



# Controlling the Proliferation of Nuclear Weapons



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# Introduction

## Objectives of the Teaching Guide

- ❑ To increase student understanding of the prevalence and spread of nuclear weapons;
- ❑ To familiarize students with historic and contemporary measures to control nuclear proliferation and stimulate their thinking of potential strategies for doing so in the future;
- ❑ To develop students' analytical reading, writing, and research skills;
- ❑ To reinforce students' abilities to collaborate and produce a work product with peers using traditional and electronic means of research, discussion, and document preparation;
- ❑ To enable classroom teachers, students, and contest coordinators to:
  - Understand the overall theme of the National Peace Essay Contest (NPEC) topic;
  - Define and understand the concepts contained in the essay question;
  - Formulate a thesis for their essay;
  - Review bibliographic resources and select qualified sources for their research;
  - Write, edit, and submit essays to the United States Institute of Peace;
- ❑ To provide teachers with lesson plans, worksheets, bibliographic sources, and factual material to assist them in preparing students to write essays for submission to the National Peace Essay Contest.

## Advance Preparation

1. Review this teaching guide and the NPEC guidebook.
2. Decide whether you will use these lessons as preparation for the NPEC or as a supplement to your curriculum.
3. If you will use the guide as preparation for the NPEC, decide:
  - Will this be a required, extra-credit, or extracurricular project for your students?
  - At what point in your course will you include the NPEC?
  - How many class hours can you devote to this project?
  - How will the class hours be scheduled among other assignments and activities?
  - *Will you use optional activities and Lesson VI?*

- Will you use any of the extension activities?
4. For each student, make copies of the essay question, your schedule of assignments, and grading criteria. If you are submitting essays to the NPEC, you may also want to make copies of the Contest guidelines and judging criteria located on pages 4 and 6 of the NPEC guidebook. Please note that you can request a copy of the guidebook for each student in your class by contacting the Institute at (202) 429-3854. Students can also access the guidebook on the NPEC web site: [www.usip.org/npec](http://www.usip.org/npec).
  5. Make copies of the worksheets, overhead transparencies, and reference materials for the lessons you have decided to use.

## Teaching Materials

- Library Access
- Internet Access (if available)
- Overhead Projector

### NOTES:

- This Teaching Guide has been prepared to coincide with the 2005-2006 NPEC; however, the materials can be used at any time, independent of the contest.
- These lessons assume a 45-minute class period. If your school uses block scheduling, these lessons may be combined or may be used as a portion of one day's block. Several lessons are "expandable" depending on the amount of time you wish to give students for research, whether they work individually or in groups, and the method of presentation of their results (written or oral reports), which you select. The sequence of lessons is recommended but is subject to teacher discretion.
- You may wish to confer with colleagues in other departments for substantive information or ideas to improve your students' essay-writing skills.
- Throughout the guide topics or activities that appear in *italics* are optional.

## **About the United States Institute of Peace (USIP)**

The United States Institute of Peace is an independent, nonpartisan federal institution created by Congress to promote the prevention, management, and peaceful resolution of international conflicts. Established in 1984, the Institute meets its congressional mandate through an array of programs, including research grants, fellowships, professional training, education programs from high school through graduate school, conferences and workshops, library services, and publications. The Institute's Board of Directors is appointed by the President of the United States and confirmed by the Senate.

The Institute carries out its mandate through six activities:

1. Expanding society's knowledge about the changing nature and conduct of international relations and the management of international conflicts;
2. Supporting policymakers in the Legislative and Executive Branches;
3. Facilitating the resolution of international disputes;
4. Training international affairs professionals from the United States and abroad in conflict prevention, management, and resolution techniques;
5. Strengthening the education of emerging generations of young people in the United States and in foreign zones of conflict;
6. Increasing public understanding about the nature of international conflicts, as well as approaches to their prevention, management, and resolution.

### **The Education Program**

The Education Program of the United States Institute of Peace seeks to address the needs of educators, students, scholars, international affairs practitioners, and the public to understand the complexities of international conflicts and approaches to peace. Activities of the Education Program include:

- Developing teaching resources for secondary and higher education;
- Organizing workshops for faculty that teach in US educational institutions;
- Sponsoring the National Peace Essay Contest for high school students;
- Working in zones of conflict program to help teachers and educators understand and teach about sources of conflict, approaches to conflict management, post-conflict reconstruction and reconciliation.

# 2005-2006 National Peace Essay Contest Topic

## Controlling the Proliferation of Nuclear Weapons

A primary security concern in today's world is the threat of nuclear weapons proliferation. States beyond the five "original" nuclear weapons-possessing countries (Britain, China, France, Russia and the United States) are seeking to acquire, or have already acquired, nuclear materials, industrial systems to produce plutonium or uranium, and delivery systems, such as missiles and airplanes. Moreover, non-state actors are seeking to acquire nuclear materials and weaponry. What can be done to limit the proliferation of such dangerous weapons?

Despite multilateral and bilateral efforts to control the spread of nuclear weapons, the international community seems to be fighting an uphill battle. The Non-Proliferation Treaty (NPT), whose signatories number some 190 countries, is one multilateral mechanism for limiting the development and deployment of such weapons. But the success of the NPT relies on the willingness of states to be transparent and to cooperate with international organizations in verifying that their development of nuclear power is for peaceful purposes.

Other strategies to limit the spread of weapons have included political pressure – including from the UN Security Council, trade embargoes, sanctions, and the use of military force. Despite these methods, the number of states with nuclear weapons or seeking a nuclear capacity continues to grow. While the recent, apparently voluntary, dismantling of Libya's nuclear weapons program was a great success, and South Africa, Brazil and Argentina have all renounced or dismantled nuclear programs, India and Pakistan have joined the nuclear club, and the nuclear ambitions of North Korea and Iran highlight the urgency for more robust non-proliferation efforts.

In addition, attempts by non-state actors, such as terrorist organizations, to obtain nuclear weapons raise concerns about the ability of multilateral and bilateral efforts of states to prevent terrorist groups – who are difficult to control or deter – from acquiring nuclear materials or weapons.

In a 1500-word essay, select two cases in which the international community—through the United Nations, another international organization, or one or more states—attempted to control the proliferation of nuclear weapons. In one of the cases, the non-proliferation effort was successful; in the other case the effort was unsuccessful. At least one of the cases should be from the post-Cold War period.

- In each case, briefly describe the motivation and effort of either a state or sub-national group to develop a nuclear weapons capability, including the political and military context. Additionally, briefly describe the efforts of the international community to counter or respond to the proliferation efforts. What was each country or organization's motivation for cooperating in or subverting the non-proliferation process?
- Based on your analysis, why was the effort at non-proliferation successful or unsuccessful? Are international treaties more effective than bilateral or other efforts?
- Finally, recommend actions that the international community can take to strengthen efforts to prevent the spread of nuclear weapons.

## Lesson I

### Part A. Introducing the National Peace Essay Contest to Students (2 periods)

**Lesson Overview:** This lesson will introduce students to the topic of the 2005-2006 NPEC and will set the stage for the lessons that follow. The lesson emphasizes understanding of the vocabulary, ideas, and directives of the essay topic. Materials in the lesson stress the importance of locating and using high-quality, reliable sources in the proper manner and avoiding plagiarism.

#### Learning Outcomes:

By the end of the lesson students will have demonstrated an understanding of:

- ❑ the purposes of the United States Institute of Peace,
- ❑ the meaning of essential vocabulary in the essay topic,
- ❑ the difference between primary and secondary sources,
- ❑ the notion that plagiarism is unethical and may disqualify an essay.

