they have learned to the current challenges of terrorism, proliferation, and remaining Cold War arsenals.

**Current Events/International Relations**: As Albert Einstein observed, “The unleashed power of the atom has changed everything—except our way of thinking.” Indeed, the nuclear age has been one of unceasing peril, and yet the catastrophe that many predicted following World War II has not occurred. This unit explores the role of nuclear weapons in international affairs and asks students to consider the different approaches to meeting the challenges of nuclear weapons in a multi-polar world.
Portrayals of the Soviet Threat

Objectives:

Students will: Examine how Americans saw the threat of the Soviet Union and nuclear weapons in the early Cold War.

Understand the political climate in the United States during the Cold War.

Explore multiple contemporary sources to analyze an historical issue.

Required Reading:

Before beginning the lesson, students should have read the Introduction and Part I of the reading (pages 1-12) and completed the “Study Guide—Part I” in the Teacher Resource Book (TRB 4-5) or the “Advanced Study Guide—Part I” (TRB-6).

Handouts:

“Civil Defense Posters” (TRB 7-8)
“Fictional Journalism” (TRB 9-10)
“Comic Book” (TRB 11-13)
“The Sources of Soviet Conduct” (TRB 14-15)

(A Powerpoint presentation of these images is available for download at <www.choices.edu/nukes_resources.cfm>.)

In the Classroom:

1. Focus Question—Write the question “How were nuclear weapons and the Soviet Union seen during the early years of the Cold War?” on the board.

2. Understanding the Cold War Mindset—During the Cold War fear of the Soviets and a nuclear attack were part of everyday life for most Americans. Ask students to recall information from their reading about the Cold War.

3. Examining the Cold War—Divide the class into groups of two or three students and give a handout to each group. Tell students that each group will examine the Soviet threat from different American perspectives. Ask students to read the directions on each handout and answer the questions provided.

4. Group Responses—After small groups have completed the questions, have everyone come together in a large group. Call on small groups to share their responses to the questions. Are there recurring themes and ideas that appear?

Using the information they have, how would students characterize the perception of the threat from the Soviet Union during the first part of the Cold War? Add some of the perceptions to the board. Ask students how these perceptions may have affected international politics during the Cold War.

Ask the students if these four sources give them enough information to gauge the mood of the United States during the early years of the Cold War. Why? How does the Kennan article differ from the others?

How can we know if the Soviet threat was real? Were Americans right to be scared? How do historians and students begin to approach those questions? What sources might students turn to to assess the threat that the Soviet Union posed to the United States? How do students perceive each of these handouts from the perspective of today?

Extra Challenge:

Listen to (http://www.jfklibrary.org/j012061.htm) or read President John F. Kennedy’s Inaugural Address. Kennedy does not directly mention the Soviet Union or nuclear weapons, yet both were very much on his mind as he gave the speech. Can you find evidence to support this? What values does he support and oppose in the speech? What further clues does the speech give you about the political climate of the United States at the height of the Cold War?

Homework:

Students should read Part II of the reading in the student text (pages 13-24) and complete “Study Guide—Part II” (TRB 26-27) or the “Advanced Study Guide—Part II” (TRB-28).
Study Guide—Introduction and Part I

1. What did the CIA source named Dragonfire report on October 11, 2001?

2. Define “proliferation.”

3. Russia and the United States have approximately __________________________ of the some __________________________ nuclear weapons in the world.

4. When and why were nuclear weapons used?

5. What was the Cold War? How long did it last?
6. Deterrence was based on the idea that the _______________________ of nuclear___________________
   could actually prevent one side from starting a nuclear_______________________.

7. Examine the charts of U.S. and Soviet nuclear weapons in your reading. In what year did the num-
   ber of Soviet weapons surpass U.S. weapons?

8. What was the Cuban Missile Crisis?

9. What is the purpose of arms control? Give two examples of arms control treaties.

10. Why did President Reagan shift his attitude about the Soviet Union?
Advanced Study Guide—Part I

1. Explain how Dragonfire’s report of October 11, 2001 highlighted a new threat from nuclear weapons.

2. Why is proliferation such a strong concern for the United States?

3. What is deterrence?

4. Explain the importance of the Cuban Missile Crisis.

5. President John F. Kennedy worried that twenty to twenty-five nations would have nuclear weapons by the 1970s. Why do you think his worry did not come to pass?
Civil Defense Posters

Instructions: Examine each of the following Civil Defense posters and answer the questions after each. [Civil Defense was a non-military program designed to protect the United States from attack.] As you examine all of them, be sure to note common ideas and themes. Be prepared to report back to the class.

1. What is the central image of this poster?

2. What does the text of the poster emphasize?

3. What mood does the poster create? How?
3. What is the central image of this poster?

2. What does the text of the poster emphasize?

3. What mood does the poster create? How?

4. What is the central image of this poster?

2. What does the text of the poster emphasize?

3. What mood does the poster create? How?
Instructions: The Syracuse Herald-American published the following fictional article under the byline of Sergei Uritsky on November 12, 1950. Read the article and answer the questions that follow.

"THOSE OF YOU who are still alive and read about this will remember that at 11 P.M. a giant four-engine bomber flying at an extremely high level was heard but not seen. You will also have heard of the failure of your military interceptor planes to knock down the bomber that rushed in at 400 miles an hour over the Polar route until after we had unloaded.

"THERE IS nothing for me to lose at this moment by revealing that the atom bomb which destroyed most of Syracuse and vicinity was of a very special type and its delivery crew were well picked from among our young, more fanatical, suicide group of flyers who had been secretly prepared for the mission over a period of many months.

"No doubt, as you read this, you will recall that your State Department reported a year or so ago that seismographs throughout the world recorded a tremendous explosion in a distant part of the world.

"That was the first time that the world had any knowledge that your country and mine had begun a free-for-all race for atomic supremacy. That explosion was our first controlled atomic bomb experiment, but not the first firing of our experimental atom bomb.

"WE LEARNED from that test that our scientists had progressed further with their experiments than we had dared hoped. As a matter of fact, some of them expressed fear that we were tampering with forces so dangerous and tremendous that the world might be blown apart.

"I HAD been chosen for this difficult assignment because of my 23 years experience in my country’s air force and because of my military record in World War II against the Germans. I had been in the United States many times of course, so that I knew your heavy industrial areas like the back of my hand. It was never suspected that I was a member of a Communist party and even some of my closest friends felt that I was a native citizen of the United States for I had always acted as an outspoken critic of Communism in the Communist party.

"MY SUBORDINATES had been selected with care. Aboard the plane were several of our atomic engineers as observers.

"We found little difficulty in approaching northern Canada and the area adjacent to the northeastern United States and on the night of ______ we cruised blithely along with our deadly cargo. As we approached the target, an unreal hush settled over the intercom system. We had been in the air approximately 11 hours and it seemed most strange to be at last in striking distance of our goal. Much depended upon the next few minutes.

"The staccato bark of the bombardier to the pilot broke the spell. In a matter of seconds “bomb away” sounded over the intercom.

"I LOOKED at my watch—it was exactly 11:01. Your people in Syracuse had just settled down for their sleep with the exception of your night plant workers. Mass murder occurred 5 seconds later.

"There was a tremendous detonation. What had been a thriving industrial city, now was a horror stricken, unreal world. The usual results followed the atom bomb burst, with the ball of fire expanding rapidly from its mushroom base to a weaving, surging, flaming mass arising steadily to a great height in the sky.

"THOSE WHO lived outside the blast area know the rest. You know how completely we have proved our atomic weapons are effec-
tive. In one well planned and well executed flight, we obliterated the majority of your industrial plants in Syracuse and took a terrible toll of your populace.

“I am proud of my part in this accomplishment, and my only regret is that I am now confined in one of your American detention camps, for my plane had the misfortune to run into a squadron of your jet fighters.”

Questions
1. Who is “writing” this article?

2. What event is described in the article?

3. What do you think the purpose of putting this fictional article in a newspaper would have been? (You may want to consider the image of the front page of the Buffalo Evening News at right.)

4. Do you think it likely that the article achieved the purpose you describe in question 3? Explain.
Comic Book: Godless Communism

Instructions: The Catholic Guild published *Treasure Chest* from 1946-1971. *Treasure Chest* was a comic book designed to inspire citizenship, morality, and patriotism. It was distributed in Catholic schools throughout the United States. Below is an excerpt from a 1961 issue depicting what life in the United States might be like if it fell under communist control. Read the excerpt and answer the questions that follow on a separate piece of paper. Be prepared to report your answers to the class.

1. What values are emphasized? List at least five.
2. How are the communists portrayed? Give two examples.
3. What do you think the primary purpose of this comic was? Do you think it achieved this purpose? Explain.