#### Materials:

- ❑ 2005-2006 NPEC Guidebook on “Controlling the Proliferation of Nuclear Weapons”
- ❑ Essay contest topic, NPEC rules and guidelines, and information on USIP
- ❑ Your schedule of due dates, grading policy or rubric, and guidelines for the project.
- ❑ Student Worksheet I A: Non-proliferation Vocabulary
- ❑ Student Worksheets I B(1): Understanding Primary and Secondary Resources and Student Handouts I B(1): Evaluating Internet Resources and I B(2): Guidelines for Avoiding Plagiarism for the next assignment

#### Procedures:

##### Step 1

Introduce this project to your students and give them time to read over the information about the U.S. Institute of Peace and the contest rules and guidelines that you have prepared for them. Point out the objectives and benefits to them of entering this contest. Go over the schedule of lessons and assignments.

##### Step 2

Instruct students to read the National Peace Essay Contest topic.

##### Step 3

Divide students into groups of three or four and distribute copies of **Student Worksheet I A: Non-proliferation Vocabulary**. Divide the vocabulary among the groups and have each group develop definitions for their words based on the context of the essay topic. Provide students with dictionaries or Internet access to complete the assignment if you have it available in your classroom. Alternatively, you may have students develop definitions for homework if you do not have resources in your classroom.

##### Step 4

Have each group present their definitions. Use **Teacher Resource 1A** to guide their responses.

### **Step 5**

The terms in the Non-proliferation Vocabulary are listed in the order in which they appear in the essay topic. Ask students to regroup the terms under two headings “Dangers of Nuclear Weapons” and “Methods of Controlling Proliferation” and a third heading “Other.” (See **Teacher Resource IA** for recommended grouping). Be sure students understand why each term belongs in each category. Discuss the groupings with students using some or all of the following questions:

- Which dangers are most problematic?
- Which are most likely to be subject to control and verification?
- How would you rank the methods of control from least to most forceful?

### **Step 6**

Assign each group a paragraph of the essay topic. These paragraphs set the stage and framework for the subject of nuclear non-proliferation. Have students prepare one or two questions or prompts to lead a discussion about their assigned paragraph. For example, Paragraph 2: Why might states be unwilling to be transparent and accept verification? Paragraph 4: Why is it difficult to regulate the actions of non-state actors through international law? One group should re-read and carefully consider the fifth paragraph and each of the three bulleted items that give the direction for writing the essay. These students should prepare to review the bullets with their classmates.

### **Step 7**

Have students pose the questions they developed about their paragraph and the bulleted items to assure that students fully understand the topic and essay format.

**Note to teachers: Successful essays will discuss non-proliferation in two cases that conform to the description in the sentences before the bullets. In good essays the writer uses words or phrases from the topic to give the reader an indication which phrase or question is being addressed.**

### **Step 8: Assignment**

Distribute copies of **Student Worksheet I B(1)** and **Student Handouts I B(1) and I B(2)**. If you are pre-selecting the web page for I B (2), distribute that as well.

### **For students working independently**

Follow Steps 1 – 5.



## Part B. Finding and Using Bibliographic Resources (1/2 – 1 period)

**Lesson Overview:** This lesson emphasizes the importance of locating and using high-quality, reliable sources in the proper manner. The lesson stresses the importance of avoiding plagiarism.

### Learning Outcomes:

By the end of the lesson students will have demonstrated an understanding of:

- ❑ the difference between primary and secondary sources,
- ❑ how to evaluate Internet resources,
- ❑ the dangers of plagiarism.

### Materials:

- ❑ NPEC guidelines, and suggestions for sources and bibliography on pp. 4-5 of the contest guidebook
- ❑ Completed copies of Student Worksheet I B(1): Understanding Primary and Secondary Resources and Student Handouts I B(1): Evaluating Internet Resources and I B(2): Guidelines for Avoiding Plagiarism
- ❑ Student Worksheet II A: Timeline for the next assignment

### Procedures:

#### Step 1

Review NPEC rules, guidelines for sources, and bibliography suggestions with students and answer any questions they have. Be sure to emphasize that essays submitted to the NPEC must have a properly constructed bibliography which:

- contains a variety of Internet and non-Internet sources,
- adheres to the NPEC guidelines regarding encyclopedias, web-sites, and dictionaries (located on p. 5 of the NPEC guidebook),
- includes material that is as up-to-date as possible,
- lists Internet sources separately.

#### Step 2

Review student answers for **Student Worksheet I B(1): Understanding Primary and Secondary Sources**.

#### Step 3

Review student answers for **Student Handout I B(2): Evaluating Internet Resources**.

#### Step 4

Use **Student Handout I B(2): Guidelines for Avoiding Plagiarism** as a vehicle for discussion of the perils and consequences of plagiarism. If students need practice in avoiding plagiarism, have them complete the following exercise:

**Directions:** Select a paragraph from the web page that you used for Handout I B (1). Follow the two acceptable methods of avoiding plagiarism presented in the Lizzie Borden examples on Student Handout I B(2), and write two versions of the paragraph that would avoid plagiarism.

#### Step 5: Assignment

Distribute copies of **Student Handout II A: Timeline** and divide students into groups. Assign a decade to each group and instruct them to identify the major historical events in their assigned

decade. *As an alternative, you may give the students a version of the Timeline that includes information about these events.*

**For students working independently**

Complete **Student Worksheet I B(1)**, review **Student Handouts I B(1), I B(2)** and Step 4.

## Lesson II

### Setting the Stage: Background on Non-Proliferation (1 period)

**Lesson Overview:** History has played an important role in the development and spread of nuclear weapons and affects current efforts to control their proliferation and use. In this lesson students will analyze the relationship between the creation and proliferation of nuclear weapons and the greater historical context.

#### Learning Outcomes:

By the end of the lesson students will have demonstrated an understanding of:

- ❑ the direct and indirect relationships between the development and proliferation of nuclear weapons and the historical context in which these developments occurred.

#### Materials:

- ❑ Student Worksheet II A: Timeline
- ❑ Student Worksheet II B: Grouping Timeline Events
- ❑ Student Handout III A: Treaty on the Non-Proliferation of Nuclear Weapons (NPT) Fact Sheet for next assignment
- ❑ Student Worksheet III A: Understanding the NPT for next assignment
- ❑ Student Handout III B: International Atomic Energy Agency Fact Sheet for next assignment

#### Procedures:

##### Step 1

Have each group share the historical context they identified in their assigned decade and the events related to the proliferation of nuclear weapons.

##### Step 2

Distribute **Student Worksheet II B: Grouping Timeline Events**, and instruct students to use the timeline to create the following three lists, each in chronological order. They can work independently or in groups to complete this task.

1. Nuclear weapons tests conducted by the nations of the “nuclear club”
2. Threatening actions which heightened the level of danger of nuclear war
3. Treaties and other events which lessened the level of danger of nuclear war

##### Step 3

Review the lists created by the students. Lead a class discussion about the relationship between the events related to the proliferation of nuclear weapons (in the left column of the timeline) and the greater historical context (in the right column of the timeline). There may be specific correlations, e.g. Cuban missile crisis leading to Hot Line, and more general ones such as the effect of the end of the Cold War on the willingness of former Soviet Republics and third world nations to agree to the NPT. You may wish to use the following questions in your discussion, which aim to distinguish between nuclear capability and intent to use nuclear weapons.

- Does a country’s nuclear capability affect international events or do international events result in a country’s increased intent to use nuclear weapons? Explore this relationship with examples from your groupings on Student Worksheet II B.

- Is nuclear capability enough to create the threat of nuclear war?

#### **Step 4**

Distribute **Student Handout III A: Treaty on the Non-Proliferation of Nuclear Weapons (NPT) Fact Sheet**; **Student Worksheet III A: Understanding the NPT**; and **Student Handout III B: International Atomic Energy Agency Fact Sheet**. Assign NPT and IAEA readings and questions for homework. *If you are assigning Set 2 on Worksheet III A, you may wish to assign groups of students to find the information to answer each question.*

#### **For students working independently**

Complete **Student Worksheet II A: Timeline** and **Student Worksheet II B: Grouping Timeline Events**. Consider the relationship between events and nuclear proliferation suggested by Steps 2 and 3.