![Image of comic book page](image_url)
Since that fateful day in 1917, communism has grown by leaps and bounds. Today almost one third of the world is communist territory. And communist leaders have their eyes on the United States, too. The following story tells you what a family's life would be like in a communist United States.

This is the voice of your communist government speaking. Today, communist forces have completed the occupation of your country. The United States no longer exists. It is now the union of Soviet states of America! Long live the U.S.S.A.!!

Click!

What do we do now, Dad?

We should have done our thinking and praying before this happened, Bill. But it is never too late. Let's go to church and ask God's help.

But a surprise awaits them at the church door.

It says the church property has been taken over by the government! They're going to make a communist museum out of it!

But what about Father Ryan?

The next day, many questions are answered.

And it says all the Catholic priests and sisters are being sent to a labor camp! Those who resist will be killed!

They can't do this! Let's write our representative in Washington!

But Bill, we don't have a representative government any more. We have to do what the communists tell us to do!
The rest of the comic can be found at <http://www.authentichistory.com/images/1960s/treasure_chest/godless_communism.html>.
The Sources of Soviet Conduct

Below are excerpts from an article authored by U.S. diplomat George F. Kennan. The article appeared in Foreign Affairs in July 1947 and came to serve as the cornerstone for U.S. policy toward the Soviet Union during the Cold War. Answer the questions that follow. Be prepared to report to your classmates.

...there can never be on Moscow’s side any sincere assumption of a community of aims between the Soviet Union and powers which are regarded as capitalist. It must invariably be assumed in Moscow that the aims of the capitalist world are antagonistic to the Soviet regime, and therefore to the interests of the peoples it controls. If the Soviet Government occasionally sets its signature to documents which would indicate the contrary, this is to be regarded as a tactical manoeuvre permissible in dealing with the enemy (who is without honor) and should be taken in the spirit of caveat emptor [let the buyer beware]. Basically, the antagonism remains. It is postulated. And from it flow many of the phenomena which we find disturbing in the Kremlin’s conduct of foreign policy: the secretiveness, the lack of frankness, the duplicity, the wary suspiciousness, and the basic unfriendliness of purpose...

...we have seen that the Kremlin is under no ideological compulsion to accomplish its purposes in a hurry. Like the Church, it is dealing in ideological concepts which are of long-term validity, and it can afford to be patient. It has no right to risk the existing achievements of the revolution for the sake of vain baubles of the future. The very teachings of Lenin himself require great caution and flexibility in the pursuit of Communist purposes. Again, these precepts are fortified by the lessons of Russian history: of centuries of obscure battles between nomadic forces over the stretches of a vast unfortified plain. Here caution, circumspection, flexibility, and deception are the valuable qualities; and their value finds natural appreciation in the Russian or the oriental mind. Thus the Kremlin has no compunction about retreating in the face of a superior force. And being under the compulsion of no timetable, it does not get panicky under the necessity for such retreat. Its political action is a fluid stream which moves constantly, wherever it is permitted to move, toward a given goal. Its main concern is to make sure that it has filled every nook and cranny available to it in the basin of world power. But if it finds unassailable barriers in its path, it accepts these philosophically and accommodates itself to them. The main thing is that there should always be pressure, unceasing constant pressure, toward the desired goal. There is no trace of any feeling in Soviet psychology that that goal must be reached at any given time.

These considerations make Soviet diplomacy at once easier and more difficult to deal with than the diplomacy of individual aggressive leaders like Napoleon and Hitler. On the one hand it is more sensitive to contrary force, more ready to yield on individual sectors of the diplomatic front when that force is felt to be too strong, and thus more rational in the logic and rhetoric of power. On the other hand it cannot be easily defeated or discouraged by a single victory on the part of its opponents. And the patient persistence by which it is animated means that it can be effectively countered not by sporadic acts which represent the momentary whims of democratic opinion but only by intelligent long-range policies on the part of Russia’s adversaries—policies no less steady in their purpose, and no less variegated and resourceful in their application, than those of the Soviet Union itself.

In these circumstances it is clear that the main element of any United States policy toward the Soviet Union must be that of a long-term, patient but firm and vigilant containment of Russian expansive tendencies.
Questions

1. What does Kennan say about how Russia and the Soviet Union regard the capitalist world? Why is this important?

2. In the underlined passage, Kennan refers to “unceasing constant pressure” against the West as a cornerstone of Soviet foreign policy. What are the implications for the United States of his statement?

3. Write down the five most important words in the last paragraph. Explain why they are important.
Songs about Nuclear Weapons

Objectives:

Students will: Explore the relationship between political events and popular culture.

Compare and contrast songs with different viewpoints.

Assess the place of political themes in popular music today.

Required Reading:

Students should have read “Songs about Nuclear Weapons” (TRB 18-24) and completed the “Songs about Nuclear Weapons” (TRB-17) worksheet.

In the Classroom:

1. Student Interpretations—Call on students to offer their interpretations of the songs presented. (If possible, play recordings of the songs to demonstrate how music reinforces the message of the lyrics.) Ask students to organize the songs by themes and types. Compare and contrast the songs.

2. Identifying Values—Call on students to identify the most important values in the songs. Invite students to reflect on the connection between the songs and the public mood during the Cold War era. To what extent did the songs mirror, or shape, public attitudes?

3. Comparing Past and Present—Ask students to compare songs of the Cold War with popular music today. Call on them to give examples of current political songs. How have the themes changed since the Cold War? How are feelings of patriotism or protest expressed in today’s music?
Songs about Nuclear Weapons

Instructions: Answer the questions below for three of the songs.

1. When was the song written and what events were happening at that time? (Be sure to identify the songs you chose.)
   
   song #1:  
   song #2:  
   song #3:  

2. What is the mood of the song? Is it angry, sad, hopeful, sarcastic, joyful, triumphant, etc.? (Remember that songs are meant to be heard, not read. The music may play an important part in conveying the meaning. If you have access to recordings of any of these songs, bring them in to class.)
   
   song #1:  
   song #2:  
   song #3:  

3. What attitude toward nuclear weapons is being expressed? Do you think the songwriter is expressing his or her personal feelings, or the general attitudes of his or her society?
   
   song #1:  
   song #2:  
   song #3:
Songs about Nuclear Weapons

Introduction: Throughout history, conflict and war have raised strong feelings in poets, artists, and songwriters. Songs captured the strong feelings of the nuclear age and offer a window on the differing perspectives of the Cold War. Below is a small selection of the many songs written during this period.

When They Drop the Atom Bomb
Jackie Doll and His Pickled Peppers, 1950

There will soon be an end to this cold and wicked war
When those hard-headed communists get what they're looking for
Only one thing that will stop them and their ferocious fun
If General MacArthur drops the atomic bomb
Now over in Korea our boys have fought and fell
But they died just like heroes, so many shot and killed
They had their hands tied behind them and were murdered by the score
By those dirty-minded Communists who started this sad war

There’ll be fire dust and metal flying all around
And the radioactivity will burn them to the ground
If there’s any commies left they’ll be all on the run
If General MacArthur drops the atomic bomb

Old hard-headed Joe will be feelin’ mighty blue
When he finds out he’s bitten off more than he can chew
For the thrashing will be ended and the job will be well done
If General MacArthur drops the atomic bomb

O’ MacArthur has the power to stop those thieves
And he’ll make them sorry for their underhanded schemes
Just leave it to the general for he really has the nerve
To give those no good communists just what they deserve

There’ll be fire dust and metal flying all around
And the radioactivity will burn them to the ground
If there’s any commies left they’ll be all on the run
If General MacArthur drops the atomic bomb
Political Science

Randy Newman, 1972

No one likes us—I don’t know why
We may not be perfect, but heaven knows we try
But all around, even our old friends put us down
Let’s drop the big one and see what happens

We give them money—but are they grateful?
No, they’re spiteful and they’re hateful
They don’t respect us—so let’s surprise them
We’ll drop the big one and pulverize them

Asia’s crowded and Europe’s too old
Africa is far too hot
And Canada’s too cold
And South America stole our name
Let’s drop the big one
There’ll be no one left to blame us

We’ll save Australia
Don’t wanna hurt no kangaroo
We’ll build an All American amusement park there
They got surfin’, too

Boom goes London and boom Paree
More room for you and more room for me
And every city the whole world round
Will just be another American town
Oh, how peaceful it will be
We’ll set everybody free
You’ll wear a Japanese kimono
And there’ll be Italian shoes for me

They all hate us anyhow
So let’s drop the big one now
Let’s drop the big one now

Russians

Sting, 1984

In Europe and America, there’s a growing feeling of hysteria
Conditioned to respond to all the threats
In the rhetorical speeches of the Soviets
Mr. Khrushchev said we will bury you
I don’t subscribe to this point of view
It would be such an ignorant thing to do
If the Russians love their children too

How can I save my little boy from
Oppenheimer’s deadly toy
There is no monopoly in common sense
On either side of the political fence
We share the same biology
Regardless of ideology
Believe me when I say to you
I hope the Russians love their children too

There is no historical precedent
To put the words in the mouth of the president
There’s no such thing as a winnable war
It’s a lie that we don’t believe anymore
Mr. Reagan says we will protect you
I don’t subscribe to this point of view
Believe me when I say to you
I hope the Russians love their children too

We share the same biology
Regardless of ideology
What might save us, me, and you
Is that the Russians love their children too
Breathing
Kate Bush, 1980

Outside
Gets inside
Through her skin.
I’ve been out before
But this time it’s much safer in.

Last night in the sky,
Such a bright light.
My radar send me danger
But my instincts tell me to keep
Breathing,
(out, in, out, in, out, in...)
Breathing,
Breathing my mother in,
Breathing my beloved in,
Breathing,
Breathing her nicotine,
Breathing,
Breathing the fall-out in,
Out in, out in, out in, out in.

We’ve lost our chance.
We’re the first and the last, ooh,
After the blast.
Chips of plutonium
Are twinkling in every lung.

I love my
Beloved, ooh,
All and everywhere,
Only the fools blew it.
You and me
Knew life itself is
Breathing,
(out, in, out, in, out...)
Breathing,
Breathing my mother in,
Breathing my beloved in,
Breathing,
Breathing her nicotine,
Breathing,
Breathing the fall-out in,
(out!)
In point of fact it is possible to tell the
Difference between a small nuclear explosion and
A large one by a very simple method. The calling
Card of a nuclear bomb is the blinding flash that
Is far more dazzling than any light on earth—brighter
Even than the sun itself—and it is by the duration
Of this flash that we are able to determine the size
(what are we going to do without?)
Of the weapon. After the flash a fireball can be
Seen to rise, sucking up under it the debris, dust
And living things around the area of the explosion,
And as this ascends, it soon becomes recognizable
As the familiar mushroom cloud. As a demonstration
Of the flash duration test let’s try and count the
Number of seconds for the flash emitted by a very
Small bomb; then a more substantial, medium-sized
Bomb; and finally, one of our very powerful,
High-yield bombs

What are we going to do without?
Ooh please!
What are we going to do without?
Let me breathe!
What are we going to do without?
Ooh, quick!
We are all going to die without!
Breathe in deep!
What are we going to die without?
Leave me something to breathe!
We are all going to die without!
Oh, leave me something to breathe!
What are we going to do without?
Oh, god, please leave us something to breathe!
We are all going to die without
Oh, life is—breathing.
Talking World War III Blues

Bob Dylan, 1963

Some time ago a crazy dream came to me,
I dreamt I was walkin’ into World War Three,
I went to the doctor the very next day
To see what kinda words he could say.
He said it was a bad dream.
I wouldn’t worry ‘bout it none, though,
They were my own dreams and they’re only in
my head.
I said, Hold it, Doc, a World War passed through
my brain.
He said, Nurse, get your pad, this boy’s insane,
He grabbed my arm, I said Ouch!
As I landed on the psychiatric couch,
He said, Tell me about it.

Well, the whole thing started at 3 o’clock fast,
It was all over by quarter past.
I was down in the sewer with some little lover
When I peeked out from a manhole cover
Wondering who turned the lights on.

Well, I got up and walked around
And up and down the lonesome town.
I stood a-wondering which way to go,
I lit a cigarette on a parking meter
And walked on down the road.
It was a normal day.

Well, I rung the fallout shelter bell
And I leaned my head and I gave a yell,
Give me a string bean, I’m a hungry man.
A shotgun fired and away I ran.
I don’t blame them too much though,
I know I look funny.

Down at the corner by a hot-dog stand
I seen a man, I said, Howdy friend,
I guess there’s just us two.
He screamed a bit and away he flew.
Thought I was a Communist.

Well, I spied a girl and before she could leave,
Let’s go and play Adam and Eve.
I took her by the hand and my heart it was
thumpin’

When she said, Hey man, you crazy or sumpin’,
You see what happened last time they started.
Well, I seen a Cadillac window uptown
And there was nobody aroun’,
I got into the driver’s seat
And I drove down 42nd Street
In my Cadillac.
Good car to drive after a war.

Well, I remember seein’ some ad,
So I turned on my Conelrad.
But I didn’t pay my Con Ed bill,
So the radio didn’t work so well.
Turned on my record player
It was Rock-A-Day, Johnny singin’,
Tell Your Ma, Tell Your Pa,
Our Loves Are Gonna Grow Ooh-wah, Ooh-wah.

I was feelin’ kinda lonesome and blue,
I needed somebody to talk to.
So I called up the operator of time
Just to hear a voice of some kind.
When you hear the beep
It will be three o’clock,
She said that for over an hour
And I hung it up.

Well, the doctor interrupted me just about then,
Sayin, Hey I’ve been havin’ the same old dreams,
But mine was a little different you see.
I dreamt that the only person left after the war was
me.
I didn’t see you around.

Well, now time passed and now it seems
Everybody’s having them dreams.
Everybody sees themselves walkin’ around with no
one else.
Half of the people can be part right all of the time,
Some of the people can be all right part of the time.
But all of the people cant be right all of the time.
I think Abraham Lincoln said that.
I’ll let you be in my dreams if I can be in yours,
I said that.
Jesus Hits Like an Atom Bomb
Lowell Blanchard and the Valley Trio, 1950

Ev’rybody’s worried
‘bout that atom bomb.
Well, no one seems worried about the day my Lord
shall come.
You better set your house in order,
He may be coming soon,
and He’ll hit like an atom bomb when he come,
when he come.

In 19 hundred and 45, the atom bomb became alive.
In 19 hundred and 49, the USA got very wise.
They found that a country across the line
had an atom bomb of the very same kind.
People got worried over the land,
just like the people in Japan.
God told Elijah He’d send down fire,
send down fire from the sky.
He showed old Noah by the rainbow sign,
it won’t be water but fire next time.

Oh well now Ev’rybody’s worried
‘bout that atom bomb.
Well, no one seems worried about the day my Lord
shall come.
You better set your house in order,
well He may be coming soon,
and He’ll hit like an atom bomb when he come,
when he come.

Now don’t you get worried, bear in mind,
trust King Jesus and you shall find
peace, and happiness, joy divine,
with my Savior all the time.
God told Elijah He’d send down fire,
send down fire from the sky.
He said he would, and I believe He will,
He’ll fight your battles if you keep still.

Ev’rybody’s worried
‘bout that atom bomb ...

... And He’ll hit...
And He’ll hit like an atom ...
Hit like an atom ...
Hit like an atom bomb when He come, when He come.
You better straighten up and fly right ‘cause He may be
coming soon.

Who’s Next?
Tom Lehrer, 1965

First we got the bomb and that was good,
‘Cause we love peace and motherhood.
Then Russia got the bomb, but that’s O.K.,
‘Cause the balance of power’s maintained that
way!

France got the bomb, but don’t you grieve,
‘Cause they’re on our side (I believe).
China got the bomb, but have no fears;
They can’t wipe us out for at least five years!
Who’s next?
Then Indonesia claimed that they
Were gonna get one any day.
South Africa wants two, that’s right:
One for the black and one for the white!
Who’s next?
Egypt’s gonna get one, too,
Just to use on you know who.
So Israel’s getting tense,
Wants one in self defense.
“The Lord’s our shepherd,” says the psalm,
But just in case, we better get a bomb!
Who’s next?

Luxembourg is next to go
And, who knows, maybe Monaco.
We’ll try to stay serene and calm
When Alabama gets the bomb!
Who’s next, who’s next, who’s next?
Who’s next?
99 Luftballons
Nena, 1984

You and I in a little toy shop
Buy a bag of balloons with the money we’ve got
Set them free at the break of dawn
’till one by one they were gone
Back at base, sparks in the software
Flash the message “something’s out there”
Floating in the summer sky
Ninety nine red balloons go by

Ninety nine red balloons
Floating in the summer sky
Panic bells, it’s red alert
There’s something here from somewhere else
The war machine springs to life
Opens up one eager eye
And focusing it on the sky
The ninety nine red balloons go by

Ninety nine decisions treat
Ninety nine ministers meet
To worry, worry, super scurry
Call the troops out in a hurry
This is what we’ve waited for
This is it boys, this is war
The President is on the line
As Ninety nine red balloons go by

Ninety nine knights of the air
Ride super high-tech jet fighters
Everyone’s a super hero
Everyone’s a Captain Kirk
With orders to identify
To clarify and classify
Scramble in the summer sky
Ninety nine red balloons go by

As ninety nine red balloons go by

Ninety nine dreams I have had
In every one a red balloon
It’s all over and I’m standing pretty
In this dust that was a city
If I could find a souvenir
Just to prove the world was here
And here is a red balloon
I think of you and let it go
Radioactive Mama
Sheldon Allman, 1960

Radioactive mama, hold me tight
Radioactive mama treat me right
Radioactive mama we’ll reach critical mass tonight
Well when we get together clear away the crowd there won’t be nothing left except a mushroom shaped cloud
Radioactive mama treat me right
Radioactive mama we’ll reach critical mass tonight
Well, your kisses do things to me in oh so many ways
I feel them going through me all those gamma gamma rays
Radioactive mama treat me right
Radioactive mama we’ll reach critical mass tonight
Well since I kissed you baby, that evening in the park,
I lost my hair and eyebrows and my teeth shine in the dark
Radioactive mama treat me right
Radioactive mama we’ll reach critical mass tonight.
Mapping the Nuclear World

Objectives:

Students will: Analyze maps and data to draw conclusions about the status of nuclear weapons stockpiles today.