## Lesson III

### The Non-Proliferation Treaty and International Atomic Energy Agency (1 period)

**Lesson Overview:** In this lesson students will review the treaty framework for controlling the spread of nuclear weapons.

#### Learning Outcomes:

By the end of the lesson students will have demonstrated an understanding of:

- ❑ the major provisions of the NPT,
- ❑ the challenges in enforcing the NPT.

#### Materials:

- ❑ Completed Student Worksheet III A: Understanding the NPT
- ❑ *Student Handout III C: Verification of Nuclear Agreements*

#### Procedures:

##### Step 1

Review student answers to the comprehension questions (set 1) of **Student Worksheet III A**. *Student groups can share the information they found about the research questions (set 2)*. Consider and discuss the questions in set 3.

##### Step 2

Have students turn to **Student Handout III B: International Atomic Energy Agency Fact Sheet**. Discuss the IAEA using some or all of the following questions:

- What are the three pillars of the work of the IAEA?
- Which of the activities described as “pillars” would you expect to have the most widespread acceptance and support? *Why?*
- Which of the activities might give rise to resistance and controversy and be difficult to carry out? *Why?*

##### Step 3

Distribute **Student Worksheet IV A: State and Non-State Actors** for the next assignment. Students may work independently or in groups to complete this worksheet.

#### For Students Working Independently

Read **Student Handouts III A and III B** and complete parts 1 and 2 of **Student Worksheet III A**. Answer the questions in Step 3.

## Lesson IV

### State vs. Non-State Actors (1 period)

**Lesson Overview:** Whereas earlier efforts to control proliferation were directed towards nation-states, currently the international community seeks to control the spread of these weapons to non-state actors as well. In this lesson, students will consider how the concepts and strategies that are a part of nonproliferation differ when considered in relation to state vs. non-state actors.

**Lesson Outcomes:**

By the end of the lesson students will have demonstrated an understanding of:

- The difference in meaning of various terms in relation to state and non-state actors.

**Materials:**

- Student Worksheet IV A: State and Non-State Actors
- Student Worksheet V A: Using Nuclear Power for next assignment

**Procedures:**

#### Step 1

Review with students the meaning of state and non-state actors. Ask students for examples of each type of actor.

#### Step 2

Read the following, excerpted from the Center for Non-proliferation Studies' chart of al-Qaeda's WMD activities, listed on the Center's homepage at <http://www.cns.miis.edu/>. Al-Qaeda is the terrorist organization which the U.S. government believes is responsible for orchestrating the September 11, 2001 attacks on the United States, among other terrorist acts.

On 8 February 2004, the Egyptian newspaper Al-Hayat reported that al-Qaeda had purchased tactical nuclear weapons from the Ukraine in 1998 and was "storing them for possible use." Al-Qaeda allegedly purchased the bombs in Kandahar after a visit from Ukrainian scientists. The Ukrainian government denied that the transaction had taken place, stating that all nuclear weapons stored in the Ukraine had been transferred to Russia as of 1996.

Ask students how the international community might verify the information above, which appeared in a newspaper. What challenges to verification might exist?

Ask students now to replace al-Qaeda in the story with North Korea. Does the story change when the actor changes? If so, how? Does the story become more complicated? Less complicated? Why?

#### Step 3

Divide students into 5 groups and assign each group a term on **Student Worksheet IV A: State and Non-State Actors**. Have each group describe the term they have been assigned in relation to both state and non-state actors.

#### Step 4

Have each group share their responses and facilitate a discussion about the challenges that non-state actors pose for the international community in their efforts to control the proliferation of nuclear weapons.

**Step 5**

Distribute **Student Worksheet V A: Using Nuclear Power** and instruct students to complete it individually or assign one or more countries to groups.

**For students working independently**

Complete Student Worksheet IV A.

## Lesson V

### The Use of Nuclear Power (1 period)

**Lesson Overview:** In this lesson, students will review the range of policy choices states have made regarding the development of peaceful and non-peaceful uses of nuclear technology.

#### Learning Outcomes:

By the end of the lesson students will have demonstrated an understanding of:

- ❑ the various policy choices regarding the development of nuclear technology,
- ❑ why countries make certain policy choices regarding the development of nuclear technology.

#### Materials:

- ❑ Completed Student Worksheet V: "Using Nuclear Weapons"
- ❑ *Background material and debate topic for Lesson VI*
- ❑ *Student Handout V: Distinguishing between Civil and Military Stocks of Nuclear Material*
- ❑ *Case Study: Australia*

#### Procedures:

##### Step 1

Ask students to present their policy choices for each country so the class can create a completed version of **Student Worksheet V**. Review responses with the whole class, discussing those countries for which students have answers that differ from the Teacher Resource.

##### Step 2

Lead a discussion using the questions at the bottom of **Student Worksheet V**.

- Why might a country develop nuclear technology?
- Why might a country that has developed nuclear technology for peaceful purposes consider diverting the technology for non-peaceful purposes?

and some or all of the following questions regarding the choices specific countries have made:

- Are there factors that might lead Japan and Taiwan to divert their nuclear energy programs to nuclear weapons? If so, what are they?
- Which countries tested and developed nuclear weapons in the context of the Cold War?
- Which countries have done so because of regional conflicts?
- What did your research reveal about the reasons countries abandoned nuclear weapons programs or made policy choices not to develop them?

##### Step 3

*If you have time, review the case study of Australia with students and lead a discussion using the questions at the bottom of the case as a guide.*

##### Step 4

*If you are using the optional Lesson VI, distribute copies of Student Handout VI: Debate Background. For homework have students read the background and list arguments for each side of the debate.*



**For students working independently**

Complete **Student Worksheet V: Using Nuclear Power** and consider the questions in Step 2.  
Review the terms in **Student Handout V: Distinguishing Between Civil and Military Stocks of Nuclear Material**.

## Lesson VI

### Debate: Options for Controlling the Proliferation of Nuclear Weapons (1 period)

Lesson Overview: In this lesson, students will further explore the uses of nuclear power and will consider different strategies for controlling the proliferation of nuclear weapons.

Lesson Outcomes:

By the end of the lesson students will have demonstrated an understanding of:

- ❑ the limitations of treaties like the NPT,
- ❑ the challenges to the international community of controlling the proliferation of nuclear weapons.

Materials:

- ❑ Student Handout VI: Debate Background
- ❑ Teacher Resource VI A: Debate Roles
- ❑ Teacher Resource VI B: The Fissile Material Cutoff Treaty Beyond NPT

Procedures:

#### Step 1

Review the debate background making sure all students understand the focus of the debate.

#### Step 2

Divide students into triads. Give one student the role card “U.S. government” and a second student the role card “IAEA.” Have the third student serve as the debate judge. Their responsibility is to listen to the arguments and determine which side wins the debate based on the strength of the arguments put forth.

#### Step 3

Have students meet in groups based on their roles for 10 minutes. Have all of the U.S. Government actors discuss their arguments, have all of the IAEA actors discuss their arguments, and have the judges list arguments they will listen for during the debate.

#### Step 4

Have students debate the topic for 10 minutes in their triads.

#### Step 5

Have each judge announce the winner of their debate, explaining the reasons for their decision.

#### Step 6

Lead a class discussion using some or all of the following questions.

- How many judges determined the US government to be the winner? How many determined the IAEA to be the winner?
- Was the final decision difficult to make? Is so, why?
- Which arguments were the most persuasive?
- How were you able to use your understanding of the NPT, the IAEA, and of policy choices to make your decision?