Develop map reading skills and data-analysis skills.

Required Reading:

Students should have read Part II of the reading in the student text (pages 13-24) and completed “Study Guide—Part II” (TRB 26-27) or the “Advanced Study Guide—Part II” (TRB-28).

Handouts:

“Nuclear Weapons Status 2005” (TRB-29)

“Map Analysis Questions” (TRB-30)

In the Classroom:

1. Establishing Background—Ask students to think about Part II of the student text. Have them generate as a class a short list of current problems surrounding nuclear weapons. Put the list on the board or an overhead.

2. Map Analysis—Explain to students that they will be using a map to examine the status of nuclear weapons. Put students in groups of two or three and hand out the “Map Analysis Questions.”

3. Sharing Conclusions—After students have finished the activity, review some of the answers. Are there connections to the current problems listed on the board?

Suggestion:

If your class finishes this exercise with time to spare, you might want to have them also do the optional lesson (TRB 17-24) “Songs about Nuclear Weapons.”

Homework:

Students should read “Options in Brief” in the student text (page 25).
1. List two arguments in favor of nuclear weapons.
   a. 
   b. 

2. List two arguments against nuclear weapons.
   a. 
   b. 

3. What is the difference between a strategic and a tactical nuclear weapon?

4. What is the purpose of the Cooperative Threat Reduction programs?

5. What is the purpose of the National Missile Defense program? List two arguments made by its opponents.
   a. 
   b. 
6. What is nuclear proliferation?

7. List the three central components of the Nuclear Non-Proliferation Treaty.
   a. 
   b. 
   c. 

8. What was Abdul Qadeer-Khan known for?

9. List two countries where nuclear proliferation is a concern. Explain the concern in each country.
   a. 
   b. 

10. List three ways that terrorists might try to acquire a nuclear weapon.
    a. 
    b. 
    c.
Advanced Study Guide—Part II

1. Summarize the basic argument for and the basic argument against nuclear weapons.

2. What role has the Nuclear Non-Proliferation Treaty played in preventing the spread of nuclear weapons?

3. Explain Secretary of State Rice’s high level of concern about the Russian nuclear arsenal. (See her quote on page 16 of your reading.)

4. How has the threat of terrorism changed thinking about nuclear weapons?
Abstaining Countries
The following countries have the potential ability to develop nuclear weapons, but have chosen not to do so. Some have installations under international inspection that could produce weapons-grade material.
Algeria, Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, Chile, Egypt, Finland, Germany, Hungary, Indonesia, Italy, Japan, Mexico, Netherlands, Norway, Poland, Romania, Republic of Korea, Slovakia, South Africa, Spain, Sweden, Switzerland, Taiwan, Turkey, Ukraine.

Recent Renunciations
South Africa produced six complete nuclear bombs during the 1980's, but renounced such activities and joined the NPT in 1991. Belarus, Kazakhstan, and Ukraine acceded to the NPT as non-nuclear weapon states and returned all remaining nuclear weapons to Russia in the early 1990's.
Egypt and Sweden both had active nuclear weapon programs but terminated them prior to the founding of the NPT in 1970. After 1970, Argentina, Brazil, Libya, Iraq, Romania, South Korea, Spain, Taiwan, and Yugoslavia all had active programs researching nuclear weapons options. All of these programs were terminated by the early 1990's, except for Libya's, which was renounced in December 2003.

Map Analysis Questions

*Instructions:* Look carefully at the map before answering each question.

1. How many Non-NPT (states that are not parties to the Nuclear Non Proliferation Treaty) nuclear weapons states are there? What are they? Circle them on your map.

2. How many weapons do each of these non-NPT states have?

3. According to the map, what is an abstaining country? How many abstaining countries are there?

4. What states have had nuclear weapons and have given them up?

5. What states have given up nuclear weapons programs and research?

6. How many nuclear weapons does the United States have? How many does Russia have? What percent of the world’s total nuclear weapons are Russian or U.S. weapons?
Fifteen Minutes

Objectives:

Students will: Stage a fictional depiction of presidential decision-making during the minutes before a potential nuclear attack.

Understand the effect of uncertainty on decision-making having to do with nuclear weapons.

Understand the limits of time on response to a nuclear attack.

Required Reading:

Students should have read Part II of the reading in the student text (pages 13-24) and completed “Study Guide—Part II” (TRB 26-27) or the “Advanced Study Guide—Part II” (TRB 28).

Handouts:

“The Doomsday Scenario” (TRB 33-35)

In the Classroom:

1. Focus Question—Write the question “How dangerous is the threat of a nuclear attack today?” on the board.

2. Getting Started—Nine students will participate in a skit to be performed for their classmates. Those not in the skit will participate through critique and questioning after the performance. All students will engage in a “debriefing” following the performance. Distribute “The Doomsday Scenario.” Assign students to take on the nine acting roles, described on the handout.

3. Reviewing Instructions—Go over the activity with students. Read the scenario together as a class. Tell students that you will be keeping time from the moment of the phone call to the end of the scenario, and that they have only fifteen minutes until the president must make a decision.

4. Preparing for the Skit—Allow students playing roles about ten minutes to familiarize themselves with their roles and to review reading as necessary. Students should especially recall the various scenarios in which a nuclear weapon might be launched—today—from Russia against the United States and incorporate those possibilities into their skit. They should also be aware of the possible responses the United States could have. Ask students in the audience to develop questions they think the president should ask the other characters. Allow the performers to arrange a stage area and collect quick props.

5. Dividing the Class—Send the president and the secretary of state, both having a state dinner in the scenario, to a far-away location in the school. The agent assigned to collect the president to take the phone call will need to physically retrieve these two students. The time it takes to retrieve the students is meant to simulate a real-life situation. The other performers may remain in the room.

6. Presentation—Start the timer and have the first ring of the commander of USSTRATCOM’s phone occur simultaneously. As the drama unfolds, ask audience members to record the events, and make notes of where different questions might have been asked. You might want to make announcements of time remaining periodically during the performance.

7. Debriefing—Following the presentation, ask audience members if there were moments during the skit that were different from what they imagined might happen, or if questions they thought should be raised were not. In general, the debriefing should not emphasize trying to find a “correct answer” to the scenario or resolving the question of whether it was an actual attack. There are many ways the scenario could have played out. Here are additional questions to address:

1. What made the president’s decision difficult?

2. What was the most difficult question to resolve while making the decision?

3. What role did uncertainty play during the skit?
4. What might have happened after the president’s decision if it had been an actual attack?

5. What might have happened after the president’s decision if it had not been an actual attack?

6. How might you change the parameters of the skit so that you would feel the president could make a decision with confidence?

7. How could international relations and nuclear weapons protocols be changed to minimize the risk of nuclear war? Did the skit illustrate this at all? How?

Notes:

Teachers are encouraged to adapt this lesson to make it work for their classroom.

This lesson does not attempt to portray events as they would actually happen. Indeed, information about the exact protocol in this type of situation is classified. Nevertheless, the ideas and the timeline of decision-making is drawn from “Avoiding Nuclear Catastrophe” (pages 180-181), in Wilson’s Ghost: Reducing the Risk of Conflict, Killing, and Catastrophe in the Twenty-First Century, by Robert S. McNamara and James G. Blight (Public Affairs: New York, 2003).

The purpose of the exercise is to help students understand the difficulties of decision-making in this context.

This exercise is effective only if students are able to perform seriously and thoughtfully. You may want to discuss with them beforehand that while it may seem absurd, it is in fact true that the United States currently has a time window of fifteen minutes to respond to a nuclear attack from anywhere within Russia before areas inside the United States would be destroyed.

If time permits, it might help to do the performance again after the debriefing and questioning period to demonstrate what students have learned.

Finally, if you have a group of willing actors, perhaps there are other venues for them to perform, such as a grade-level meeting or school assembly.
The Doomsday Scenario

Instructions: Read the scenario below. After you have read the scenario, you will prepare a brief skit for the class. You will find general descriptions of the characters for this short fictional skit after the scenario. The purpose of the skit is to give a sense of the difficult decisions that a U.S. president would need to make (in less than fifteen minutes), if he or she received a report of a missile attack. It is important to remember the consequences of the decision could change the world in significant ways. If twelve Russian missiles are actually about to hit the United States, tens of millions will die. If the United States launches an attack and the report of a Russian attack is incorrect, millions of Russians will die and the United States will face the wrath of the international community and the condemnation of history.

The president must question the advisors carefully and thoroughly. The advisors must give careful, measured advice based on the description of their characters and the reading. (The performers should draw on the reading or other sources to add details to their character, but they should not change or alter the basic character description.) It is generally assumed that the president would have less than fifteen minutes to decide what to do if there is a report of such an attack. Your teacher will be keeping time and will require the president to make a decision before the fifteen minutes are up.

Class members who do not have a role in the skit should carefully read the characters’ descriptions and review the reading. You should also prepare questions or statements you believe each character should make during the skit. Finally, during the skit, you should record the events and be prepared to discuss them afterwards.

Scenario: Nuclear Crisis or False Alarm?

It is 8:30 PM East Coast Time. The president is hosting a state dinner for the president of Ukraine at the White House. The guests have just been seated and toasts have begun. The secretary of state is also at the dinner. The secretary of defense is in her office, working late. She is reading a report on a failed test of the U.S. missile defense system. The national security advisor is at home in the Georgetown neighborhood of Washington DC on the treadmill. The commander of the U.S. Strategic Command (USSTRATCOM) is about to be telephoned on the phone he carries with him 24 hours a day, 365 days a year. The commander is just finishing dinner with his family in the Midwest (where it is only 7:30 PM) and has started to clear the table. He has left the phone in a charger in his study. He is required to answer it within three rings.

Meanwhile, inside Cheyenne Mountain in Colorado (where it is 6:30 PM), at the North American Aerospace Defense Command (NORAD), a satellite data interpreter slowly puts down his Big Mac. His screen seems to indicate that twelve missiles have just been launched from Perm, Russia and are bound for the United States. Such missiles, if they have indeed been launched, will reach the East Coast of the United States in approximately fifteen minutes. The Russian ambassador to the United States is in Boulder, Colorado, where she is scheduled to give a presentation to the Chamber of Commerce the following day.
Dramatis Personae

The President: You are new to the presidency having assumed office just seven months ago. Your election campaign focused mostly on domestic political issues. Although you are knowledgeable about international affairs, you rely on your advisers for information about international and military affairs. You consider yourself to be a thoughtful and careful person. As Commander in Chief of the United States military, only you have the authority to decide how to respond to a nuclear attack on the United States. You have less than fifteen minutes to make a decision that could change the world forever.

The Secretary of State: You spend your days working on international affairs issues. You have made it a top priority to improve U.S. relations with the countries of the former Soviet bloc. It was you who led the effort to invite the president of Ukraine to this dinner. You are on good terms with your Russian counterpart having just visited him in Moscow last month. You believe that U.S.-Russian relations have been cooperative and hold more promise in economic areas. You know that there is some dissatisfaction within the Russian military with the current Russian leader, but you can’t believe that Russia has any reason to attack the United States. You know that there is a hot-line between Moscow and Washington. You also have the Russian ambassador’s cell-phone number. When the president asks you for a recommendation, you must be prepared to give one as well as support your argument.

The Secretary of Defense: Your area of expertise is in military affairs. You remember the history of nuclear false alarms and have taken steps to prevent them from happening again. You have full faith in the abilities of the military and its technology. You know that the president has less than fifteen minutes to make a decision. You know that there is no defense against incoming missiles, and believe that failing to respond could prompt an even larger strike against the United States. When the President asks you for a recommendation, you must be prepared to give one as well as support your argument.

National Security Advisor: You were a young officer in the CIA during the Cuban missile crisis. You remember the tension at the time and how close the United States and the Soviet Union came to war. Since then, you have worked hard to develop methods to verify information agreed to in arms-control agreements. You will be able to advise the president about the potential casualties of this attack and any U.S. response. You believe the president has three options: do nothing/wait and see; launch an equivalent counter-strike against Russian military forces; or launch a massive retaliatory strike against Russia. When the president asks you for a recommendation, you must be prepared to give one as well as support your argument.

Norad Satellite Monitor: You have been in the military for five years and have extensive training. You have double-checked the calibration of your screen. It is not yet possible to tell where in the United States the missiles might be headed. You wondered at first if this might be a drill. Your immediate superior officer tells you that she knows nothing about a drill and to continue reporting what you see on your screen.

Norad Representative: It is your duty to telephone the Commander of USSTRATCOM in this situation and inform him that a nuclear attack might be underway. You have made this phone call three times before in your career, and each time the report turned out to be false.

Commander of USSTRATCOM: You are well-versed and familiar with the operations of U.S. nuclear forces. You believe that no training exercises have been scheduled for today. Computer software and hardware at NORAD has recently been upgraded and tested thoroughly. You remind the president that he has fifteen minutes to decide to launch before the missiles hit or else the United States runs the risk of losing some of its ability to respond. The United States has more than two thousand nuclear warheads on ICBMs ready to launch.
The Russian Ambassador: You represent the interests of your country in the United States. You are well-acquainted with the U.S. president and the secretary of state. You have no information from Moscow about increasing tensions between the United States and Russia. In fact, you believe that relations between Moscow and Washington were growing more cooperative and positive in recent years. Your superiors in Moscow are in bed; it’s 4:30 in the morning, but you could try to reach them. Under normal circumstances, your job is to follow the instructions given to you from Moscow. You are familiar with American nuclear weapons strategy. You assume that the Americans are considering launching a nuclear strike against your country in this scenario and must try to convince them not to.

White House Agent: You have been working for this administration since the current president took office. Before that, you were a Marine. A call from the commander of USSTRATCOM will be routed to you, so it will be your responsibility to bring the president and the secretary of state away from their dinner without alarming the other guests. You will not be told of the reason to fetch them.
Role Playing the Three Options: Organization and Preparation

Objectives:
Students will: Analyze the issues that frame the debate on the role of nuclear weapons in the world.

Identify the core underlying values of the options.

Integrate the arguments and beliefs of the options and the reading into a persuasive, coherent presentation.

Work cooperatively within groups to organize effective presentations.

Handouts:
“Presenting Your Option” (TRB-37) for option groups

“Expressing Key Values” (TRB-38) for option groups

“Committee on Foreign Relations of the U.S. Senate” (TRB-39) for committee members

In the Classroom:
1. Planning for Group Work—In order to save time in the classroom, form student groups before beginning Day Three. During the class period of Day Three, students will be preparing for the Day Four simulation. Remind them to incorporate the reading into the development of their presentations and questions.

2a. Option Groups—Form three groups of four students each. Assign an option to each group. Distribute “Presenting Your Option” (TRB-37) and “Expressing Key Values” (TRB-38) to the three option groups. Inform students that each option group will be called upon on Day Four to present the case for its assigned option to members of the Committee on Foreign Relations of the U.S. Senate. Explain that option groups should follow the instructions in “Presenting Your Option.” Note that the option groups should begin by assigning each member a role.

2b. Committee Members—The remainder of the class will serve as members of the Committee on Foreign Relations of the U.S. Senate. Distribute “Committee on Foreign Relations of the U.S. Senate” (TRB-39) to each committee member. While the option groups are preparing their presentations, members of the Committee on Foreign Relations should develop clarifying questions for Day Four. (See “Committee on Foreign Relations of the U.S. Senate.”) Remind committee members that they are expected to turn in their questions at the end of the simulation.

Suggestions:
In smaller classes, other teachers or administrators may be invited to serve as members of the committee. In larger classes, additional roles—such as those of newspaper reporter or lobbyist—may be assigned to students.

Extra Challenge:
Ask the options groups to design a campaign poster or a political cartoon illustrating the best case for their option.

Homework:
Students should complete preparations for the simulation.
Presenting Your Option

Preparing Your Presentation

Your assignment: Your group has been called upon to appear before the Committee on Foreign Relations of the U.S. Senate. Your assignment is to persuade the committee members that your option should serve as the basis for our country’s foreign policy concerning nuclear weapons. You will be judged on how well you present your option.

Organizing your group: Each member of your group will take a specific role. Below is a brief explanation of the responsibilities for each role. Before preparing your section of the presentation, work together to address the questions on the “Expressing Key Values” worksheet.

1. Group Director: Your job is to organize your group’s three-to-five minute presentation of its option to the Committee on Foreign Relations. In preparing your presentation, you will receive help from the other members of your group. You should include arguments from their areas of expertise. Read your option and review the readings to build a strong case for your option. Keep in mind that, although you are expected to take the lead in organizing your group, your group will be expected to make the presentation together.