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## Student Worksheet I A: Non-proliferation vocabulary

**Directions:** Listed below **in bold** are words that appear in the Essay Question and other terms in italics that are important for you to understand in order to consider this topic. Use dictionaries, and other resources to define them in the context of the spread of nuclear weapons.

**Proliferation** -

**Stockpiles** -

**Delivery Systems** -

**Non-state actors** -

**Terrorist Organizations** -

**Multilateral** -

**Bilateral** -

**Deployment** -

**Transparent** -

**Verifying** -

**Military Action** -

**Trade Embargoes** -

**Sanctions** -

**Nuclear Club** -

**Subverting** -

*Suitcase bomb* -

*Human capital* -

*Signatories* -

## Teacher Resource I A: Non-proliferation vocabulary

**Directions:** Listed below **in bold** are words that appear in the Essay Question and other terms in italics that are important for you to understand in order to consider this topic. Use dictionaries, and other resources to define them in the context of the spread of nuclear weapons.

**Proliferation (nuclear)** - The spread of nuclear weapons, nuclear weapons technology, or nuclear materials (such as enriched uranium) to states and organizations that do not have them.

**Stockpiles** - The accumulation of nuclear materials, equipment and weapons that are regularly serviced and can be effectively deployed for future use.

**Delivery Systems** - Methods (including guided missile systems, airplanes, torpedoes, hand-held launchers) by which nuclear warheads are delivered to an intended target.

**Non-state actors** - Organizations, networks or alliances other than states with defined mission and goals.

**Terrorist Organizations** - Organizations or movements that use terror as a means to achieve their goals.

**Multilateral** - Involving more than two parties or nations.

**Bilateral** - Involving two parties or nations.

**Deployment** - The systematic positioning and spreading of weapons and forces in readiness to be used offensively or defensively as part of an overall, coordinated plan.

**Transparent (transparency)** - Actions or deployments of weapons that are clear, easily-identified and verifiable, so as to avoid misperceptions about capabilities and intentions. An example of transparency is giving advanced notice of a military training exercise.

**Verifying (verification)** - Means – usually via technical monitoring and/or human inspection – by which parties to an agreement can determine on a near-continuous basis, the extent to which agreement are being complied with. Verification enhances predictability and confidence for parties.

**Trade Embargoes** - Decision by a country or group of countries to prohibit commerce or other economic interaction with a particular country.

**Sanctions** - Coercive measures or restrictions upon international trade, commerce and finance that one country or a group of countries imposes on another in order to influence the latter into complying with international law or take or halt a certain policy or action.

**Nuclear Club** – Traditionally the term “nuclear club” has been an informal way to refer to the United States, Russia, China, France, and Britain-- the first five nations to test nuclear weapons. More formally, these nations are referred to as “nuclear weapon states,” which as defined by Article IX, paragraph 3 of the nuclear Nonproliferation Treaty, are the five states that detonated a nuclear device prior to January 1, 1967. “Non-nuclear states” refers to all other states.

**Subverting (subversion)** - A deliberate effort to undermine and ruin inspection and verification of nuclear programs, equipments and facilities.

*Suitcase bomb* - A very compact and portable nuclear weapon or conventional bomb the size of a small suitcase. It can be hidden in a delivery device as small as a suitcase.

*Human capital* - Knowledge, expertise, capabilities, skills and values of individuals.

*Signatories* - Either nuclear or non-nuclear states that have signed the NPT.

### **Dangers of Nuclear Weapons**

Proliferation

Stockpiles

Delivery Systems

Deployment

Suitcase Bomb

Human Capital

Terrorist Organizations

Subversion

### **Methods of Controlling Proliferation:**

Transparency

Verification

Multilateral Action

Bilateral Action

Trade Embargoes

Sanctions

### **Other**

Non-State Actors

Nuclear Club

Signatories

Student Worksheet I B(1):  
Understanding Primary and Secondary Sources

**Part 1**

**Directions:** For each item below, place a "P" in front of those which are Primary sources and a "S" in front of those which are Secondary sources.

- \_\_\_\_\_ Treaty on the Non-Proliferation of Nuclear Weapons, <http://disarmament2.un.org/wmd/npt/npttext.html>
  
- \_\_\_\_\_ Scheffran, Jurgen (eds). *Beyond the NPT: A Nuclear-Weapon-Free World*. Preliminary Findings of the INESAP Study Group 'Beyond the NPT' presented on the occasion of the NPT Review and Extension Conference on 25 April 1995 in New York *Darmstadt and New York, April 1995*. INESAP- Bulletin No. 14, November 1997.
  
- \_\_\_\_\_ Graham, Thomas. "Sixty Years after Hiroshima, a New Nuclear Era." *Current History: A Journal of Contemporary World Affairs*, Vol. 104, No. 681. April 2005.
  
- \_\_\_\_\_ Levi, A. Michael and Michael E. O'Hanlon. *The Future of Arms Control*. Washington, DC: Brookings Institution Press, 2005.

**Part 2**

**Directions:** In the space provided, list four potential Primary sources for your essay and four potential Secondary sources.

Primary Sources	Secondary Sources
_____	_____
_____	_____
_____	_____
_____	_____

**Part 3**

**Directions:** In a short paragraph, explain why a good essay is based on both primary and secondary sources.

## Student Handout I B(1): Evaluating Internet Resources

**Directions:** Conduct an Internet search for a web site and/or page that your teacher has selected or one that might be a source for your essay. Print the page(s). Using a highlighter and referring to the numbered and lettered items that follow, mark the page(s) to indicate that the site meets the standards listed below. For example, for II. A. "Author/producer is identifiable" you would highlight the name of the author/producer and write "II A" alongside that information.

This may be a good place to give examples of how Internet sources should be listed in the bibliography and cited within the paper

### I. Overall Purpose

- A. Information at this site is relevant to my topic.
- B. My purpose in using the site meshes with the purpose of its author/producer.

### II. Source

- A. Author/producer is identifiable.
- B. Credentials of author/producer are available.
- C. Credentials suggest that author/producer has expertise on the subject.
- D. Sponsor/location of the site is shown in the URL
  - 1. ie. .edu; .gov; .com.
  - 2. Beware of personal home pages with no official sanction.
- E. Mail-to link is offered for submission of questions or comments.

### III. Content

- A. Information is attributed properly or clearly expressed as the author/producer's original work-product.
- B. Accuracy of factual material can be verified with links to other sources.
- C. Subjective opinion or bias is clearly presented as such.
- D. There is a clear indication of whether the material only covers a specific time period.
- E. Site has been updated recently as reflected by the date on the page.
- F. Information is up-to-date.
- G. Links are relevant and appropriate.

### IV. Style and Functionality

- A. Site is laid out clearly and logically with well-organized subsections.
- B. Writing style is appropriate for an academic audience.
- C. Site is easy to navigate including:
  - 1. Clearly labeled *Back, Home, Go To Top* icons/links.
  - 2. Internal indexing links on lengthy pages.
- D. Links to remote sites all work.
- E. Search capability is offered if the site is extensive.

Handout based on  
Jacobson, Trudi and Laura Cohen, "Evaluating Internet Resources" University at Albany Libraries at  
<http://library.albany.edu/internet/evaluate.html>.



## Student Handout I B(2): Guidelines for Avoiding Plagiarism

**Plagiarism:** Because of easy access to information on the Internet, plagiarism has become a large problem. Cutting and pasting text from the web, and representing this text as your own, is plagiarism. Quoting and paraphrasing without citing the author is plagiarism. Stealing other writers' ideas without citation is plagiarism. When in doubt, use a citation!

**USIP cannot say strongly enough how important it is for you to avoid plagiarism. Essays that contain plagiarized material will be DISQUALIFIED.**

Under copyright law, an author's original expression is strictly protected. It is **against the law** to plagiarize. That includes cutting and pasting from web pages and other online sources.

### **DIRECT QUOTATIONS**

Any text directly copied from any source, including web pages, must be put in quotation marks.

### **PARAPHRASE**

You paraphrase when you put someone else's ideas, thoughts, or research into your own words. In order for a paraphrase to be acceptable, it must truly be in your own words, without using phrases or the same structure as the original. In a paraphrase, you are capturing the spirit of the original, not copying it.

This **does not** mean that you can simply represent others' ideas, thoughts, or research as your own!!

You must indicate a source for any paraphrase or direct quotation. There are two ways to go about this depending on the kind of writing you're doing:

1. If you are writing a general nonfiction essay, you will usually not use footnotes, endnotes, or in-text citations. Rather, you indicate the author or source in the sentence itself. For example:

The transcendentalist philosopher Ralph Waldo Emerson once called snow "the fierce artificer."

The German philosopher Martin Heidegger argued that poetry was the answer to technology's extreme rationalization.

As you can see, it is entirely clear who said what in both these cases.

2. If you are writing a research paper or a scholarly work, you will be required to put a footnote, endnote, or in-text citation after **every** paraphrase or direct quotation. There are a few exceptions to this rule that depend on a thorough knowledge of the bibliographic style required by your professor or editor. **DO NOT GUESS.** When in doubt, ask.  
You must indicate the source of any paraphrase or direct quotation, **sentence by sentence.** Occasionally, you can write a few sentences summarizing the thoughts of an author without

mentioning the author's name in every sentence, but it must be crystal clear that each sentence is coming from that source. **This is a very difficult writing skill to master, and unless you really know what you are doing, you should indicate the source in every sentence.**

IF YOUR WRITING FEELS REPETITIOUS BECAUSE YOU ARE MENTIONING A SOURCE IN EVERY SENTENCE, YOU HAVE A STRONG CLUE THAT YOU ARE NOT PUTTING IN ENOUGH OF YOUR OWN IDEAS AND ANALYSIS.

- ❑ If every sentence is from another source, you're not doing your job as a writer.
- ❑ Sources are used to support YOUR IDEAS, not substitute for them!
- ❑ Own your writing!
- ❑ A rule of thumb: For every 250 wds. of writing, 3-4 sentences using sources.

Some facts, ideas, and thoughts are considered general knowledge. For example, "In 1963, John F. Kennedy was shot by Lee Harvey Oswald" is general knowledge. However, "In 1963, John F. Kennedy was shot by Lee Harvey Oswald, who was involved in a Russian Mafia conspiracy," is a thought that belongs to the author, who has drawn a unique conclusion from the facts. If you see information that could easily appear in a general encyclopedia, it is probably general knowledge and does not need a citation. But NEVER GUESS. When in doubt, cite your source.

**It is much, much, much, much better to cite too much than to plagiarize.**

The above guidelines are from Michigan State University's website:  
[www.msu.edu/course/atl/130/larabee/plagguide.htm](http://www.msu.edu/course/atl/130/larabee/plagguide.htm)

### **Taking Notes**

**Sloppy note-taking increases the risk that you will unintentionally plagiarize.**

Unless you have taken notes carefully, it may be hard to tell whether you copied certain passages exactly, paraphrased them, or wrote them yourself. This is especially problematic when using electronic source materials, since they can so easily be copied and pasted into your own documents.

#### **Tips:**

- ❑ **Identify words that you copy directly** from a source by placing *quotation marks* around them, typing them in a *different color*, or *highlighting them*. (Do this immediately, as you are making your notes. Don't expect to remember, days or weeks later, what phrases you copied directly.) Make sure to indicate the exact beginning and end of the quoted passage. Copy the wording, punctuation and spelling exactly as it appears in the original.
- ❑ **Jot down the page number and author or title** of the source each time you make a note, *even if you are not quoting directly but are only paraphrasing*
- ❑ **Keep a working bibliography** of your sources so that you can go back to them easily when it's time to double-check the accuracy of your notes. If you do this faithfully during the note-taking phase, you will have no trouble completing the "works cited" section of your paper later on.

- ❑ **Keep a research log.** As you search databases and consult reference books, keep track of what *search terms* and *databases* you used and the *call numbers* and *url's* of information sources. This will help if you need to refine your research strategy, locate a source a second time, or show your professor what works you consulted in the process of completing the project.

The above Note-Taking guidelines are from Duke University's website:  
[www.lib.duke.edu/libguide/citing.htm](http://www.lib.duke.edu/libguide/citing.htm)

### **How to Recognize Unacceptable and Acceptable Paraphrases**

Here's the ORIGINAL text, from page 1 of *Lizzie Borden: A Case Book of Family and Crime in the 1890s* by Joyce Williams et al.:

The rise of industry, the growth of cities, and the expansion of the population were the three great developments of late nineteenth century American history. As new, larger, steam-powered factories became a feature of the American landscape in the East, they transformed farm hands into industrial laborers, and provided jobs for a rising tide of immigrants. With industry came urbanization the growth of large cities (like Fall River, Massachusetts, where the Bordens lived) which became the centers of production as well as of commerce and trade.

#### **Here's an UNACCEPTABLE paraphrase that is plagiarism:**

The increase of industry, the growth of cities, and the explosion of the population were three large factors of nineteenth century America. As steam-driven companies became more visible in the eastern part of the country, they changed farm hands into factory workers and provided jobs for the large wave of immigrants. With industry came the growth of large cities like Fall River where the Bordens lived which turned into centers of commerce and trade as well as production.

#### **What makes this passage plagiarism?**

The preceding passage is considered plagiarism for two reasons:

- ❑ The writer has only changed around a few words and phrases, or changed the order of the original's sentences.
- ❑ The writer has failed to cite a source for any of the ideas or facts.

**\* If you do either or both of these things, you are plagiarizing.**

**NOTE:** This paragraph is also problematic because it changes the sense of several sentences (for example, "steam-driven companies" in sentence two misses the original's emphasis on factories).

#### **Here's an ACCEPTABLE paraphrase:**

Fall River, where the Borden family lived, was typical of northeastern industrial cities of the nineteenth century. Steam-powered production had shifted labor from agriculture to manufacturing, and as immigrants arrived in the US, they found work in these new factories. As a result, populations grew, and large urban areas arose. Fall River was one of these manufacturing and commercial centers (Williams 1).

#### **Why is this passage acceptable?**

This is acceptable paraphrasing because the writer:

- ❑ Accurately relays the information in the original uses her own words.
- ❑ Lets her reader know the source of her information.

**Here's an example of quotation and paraphrase used together, which is also ACCEPTABLE:**

Fall River, where the Borden family lived, was typical of northeastern industrial cities of the nineteenth century. As steam-powered production shifted labor from agriculture to manufacturing, the demand for workers "transformed farm hands into factory workers," and created jobs for immigrants. In turn, growing populations increased the size of urban areas. Fall River was one of these manufacturing hubs that were also "centers of commerce and trade" (Williams 1)

**Why is this passage acceptable?**

This is acceptable paraphrasing because the writer:

- ❑ Records the information in the original passage accurately.
- ❑ Gives credit for the ideas in this passage.
- ❑ Indicated which part is taken directly from her source by putting the passage in quotation marks and citing the page number.

\* Note that if the writer had used these phrases or sentences in her own paper without putting quotation marks around them, she would be **PLAGIARIZING**. Using another person's phrases or sentences without putting quotation marks around them is considered plagiarism **EVEN IF THE WRITER CITES IN HER OWN TEXT THE SOURCE OF THE PHRASES OR SENTENCES SHE HAS QUOTED.**

The above Paraphrasing guidelines are from Indiana University's website:  
From: [www.indiana.edu/wts/wts/plagiarism.html](http://www.indiana.edu/wts/wts/plagiarism.html)

## **PRACTICE IN AVOIDING PLAGIARISM**

Instructions to students: Select a paragraph from the web page which you found for Handout I B (1). Following the two acceptable methods of avoiding plagiarism presented in the Lizzie Borden examples, write two versions of the paragraph that would avoid plagiarism.