2. Military Expert: Your job is to explain why your group’s option best addresses the military challenges of nuclear weapons. Pay special attention to the “What should we do?” section of your option. Review the reading to build a strong case for your option. Make sure that your expertise is represented in the presentation.

3. Ethics/Morality Expert: Your job is to explain why your group’s option best addresses the ethical and moral challenges of nuclear weapons. Pay special attention to the “What should we do?” section of your option. Review the reading to build a strong case for your option. Make sure that your expertise is represented in the presentation.

4. Historian: What lessons can be drawn from history to support your group’s position? Carefully read your option and then review the reading with this question in mind. Make sure that your expertise is represented in the presentation.

Making Your Case

After your preparations are completed, your group will deliver a three-to-five minute presentation to the Committee on Foreign Relations. The “Expressing Key Values” worksheet and other notes may be used, but group members must speak clearly and convincingly. During the presentations of the other groups, you should try to identify the weak points of the competing options. After all of the groups have presented their options, members of the Committee on Foreign Relations will ask you clarifying questions. Any member of your group may respond during the cross-examination period.
Expressing Key Values

Values play a key role when defining the broad parameters of public policy. What do we believe about ourselves? What matters most to us? When strongly held values come into conflict, which is most important?

The term “values” is not easy to define. Most often, we think of values in connection with our personal lives. Our attitudes toward our families, friends, and communities are a reflection of our personal values. Values play a critical role in our civic life as well. In the United States, our country’s political system and foreign policy have been shaped by a wide range of values. Since our nation’s beginnings a commitment to freedom, democracy, and individual liberty have been a cornerstone of our national identity. At the same time, the high value many Americans place on justice, equality, and respect for the rights of others rings loudly throughout U.S. history.

For most of our country’s existence, the impulse to spread American values beyond our borders was outweighed by the desire to remain independent of foreign entanglements. Since World War II, however, the United States has played a larger role in world affairs than any other single nation. At times, American leaders have emphasized the values of human rights and cooperation. On other occasions, they have stressed the values of stability and security.

Some values fit together well. Others are in conflict. Americans are constantly being forced to choose among competing values in our ongoing debate about foreign policy. Each of the three options in this unit revolves around a distinct set of values. The opening paragraphs of your assigned option offer a description of a policy direction grounded in distinct values. Your job is to identify and explain the most important values underlying your option. These values should be clearly expressed by every member of your group. This worksheet will help you organize your thoughts.

1. What are the two most important values underlying your option?
   a. 
   b. 

2. According to the values of your option, what should be the role of the United States in the world?

3. Why should the values of your option be the guiding force for U.S. nuclear weapons policy?
Committee on Foreign Relations of the U.S. Senate
Hearing on U.S. Foreign Policy

Your Role
As a member of the Committee on Foreign Relations of the U.S. Senate, you consider issues relating to our country’s foreign policy. These hearings will introduce you to three distinct positions our country could take to address nuclear weapons.

Your Assignment
While the three option groups are organizing their presentations, you should prepare two questions regarding each of the options. Your teacher will collect these questions at the end of Day Four.

Your questions should be challenging and designed to clarify differences among the options. For example, a good question for Option 1 might be:

How can you be sure that if the United States has only five hundred nuclear weapons that it will be safe from attack?

On Day Four, the three option groups will present their positions. After their presentations are completed, your teacher will call on you and your fellow committee members to ask questions. The “Evaluation Form” you receive is designed for you to record your impressions of the option groups. Part I should be filled out in class after the option groups make their presentations. Part II should be completed as homework. After the hearings are concluded, you may be called upon to explain your evaluation of the option groups.
Role Playing the Three Options: Debate and Discussion

Objectives:

Students will: Articulate the leading values that frame the debate on U.S. foreign policy regarding nuclear weapons.

Explore, debate, and evaluate multiple perspectives on U.S. foreign policy regarding nuclear weapons.

Sharpen rhetorical skills through debate and discussion.

Cooperate with classmates in staging a persuasive presentation.

Handouts:

“Evaluation Form” (TRB-41) for committee members

In the Classroom:

1. Setting the Stage—Organize the room so that the three option groups face a row of desks reserved for the Senate Committee on Foreign Relations. Distribute “Evaluation Form” to the committee members. Instruct members of the committee to fill out the first part of their “Evaluation Form” during the course of the period. The second part of the worksheet should be completed as homework.

2. Managing the Simulation—Explain that the simulation will begin with three-to-five minute presentations by the option groups. Encourage the group members to speak clearly and convincingly. Instruct the students in the other options groups to listen carefully to their classmates’ presentations and record persuasive arguments for and against each option presented.

3. Guiding Discussion—Following the presentations, invite members of the Committee on Foreign Relations to ask cross-examination questions. Make sure that each committee member has an opportunity to ask at least one question. The questions should be evenly distributed among all three option groups. If time permits, encourage members of the option groups to challenge the positions of the other groups. During cross-examination, allow any option group member to respond. (As an alternative approach, permit cross-examination following the presentation of each option.)

Deliberation:

The consideration of alternative views is not finished when the options role play is over. After the role play, it is important for students to have an opportunity to deliberate with one another about the merits and trade-offs of alternative views prior to articulating their own views as an “Option 4.” A good tool to use for deliberation is a focused “fishbowl” activity in which students observe each other discussing their views of each option and record their own views. Directions and handouts for this activity, as well as more information on deliberation, can be found at <www.choices.edu/fishbowl.cfm>.
## Evaluation Form
Committee on Foreign Relations of the U.S. Senate

<table>
<thead>
<tr>
<th>Part I</th>
<th>What was the most persuasive argument presented in favor of this option?</th>
<th>What was the most persuasive argument presented against this option?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Option 1</td>
<td>Option 1</td>
</tr>
<tr>
<td></td>
<td>Option 2</td>
<td>Option 2</td>
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<tr>
<td></td>
<td>Option 3</td>
<td>Option 3</td>
</tr>
</tbody>
</table>

### Part II
Which group presented its option most effectively? Explain your answer.
Objectives:

Students will:

Begin to understand the complex moral conundrums associated with nuclear weapons.

Understand the concept of deterrence in concrete terms.

Work in groups to evaluate views on the use of nuclear weapons.

Handouts:

“Exploring Deterrence” (TRB-43)

In the Classroom:

1. Defining Terms—As a large group, ask students to define deterrence. Put the final definition on the board or an overhead.

2. Understanding Deterrence—Divide students into pairs or small groups. Distribute “Exploring Deterrence” to each group. Ask students to follow the directions on the handout. If needed, you can prod students as they develop their lists.

3. Evaluating Analogies—Return to the large group setting and ask students to share their lists. Did the analogy help students to understand better the concept of deterrence? Or does the analogy muddy the waters further?

   Ask students to come up with an analogy that would accurately describe either deterrence or the moral issues of nuclear weapons. It is likely that this will be impossible for them to do, as they will always be able to find loopholes in their arguments. No one has published an analogy that does, in fact, describe deterrence completely and accurately.

4. Assessing the Policy Implications—Once students have tried (and likely failed) to develop an accurate analogy, ask them what that failure means. If we can’t describe deterrence in everyday terms, what does that mean for our understanding of the concept? Why don’t people discuss nuclear weapons and deterrence more often? Are our views about nuclear weapons complete if we do not have a useful way of describing the basic policies we have about them? What moral questions does this raise about nuclear weapons?

Homework:

Students should complete “Focusing Your Thoughts” (TRB-44) and “Your Option Four” (TRB-45).

Suggestion:

If your students find the questions in “Assessing the Policy Implications” too difficult to have a useful discussion, you might consider having them complete “Your Option Four” in class instead.

Note:

Criticism of the Ramsey analogy can be found in several places, but a straightforward and concise version is in Michael Walzer’s Just and Unjust Wars, chapter 17.
Exploring Deterrence

Introduction: Read the sentence below. It was written by Paul Ramsey, a Protestant theologian. He was trying to explain the concept of deterrence using an analogy.

Suppose that one Labor Day weekend no one was killed or maimed on the highways; and that the reason for the remarkable restraint placed on the recklessness of automobile drivers was that suddenly everyone of them discovered he [or she] was driving with a baby tied to his [or her] front bumper!

List as many ways as you can think of that this analogy does a good job of describing deterrence.

List as many ways as you can think of that this analogy does a bad job of describing deterrence. (Hint: How often—before you began studying them—did you think about nuclear weapons? How often would a driver need to think about a baby on the front of his or her car?)
Focusing Your Thoughts

Ranking the Options
Which of the options below do you prefer? Rank the options “1” to “3” with “1” being your first choice.

___ Option 1: Eliminate Nuclear Weapons Now
___ Option 2: Rely on Arms Control
___ Option 3: Keep Nuclear Weapons as an Essential Part of U.S. Security

Beliefs
Rate each of the statements according to your personal beliefs:
1 = Strongly Support  2 = Support  3 = Oppose  4 = Strongly Oppose

___ In today’s interconnected world, the challenges of nuclear weapons can be addressed only through international cooperation.
___ America has too many problems at home to focus on those abroad.
___ Preventing the spread of nuclear weapons should be America’s most important foreign policy.
___ Deterrence can effectively protect the United States against attack by other states.
___ A nuclear war cannot be won, and should never be fought.
___ Human error will one day lead to the use of nuclear weapons.
___ Nuclear weapons actually reduce the likelihood of war.
___ The United States should develop smaller, usable nuclear weapons.
___ The U.S. should never accept international agreements that limit our ability to develop and test nuclear weapons.
___ It is immoral to rely on the policy of deterrence to threaten the lives of millions if there are other alternatives to maintaining U.S. security.

Creating Your Own Option
Your next assignment is to create an option that reflects your own beliefs and opinions. You may borrow heavily from one option, combine ideas from two or three options, or take a new approach altogether. There are, of course, no perfect solutions. And there is no right or wrong answer. Rather, you should strive to craft an option that is logical and persuasive.

Be careful of contradictions and keep in mind that policies should logically follow beliefs. If you believe, for instance, that the United States should closely cooperate with other countries in controlling the spread of nuclear weapons, you would support an increase in U.S. funding for the Cooperative Threat Reduction Programs.
Your Option Four

*Instructions*: In this exercise, you will offer your own recommendations for U.S. foreign policy concerning nuclear weapons. Your responses to “Focusing Your Thoughts” should help you identify the guiding values of your proposal.

1. What values and interests should guide U.S. policy concerning nuclear weapons?

2. What steps in the foreign policy arena should the United States take over the next ten years?

3. How would your option effect the lives of Americans?

4. What are the two strongest arguments opposing your option?
   a.
   b.

5. What are the two strongest arguments supporting your option?
   a.
   b.
Film and Nuclear War

Objectives:

Students will: Identify the historical events surrounding a film.

Consider the relationship of film and political ideas.

Explore the ways the filmmaker conveyed his or her ideas.

Handouts:

“Films about Nuclear Weapons” (TRB-47), to be completed while watching the film.

Suggestions:

There are numerous films that deal with issues surrounding nuclear war. Teachers may choose to use class time to watch a single film, or challenge students to examine films on their own or in small groups and report back to their classmates. There are also numerous internet sources of listing films about nuclear war. One example is: <http://www.conelrad.com/conelrad100>

There are several resources offering ideas about incorporating film into the teaching of history. Below are three that might be helpful.

<http://www.pbs.org/wgbh/masterpiece/learningresources/fic.html>


<http://www.salzburgseminar.org/ASC/csacl/progs/EFL/FILM.htm>

Below are a few possible films; they are organized by type. Teachers should preview films to be sure that they are appropriate for their classrooms.

Fiction:

*The Day After*

*Dr. Strangelove*

*Failsafe*

*Last Best Chance*

*Wargames*

Fictional Account of Historical Events

*Thirteen Days*

Documentary:

*The Fog of War*

*The Atomic Cafe*

In the Classroom:

1. Focus Question—Put the question “What is the purpose of film?” on the board or on an overhead.

2. Film and History—If students have worked in groups ask them to report to the class on the film they watched. Challenge the reporting students as well as the class to identify the filmmaker’s point of view as well as accuracies or inaccuracies in the film.

3. The Power of Film: Ask students to list the ways that film is different from the written word. How might these differences help add to an understanding of history? Ask students to give examples from the film they watched. Which of these differences might lead to a misleading portrayal of history? Ask students to provide examples of this in the film they watched.

What can students and historians do to be sure that they are not misled by film? How can students be sure that they are not misled by any source when studying history?

4. History and “Truth”

“History isn’t made up of the truth anyhow, so why worry?” —T.E. Lawrence

Ask students to consider Lawrence’s quote. What did he mean? Do students agree or disagree with his quote? If they disagree, challenge students to make an argument for agreeing, and vice-versa. Does Lawrence’s quote relate to the film that they watched?
Films about Nuclear Weapons

Instructions: As you watch the film, answer the following questions. Be prepared to share your answers with your classmates.

1. When does the film take place? What historical events are taking place at that time? Refer to your reading.

2. List the main characters of the film. What is their role in the film?

3. List two of the most striking images of the film. What made these moments stand out for you?
   a.
   b.

4. Does the film have a particular point of view or bias about nuclear weapons? What is it? Give two examples of how the director of the film chose to portray these points of view.
   a.
   b.

5. What is the tone of the film? (Serious, sarcastic, funny, etc?)
Other Weapons of Mass Destruction
Nuclear, Biological, and Chemical Weapons

Objectives:

Students will: Identify the three types of weapons of mass destruction (WMD).

Consider the purpose and distinctions of these three types of weapons.

Use online resources to identify the different types of WMD and the history of their use.

Evaluate the reliability of online resources.

Note:

This lesson relies on using the internet to conduct research. The work can be done either in class if students have access to the internet or as homework. Teachers may want to review with students their guidelines for internet usage ahead of time.

There are numerous websites that students may want to turn to. Here are a few starting points:


Center for Non Proliferation Studies: <http://cns.miis.edu/cns/resources.htm>

In the Classroom:

1. Focus Question—Put the question “What are weapons of mass destruction?” on the board or on an overhead.

2. Exploring WMD—Divide the class into at least three groups. Assign each group the task of researching information on one type of WMD: biological, chemical, or nuclear weapons. Ask each group to prepare a two-three minute report on the history and purposes of these weapons. Students should include information about the history of the use of these weapons.

3. Understanding Differences—Ask students to consider what these different types of WMD have in common. What are the primary differences? Why are these weapons called weapons of mass destruction? How different are they from conventional weapons? When and where have they been used?

4. Evaluating the Reliability of Internet Resources—Ask each group to name one of its internet resources. Why did students think that it was reliable? Did they discover any that they thought were less reliable? Ask them to explain. Ask students to consider who wrote the piece and for what purpose. Understanding the motives of the writer(s), as well as the context in which the piece was written, can help determine reliability and accuracy. Remind students that multiple accounts and sources can help students and scholars sort out the accurate and inaccurate.

Review with students the concept of bias. Did they discover any sites with a bias? Can a biased source be useful? Discuss how students might recognize bias in a source, perhaps through language use or selective use of facts, for instance.
# Key Terms

<table>
<thead>
<tr>
<th>Introduction</th>
<th>Part II</th>
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<tr>
<td>kiloton</td>
<td>arsenal</td>
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<td>national security</td>
<td>biological and chemical weapons</td>
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<td>kiloton</td>
<td>taboo</td>
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<td>nuclear terrorism</td>
<td>treaty</td>
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<td>proliferation</td>
<td>industrializing countries</td>
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<td>conventional weapons</td>
<td>intelligence analysts</td>
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<td>megaton</td>
<td>hard-line</td>
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<td>ally</td>
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<td>communism</td>
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<td>capitalism</td>
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<td>first-strike</td>
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<td>great power</td>
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<td>ideology</td>
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<td>ICBMs</td>
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<td>MAD</td>
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<td>arms control</td>
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<td>grass roots</td>
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**Part I**

nuclear terrorism
proliferation
conventional weapons
megaton
radiation
ally
communism
capitalism
military alliance
deterrence
first-strike
great power
ideology
fallout
ICBMs
MAD
arms control
grass roots

**Part II**

arsenal
biological and chemical weapons	
taboo

treaty
industrializing countries
intelligence analysts
hard-line
diplomatic engagement
Atomic Energy
Atomic energy is derived from the splitting or combining of particles within the nucleus of an atom. In the first type of reaction, called fission, energy is emitted as the nucleus is split. In the second type, fusion, a small amount of mass turns into energy as a result of the reaction and the heat and pressure needed to create it. This transfer of mass into energy is described in Einstein’s famous equation E=MC². Nuclear reactors in the United States use fission to heat water to turn turbines, and the radioactive by-products are usually buried in lead containers to prevent contamination of the environment. The energy of an atomic bomb is measured in units of the explosive TNT, a comparison similar to a car’s power measured in horsepower. The enormous amount of energy released in a single atomic bomb can level an entire city in minutes; in contrast, hundreds of planes and several hours are needed to achieve a similar result with conventional bombs.

Diplomatic Relations:
A formal arrangement between states by which they develop and maintain the terms of their relationship. This often includes establishing treaties regarding trade and investment, the treatment of each other’s citizens, and the nature of their security relationship. It also includes the establishment of an embassy and consuls in each other’s countries to facilitate representation on issues of concern for each nation.