## Student Worksheet II A: Timeline

**Directions:** Review the events related to the proliferation of nuclear weapons listed in the column on the left. Research these events and provide the greater historical context of each event in the column on the right.

### 1940s

### Context

**July 16, 1945:** The US conducts the world's first nuclear test explosion at Alamogordo, New Mexico August, 6 and August 9, 1945: Nuclear weapons are used to destroy the Japanese cities of Hiroshima and Nagasaki.

**June 14, 1946:** At the first meeting of the Atomic Energy Commission, the U.S. delegate proposes a plan to internationalize control of atomic energy. The plan is rejected by the Soviet Union.

**August 29, 1949:** The Soviet Union tests its first nuclear weapon at Semipalatinsk, ending the U.S. monopoly.

## 1950s

## Context

**October 3, 1952:** The United Kingdom conducts its first nuclear test in Western Australia.

**November 1, 1952:** The U.S. detonates the first hydrogen bomb at Enewetak Atoll in the Marshall Islands. Less than a year later, the U.S.S.R. detonates its first thermonuclear weapon.

**January 1954:** Secretary of State John Foster Dulles announces a doctrine of massive retaliation which could entail the use of nuclear weapons against communist aggression. Later that month the U.S. Navy launches the first nuclear-powered ship, the Nautilus.

**1957:** The UN creates the International Atomic Energy Agency (IAEA) to promote "peaceful" uses of nuclear energy.

**1958:** The US deploys the first Intercontinental Ballistic Missile.

**1946-1962:** The U.S. conducts 193 atmospheric tests mainly in the Pacific and in Nevada involving over 200,000 military and civilian personnel. The Soviet Union conducts 142 such tests.

## 1960s

## Context

**February 13, 1960:** France joins the nuclear weapons "club," testing an atomic weapon in Algeria.

**June, 1963:** A hot line agreement between the U.S. and USSR goes into effect.

**July 25, 1963:** A Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water—the Limited Test Ban Treaty—was signed by the U.S., USSR and Britain. It did not, however, include underground tests. 116 countries have since signed the treaty. China never signed it and in 1992 tested an atomic bomb beyond the treaty's limits.

**October 16, 1964:** China becomes the fifth nation to possess nuclear weapons, completing a successful test in Northwestern China. The next year U.S. Secretary of Defense Robert McNamara announces that the United States would rely upon the threat of "mutually assured destruction" to deter Soviet attack.

**February 1967:** The Treaty of Tlatelolco, creating a Latin American Nuclear Weapons Free Zone, is signed. China conducts its first thermonuclear weapons test. July 1, 1968: The US, USSR, and Britain sign The Treaty on the Non-Proliferation of Nuclear Weapons (NPT). The treaty is entered into force on March 5, 1970.

## 1970s

## Context

**May, 1974:** India conducts its first nuclear test in the Thar Desert near its border with Pakistan. Bowing to international pressure, France announces that all of its future nuclear tests will be conducted underground.

The U.S. and USSR conclude the Threshold Test Ban and Peaceful Nuclear Explosions Treaties limiting military and non-military underground tests to explosive yields below 150 kilotons.

The Strategic Arms Limitation Talks (SALT I) and Anti-Ballistic Missile (ABM) treaties are ratified by the United States and the Soviet Union. The agreement freezes the number of strategic ballistic missiles at current levels for five years.

## 1980s

Reagan's Administration engineers a massive build-up of nuclear arms. In 1985 it is reported that Israel may have up to 200 nuclear weapons stockpiled. By the end of the decade, the Cold War ends when Glasnost explodes into a mostly peaceful revolution across the former Soviet block.



## 1990s

## Context

The Strategic Arms Reduction Treaty is signed by the United States and the Soviet Union. The Treaty cuts nuclear warheads by 15% in the U.S. and by 25% in the USSR. START II, proposed two years later, increases the reductions to 50%.

South Africa dismantles its nuclear weapons and places all its nuclear materials under IAEA safeguards prior to joining the NPT.

**1993:** Belarus dismantles nuclear weapons and enters NPT as a non-nuclear weapons state.

**1994:** Kazakhstan and the Ukraine dismantle nuclear weapons and enter NPT as non-nuclear weapons states.

**May 1995:** More than 180 nations meet and agree to indefinitely extend the Nuclear Non-Proliferation Treaty.

**1996:** Comprehensive Test Ban Treaty adopted by the United Nations General Assembly in September. This treaty "prohibits any nuclear weapon test explosion or any other nuclear explosion." 166 states have signed it, but only 41 have ratified it. Those that have not ratified it include the United States, China, India, Pakistan and Israel.

**1998:** India tests two atomic bombs and one hydrogen bomb, insisting that Pakistan is a nuclear threat. Pakistan follows suit, implementing five nuclear tests. Later that year, Brazil places all its nuclear materials under IAEA safeguards and accedes to the NPT.

**2000s**

Libya is found to be in non-compliance with NPT by IAEA and in violation of safeguards agreement. In December, Libya pledges to eliminate its nuclear weapons program, declare all of its nuclear activities to the IAEA, and allow immediate inspections and monitoring to verify these actions.

## Student Worksheet II B: Grouping Timeline Events

**Directions:** *Divide the events on Student Worksheet IIA: Timeline among the three groups listed below.*

1. Nuclear weapons tests conducted by the nations of the “nuclear club.”
2. Threatening actions which heightened the level of danger of nuclear war.
3. Treaties and other events which lessened the level of danger of nuclear war.

## Student Handout III A: Treaty on the Non-Proliferation of Nuclear Weapons (NPT) Fact Sheet

### Overview

- ⇒ NPT is a landmark international treaty, which seeks to promote cooperation and equal access in the field of peaceful nuclear technology, while preventing the spread of nuclear material and technology for weapons use.
- ⇒ NPT represents the only binding multilateral agreement by nuclear states with the objective of preventing the spread of nuclear weapons and weapons technology and facilitating their eventual complete elimination. More countries have ratified the NPT than any other arms limitation and disarmament agreement.
- ⇒ NPT was opened for signature on 1 July 1968, entered into force on 5 March 1970, and extended indefinitely in 1995.
- ⇒ Total number of signatories: 189 (including all 5 nuclear weapon states)
- ⇒ Only four countries with significant nuclear activities or research have refused to sign the treaty: Israel, India, Pakistan, and Cuba.

### Conditions

- ⇒ Under the treaty, nuclear weapon states (defined as those that exploded a nuclear weapon prior to January 1, 1967) agree not to transfer nuclear weapons, devices or technologies to any recipient under any circumstances; and non-nuclear states agree not to receive, acquire, or develop them. In return, non-nuclear states are guaranteed equal access to all benefits from any peaceful applications of nuclear energy, including the right to research, produce, and use nuclear technologies.
- ⇒ The treaty establishes a system of safeguards (inspections and verifications) under the responsibility of the International Atomic Energy Agency (IAEA). All non-nuclear states agree to accept these safeguards, including inspections as a condition for being able to participate in the peaceful exchange of nuclear equipment, materials, and scientific and technological information.
- ⇒ All states that sign the agreement have the right to undertake research, production, and exploitation of nuclear energy for peaceful purposes;
- ⇒ The nuclear weapon states must assist those without nuclear weapons in the development of nuclear energy for peaceful purposes;
- ⇒ All parties to the treaty must continue to pursue negotiations on effective measures for nuclear disarmament and general and complete disarmament;
- ⇒ Each state has the right to withdraw from the treaty if it believes that its vital national interests are threatened by extraordinary events related to the treaty

### Violations

Only two states that are parties to the NPT have been found to be in clear violation. Iraq was caught violating the NPT in 1991 via IAEA inspections. The United Nations subsequently imposed economic and military sanctions on Iraq. North Korea violated the safeguard agreement and then withdrew from the treaty with nuclear material still in its possession in 1994.

## Student Worksheet III A: Understanding the NPT

### PART 1

**Directions:** *Using information in Student Handout III A, answer the following comprehension questions.*

1. What are the three major goals of the NPT?
2. What are the two categories of signatory states?
3. What are the obligations of nuclear weapon states?
4. What are the obligations of non-nuclear states?
5. What is the enforcement mechanism for preventing the spread of nuclear weapons?
6. What protection of state sovereignty does the treaty contain?
7. What countries have violated, are suspected of violating, or have refused to sign the NPT?

### PART 2

**Directions:** *Conduct research to answer the following questions.*

1. Who are the nuclear weapon states? What was and is their incentive to be signatories to the treaty?
2. What are the incentives for non-nuclear states to sign the Treaty?
3. What are some of the peaceful uses of nuclear energy that have and could be developed?
4. What record exists of nuclear states giving assistance to non-nuclear states in development of nuclear energy for peaceful purposes?
5. What ongoing disarmament negotiations have taken or are taking place?
6. For what reasons have each of the non-signatory states declined to participate in the NPT?

### PART 3

**Directions:** *Consider and discuss the following issues.*

1. How would you define “vital national interests” and “extraordinary events”? Does this right to withdraw reduce or negate the effectiveness of the NPT?
2. What steps could be taken to increase the sharing of nuclear technology and the pace and success of disarmament negotiations?
3. What could signatory states do to persuade non-signatory countries to sign the NPT and to assure signatory non-nuclear states that they do not need to violate and/or withdraw from the treaty?

## Teacher Resource III A: Treaty on the Non-Proliferation of Nuclear Weapons (NPT) Fact Sheet

### Answers to Part 1

1. To prevent the spread of nuclear weapons and weapons technology, to facilitate their elimination, and to promote cooperation in field of peaceful nuclear technology.
2. Nuclear weapon states (defined as those that have exploded a nuclear weapon prior to 1/1/67) and non-nuclear states (all others)
3. Nuclear weapon states must not transfer nuclear weapons, devices or technologies to any recipient; must assist those without nuclear weapons in the development of nuclear energy for peaceful purposes; must continue to pursue negotiations for nuclear and general disarmament.
4. Non-nuclear states must not receive, acquire, or develop nuclear weapons, devices, or technologies; must accept the inspection and verification safeguards; must continue to pursue negotiations for nuclear and general disarmament.
5. Inspections and verification by the International Atomic Energy Agency.
6. Each state may withdraw from the NPT if it believes that its vital national interests are threatened by extraordinary events related to the treaty.
7. Violated: Iraq and North Korea; suspected: Iran and Japan; non-signers: Israel, India, Pakistan, and Cuba.

### Answers to Part 2

1. U.S., Russia, France, Great Britain, and China. By international law (i.e., the Non-Proliferation Treaty), they retain a monopoly on nuclear weapons and encourage the peaceful use of nuclear technology.
2. They receive assistance from the nuclear weapon states in development of peaceful uses of nuclear technology. They are spared the cost of developing nuclear weapons if they believe other neighboring states are also pledged not to develop such weapons.
3. Generation of power, particularly electricity. Medical use, particularly in the area of radiology.
4. The IAEA has provided assistance and training in the security and safe handling of radioactive materials found in the Republic of Georgia. The IAEA and American and British funds have helped establish a radiotherapy cancer treatment center at a hospital in Ghana. The United States and IAEA have provided assistance to South Korea in developing nuclear energy, including reactor development and technology, nuclear safety, radioactive waste management, application of radiation and radioisotopes, and radiation protection.
5. There have been sporadic negotiations concerning North Korea's nuclear program between North Korea, South Korea, China, Japan, Russia and the United States, referred to as the "six-power talks." Another example has been the ongoing discussions between Germany, France and Britain with Iran that led to a temporary agreement to halt the Iranian nuclear enrichment program in 2004.
6. India has long criticized what it claims as the perpetual nuclear monopoly of the five permanent members of the UN Security Council. Israel's policy has been to maintain a policy of "nuclear ambiguity" as a means of deterring attacks against it. The Israeli government views this deterrent threat, possible retaliation against enemy attack with nuclear weapons, as central to Israel's national survival. Many Israelis credit the deterrent threat with preventing Iraqi chemical and biological attacks during the 1991 Gulf War).

Answers to Part 3 will vary.

## Student Handout III B: International Atomic Energy Agency (IAEA) Fact Sheet

### **Overview**

The IAEA, established in the late 1950s through the United Nations, works with member states “to promote safe, secure and peaceful nuclear technologies.” The IAEA was created in response to the fears that resulted from the discovery of nuclear energy. In 1956, 81 countries approved the IAEA Statute, which outlines three pillars of the IAEA’s work: nuclear verification and security, safety, and technology transfer. Today the IAEA has 138 member states. The IAEA is the verification authority for the Treaty on the Non-Proliferation of Nuclear Weapons (NPT),

### **Pillars**

#### ***Promoting Safeguards and Verification:***

The IAEA provides nuclear weapons inspectors who work to verify that safeguarded nuclear material and activities are not used for military purposes. Under safeguards agreements, the IAEA inspects nuclear facilities in more than 140 states. Most agreements are with states that have committed, through the NPT, not to possess nuclear weapons.

#### ***Promoting Safety and Security:***

The IAEA helps member states prepare for and respond to nuclear emergencies for the purpose of protecting people and the environment from harmful exposure to radiation. A key component of the work on safety is setting and promoting the application of international safety standards that regulate activities involving nuclear material. The work on security focuses on helping member states prevent, detect and respond to terrorist or other hateful acts, including illegal possession, use, and trafficking, as well as to protect nuclear installations and transport from sabotage.

#### ***Promoting Science and Technology:***

The IAEA is the focal point for the development of peaceful applications of nuclear technology in developing countries. IAEA’s work in this area contributes to fighting poverty, disease, and global pollution.

Source: IAEA website: [www.iaea.org](http://www.iaea.org)

## Student Handout III C: Verification of Nuclear Agreements

### **Checking up on the NPT**

The agreement of the signatories to the Nuclear Non-Proliferation Treaty (NPT) that they will not acquire nuclear weapons relies on the assumption of all participating states that the agreement is being observed in good faith. Without the necessary certainty that the NPT system is working, and that states are not acquiring new or secret weapons, the feeling of trust and security that was the original aim of the treaty will not take place. Therefore the verification of non-proliferation agreements is a serious and sensitive matter. The International Atomic Energy Agency (IAEA) is the world's primary inspection and verification body and its staff of nuclear experts is charged with carrying out the regular inspections required by the NPT verification agreements.

### **Methods of Verification**

There are three types of verification inspection carried out under the NPT: "ad hoc inspections" on an unscheduled basis, "regular inspections" made at regular intervals, and the rarer "special inspections" requested to further investigate a noted discrepancy. IAEA inspectors use several methods to verify compliance with the NPT. Most verification schedules begin with a state's declaration of nuclear activities, materials, equipment, and location. Inspectors can then check this initial declaration, and once confirmed, can use it as a baseline for future declared activities and inspections. Also among the methods is the use of special seals placed on instruments or materials that prevent prohibited access or movement (of excess spent fuel, for example) without detection. Verification teams may also set up cameras and surveillance mechanisms that record illegal activities in specified locations. One of the most important methods used by the IAEA is the basic inventory of weighed and identified nuclear material which must correspond to expected and declared amounts. More recently, inspectors have begun to use investigative methods such as detecting unexpected radioactivity in certain areas. They may also examine satellite imagery that indicates the possibility of a new or newly active nuclear site.