The United Nations:
The creation of the United Nations began in the midst of a world war. The United States, the Soviet Union, the United Kingdom, and China agreed to create a new international organization in October 1943—only a few months after the tide had turned in the war against Germany and Japan. The four Allies that met in 1943, along with France, were largely responsible for the development of the UN’s structure. In June 1945, they were among the fifty-five nations that signed the UN Charter in San Francisco. The United States, the Soviet Union, the United Kingdom, France, and China became permanent members of the UN’s Security Council, the new organization’s executive body. The Security Council was given primary responsibility for maintaining international peace and security. Each of the five permanent members of the Security Council held the right to veto UN decisions. The veto system was conceived as a safety valve that would allow the great powers to disagree without threatening the UN’s existence. The framers of the UN hoped that the permanent members of the Security Council would share a common interest in maintaining global peace and spelled out procedures for resolving conflict in the UN Charter.

Treaties, Conventions, Protocols:
Treaties, conventions, and protocols are all types of international agreements. The U.S. president may sign any international agreement, but it does not become the law of the land until it is ratified by two-thirds of the Senate.
The Challenge of Nuclear Weapons

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Making Choices Work in Your Classroom

This section of the Teacher Resource Book offers suggestions for teachers as they adapt Choices curricula on current issues to their classrooms. They are drawn from the experiences of teachers who have used Choices curricula successfully in their classrooms and from educational research on student-centered instruction.

Managing the Choices Simulation

A central activity of every Choices unit is the role play simulation in which students advocate different options and question each other. Just as thoughtful preparation is necessary to set the stage for cooperative group learning, careful planning for the presentations can increase the effectiveness of the simulation. Time is the essential ingredient to keep in mind. A minimum of 45 to 50 minutes is necessary for the presentations. Teachers who have been able to schedule a double period or extend the length of class to an hour report that the extra time is beneficial. When necessary, the role play simulation can be run over two days, but this disrupts momentum. The best strategy for managing the role play is to establish and enforce strict time limits, such as five minutes for each option presentation, ten minutes for questions and challenges, and the final five minutes of class for wrapping up. It is crucial to make students aware of strict time limits as they prepare their presentations.

Fostering Group Deliberation

The consideration of alternative views is not finished when the options role play is over. The options presented are framed in stark terms in order to clarify differences. In the end, students should be expected to articulate their own views on the issue. These views will be more sophisticated and nuanced if students have had an opportunity to challenge one another to think more critically about the merits and trade-offs of alternative views. See Guidelines for Deliberation <www.choices.edu/deliberation.cfm> for suggestions on deliberation.

Adjusting for Students of Differing Abilities

Teachers of students at all levels—from middle school to AP—have used Choices materials successfully. Many teachers make adjustments to the materials for their students. Here are some suggestions:

• Go over vocabulary and concepts with visual tools such as concept maps and word pictures.
• Require students to answer guiding questions in text as checks for understanding.
• Shorten reading assignments; cut and paste sections.
• Combine reading with political cartoon analysis, map analysis, or movie-watching.
• Read some sections of the readings out loud.
• Ask students to create graphic organizers for sections of the reading, or fill in ones you have partially completed.
• Supplement with different types of readings, such as from literature or text books.
• Ask student groups to create a bumper sticker, PowerPoint presentation, or collage representing their option.
• Do only some activities and readings from the unit rather than all of them.

Adjusting for Large and Small Classes

Choices units are designed for an average class of twenty-five students. In larger classes, additional roles, such as those of newspaper reporter or member of a special interest group, can be assigned to increase student participation in the simulation. With larger option groups, additional tasks might be to create a poster, political cartoon, or public service announcement that represents the viewpoint of an option. In smaller classes, the teacher can serve as the moderator of the debate, and administrators, parents, or faculty can be invited to play the roles of congressional leaders. Another option is to combine two small classes.
Assessing Student Achievement

Grading Group Assignments: Students and teachers both know that group grades can be motivating for students, while at the same time they can create controversy. Telling students in advance that the group will receive one grade often motivates group members to hold each other accountable. This can foster group cohesion and lead to better group results. It is also important to give individual grades for groupwork assignments in order to recognize an individual’s contribution to the group. The “Assessment Guide for Oral Presentations” on the following page is designed to help teachers evaluate group presentations.

Requiring Self-Evaluation: Having students complete self-evaluations is an effective way to encourage them to think about their own learning. Self-evaluations can take many forms and are useful in a variety of circumstances. They are particularly helpful in getting students to think constructively about group collaboration. In developing a self-evaluation tool for students, teachers need to pose clear and direct questions to students. Two key benefits of student self-evaluation are that it involves students in the assessment process, and that it provides teachers with valuable insights into the contributions of individual students and the dynamics of different groups. These insights can help teachers to organize groups for future cooperative assignments.

Evaluating Students’ Original Options: One important outcome of a Choices current issues unit are the original options developed and articulated by each student after the role play. These will differ significantly from one another, as students identify different values and priorities that shape their viewpoints.

The students’ options should be evaluated on clarity of expression, logic, and thoroughness. Did the student provide reasons for his/her viewpoint along with supporting evidence? Were the values clear and consistent throughout the option? Did the student identify the risks involved? Did the student present his/her option in a convincing manner?

Testing: Teachers say that students using the Choices approach learn the factual information presented as well as or better than from lecture-discussion format. Students using Choices curricula demonstrate a greater ability to think critically, analyze multiple perspectives, and articulate original viewpoints. Teachers should hold students accountable for learning historical information, concepts, and current events presented in Choices units. A variety of types of testing questions and assessment devices can require students to demonstrate critical thinking and historical understanding.

For Further Reading
Assessment Guide for Oral Presentations

**Group assignment:**

**Group members:**

<table>
<thead>
<tr>
<th>Group Assessment</th>
<th>Excellent</th>
<th>Good</th>
<th>Average</th>
<th>Needs Improvement</th>
<th>Unsatisfactory</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The group made good use of its preparation time</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2. The presentation reflected analysis of the issues under consideration</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3. The presentation was coherent and persuasive</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>4. The group incorporated relevant sections of the reading into its presentation</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>5. The group’s presenters spoke clearly, maintained eye contact, and made an effort to hold the attention of their audience</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>6. The presentation incorporated contributions from all the members of the group</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

**Individual Assessment**

<table>
<thead>
<tr>
<th></th>
<th>Excellent</th>
<th>Good</th>
<th>Average</th>
<th>Needs Improvement</th>
<th>Unsatisfactory</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The student cooperated with other group members</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2. The student was well-prepared to meet his or her responsibilities</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>3. The student made a significant contribution to the group’s presentation</td>
<td>5</td>
<td>4</td>
<td>3</td>
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<td>1</td>
</tr>
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</table>
Alternative Three-Day Lesson Plan

Day 1:
See Day Two of the Suggested Five-Day Lesson Plan. Students should have read the Introduction and Part II of the reading and completed “Study Guide—Part II” before beginning the unit.

Day 2:
Assign each student one of the option groups, and allow a few minutes for students to familiarize themselves with the mindsets of the options. Call on students to evaluate the benefits and trade-offs of their assigned options. What are the essential values that shape the mission of each group?

Day 3:
See Day Five.
Our units are always up to date.
Are yours?

Our world is constantly changing. So CHOICES continually reviews and updates our classroom units to keep pace with the changes in our world; and as new challenges and questions arise, we’re developing new units to address them.

And while history may never change, our knowledge and understanding of it are constantly changing. So even our units addressing “moments” in history undergo a continual process of revision and reinterpretation.

If you’ve been using the same CHOICES units for two or more years, now is the time to visit our website - learn whether your units have been updated and see what new units have been added to our catalog.

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- Terrorism
- Genocide
- Foreign Aid
- Trade
- Environment
- Cuba
- Nuclear Weapons
- UN Reform
- Middle East
- Iraq
- Russia
- South Africa
- India & Pakistan
- Brazil
- Iran
- Mexico
- Colonialism in Africa
- Weimar Germany
- China
- U.S. Constitutional Convention
- New England Slavery
- War of 1812
- Spanish American War
- League of Nations
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- Hiroshima
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The Challenge of Nuclear Weapons

*The Challenge of Nuclear Weapons* introduces students to the issues of nuclear weapons. Students examine the development of U.S. nuclear policy during the Cold War. They then explore the challenges of today including the nuclear legacies of the Cold War, the threat of terrorism, and proliferation. Students are asked to consider what role nuclear weapons should play in U.S. policy in the future.

*The Challenge of Nuclear Weapons* is part of a continuing series on current and historical international issues published by the Choices for the 21st Century Education Program at Brown University. Choices materials place special emphasis on the importance of educating students in their participatory role as citizens.