### **Verification is never absolute**

The difficulty with all of these methods is that they may produce "false negatives" – that is, even if all of these methods result in a satisfactory verification process, there is no absolute proof that a state has not managed to hide illegal nuclear activity. This lingering possibility has resulted in fear and suspicion regarding states that appear uncooperative. Additionally, the verification process described above does not apply at all to the non-state actors who seek to acquire nuclear materials.



## Student Worksheet IV A: State and Non-State Actors

**Directions:** Describe each term listed below in relation to state and non-state actors, emphasizing the differences in meaning, as well as how non-state and state actors may perceive these terms differently and how non-state actors may be affected by these terms differently than state actors.

### **1. Proliferation**

*State Actors:*

*Non-State Actors:*

### **2. Stockpiles**

*State Actors:*

*Non-State Actors:*

### **3. Delivery System**

*State Actors:*

*Non-State Actors:*

### **4. Transparent (Verification)**

*State Actors:*

*Non-State Actors:*

### **5. Multilateral Action**

*State Actors:*

*Non-State Actors:*

## Student Worksheet V A: Using Nuclear Power

**Directions:** Research the policy decisions of the countries listed below. Place an X in the column that best represents the policy choice made and answer the questions that follow.

Country	Successfully Tested and Developed Nuclear Weapons	Abandoned a nuclear weapons program	Made a policy choice not to pursue nuclear weapons	Has a robust nuclear energy program that could easily be diverted to nuclear weapons	Has a lack of transparency
Argentina					
Australia					
Brazil					
China					
Egypt					
France					
India					
Iran					
Iraq					
Israel					
Japan					
Libya					
North Korea					
Pakistan					
Russia					
South Africa					
Taiwan					
United Kingdom					
United States					

Why might a country develop nuclear technology?

Why might a country that has developed nuclear technology for peaceful purposes consider diverting the technology for non-peaceful purposes?

### **Case Study: Australia**

During the early stages of the Cold War, Australia began the necessary research to develop nuclear weapons capability. This was done initially in conjunction with Great Britain as part of a British Commonwealth effort and included Australia and South Africa in particular. These two countries were associated with many facets of Britain's empire bomb project, providing uranium, land for weapons and rocket tests, and scientific and engineering expertise. Nuclear tests were carried out in Australian deserts and the initial plan was to have an Australian bomb as part of a joint project. The Australian government never took a decision to systematically pursue a nuclear weapons program, but it repeatedly took steps to lessen the lead time for weapons production by pursuing civil nuclear projects. It also began to purchase delivery systems such as F-111 bombs in 1963 that could be modified to carry nuclear bombs. Initially, Australia was opposed to the NPT because it did not want to preclude its option to fully develop a nuclear weapons capacity. It finally signed the NPT agreement in 1971 and gradually began to move away from a domestic weapons capability due in large measure to agreements between the United States and Australia in the early 1970s that extended the American nuclear umbrella to Australia via military alliance. Ultimately, Australia abandoned its potential nuclear weapons projects.

#### **Questions:**

1. Why might a country decide not to develop a nuclear weapons program?
2. What are the possible advantages and disadvantages of such a decision?
3. What other countries have decided not to develop a nuclear weapons program? What were the circumstances in which they made this decision?

## Teacher Resource V A: Using Nuclear Power

Country	Successfully Tested and Developed Nuclear Weapons	Abandoned a nuclear weapons program	Made a policy choice not to pursue nuclear weapons	Has a robust nuclear energy program that could easily be diverted to nuclear weapons	Has a lack of transparency
Argentina		X			
Australia			X		
Brazil		X			
China	X				
Egypt			X		
France	X				
India	X				
Iran					X
Iraq					X
Israel	X				
Japan				X	X
Libya		X			
North Korea	X				X
Pakistan	X				
Russia	X				
South Africa		X			
Taiwan				X	
United Kingdom	X				
United States	X				

Why might a country develop nuclear technology?

Why might a country that has developed nuclear technology for peaceful purposes consider diverting the technology for non-peaceful purposes?

## Student Handout V A: Distinguishing between Civil and Military Stocks of Nuclear Material

### **Fissile Matter**

There are two kinds of nuclear material that are the subject of international concern: the radioactive elements uranium and plutonium. Uranium and plutonium are a particular type of element called "fissile." Fissile matter can be used in a process called "fission" which results in a nucleus splitting into two smaller atoms. Fissile materials undergo fission in such a way (by producing extra neutrons) that they are capable of generating a chain reaction of continuing fission. This process must occur in a nuclear reactor and generates three outcomes: heat, radiation, and fission products.

### **Fission in Reactors**

In civil nuclear reactors, the heat from fission is transformed into non-radioactive energy, often through steam, and the radiation and fission products are considered waste or "spent fuel." In military reactors, the fission products, highly enriched uranium and reduced plutonium, are used to make nuclear weapons or to power nuclear submarines. These highly refined versions of uranium and plutonium are called "weapon-grade." Uranium and plutonium are the two indispensable fissile materials used for both civil and military purposes, and they are both tracked by the International Atomic Energy Agency (IAEA) and are subject to the terms of the Nuclear Non-Proliferation Treaty (NPT).

### **The Dilemma: Both types of Nuclear Material Can Be Produced by the Same Reactor**

Worldwide stocks of nuclear material today are almost evenly divided between military and civilian use. Uranium exists naturally in metallic ores that can be mined, but uranium ore is not suitable either for driving a reactor or creating a weapon and must first be chemically treated. Plutonium does not occur naturally, except in trace amounts, and is created artificially by bombarding uranium atoms with neutrons in a nuclear reactor. This means that most kinds of reactors may be used to generate both civilian energy and to generate weapon-grade fissile material. Because civilian energy is permitted under international law, attempts to control the production and storage of nuclear material have become very complicated.

## Student Handout VI A: Debate Background

### Background:

In March 2005, the Bush Administration signaled a new approach to the NPT. While reaffirming the U.S.'s determination to live up to its commitments embodied in the NPT, President Bush also claimed that "rogue states" were taking advantage of a loophole in the treaty that allowed them "to produce nuclear materials that can be used to build bombs under the cover of civilian programs." (Bush Statement on the NPT, 3/7/05)

The President and his advisors want to prevent a country like Iran from enriching uranium to produce electric power, though they acknowledge that under the NPT, Iran has the right to develop nuclear power for non-military uses. Essentially, the United States would like Iran to give up that right or have other countries join the United States in preventing Iran from exercising that right, because in its view, Iran cannot be trusted with any technology that can produce nuclear material.

Therefore, the parameters of a major policy debate regarding the NPT have emerged. The essential question for debate is two-fold:

- 1) Should the NPT be re-negotiated and amended?
- 2) If so, how should the NPT be strengthened so as to become a stronger force in preventing the proliferation of nuclear weapons?

The two sides of the debate are whether meaningful nuclear non-proliferation can be strengthened via the existing NPT regime, through the concerted actions and commitments of UN states, or whether the United States and its allies (including other nuclear powers) should work in concert, and outside the NPT process, to prevent countries from developing nuclear bombs and withdrawing from the NPT. The first approach looks to work within the NPT system and find technical and legal means to strengthen non-proliferation. The second approach demonstrates little faith in the NPT regime and wants to rely on the use of projected political, economic and perhaps even military power to persuade "rogue states" to change.

### Scenario:

A representative of the U.S. government and a representative of the IAEA are meeting to discuss a proposed plan of action regarding Iran's nuclear power program. The major point of discussion, as put forth by the U.S. camp, is as follows:

Iran is a rogue state and its ongoing nuclear enrichment program, while legal under the NPT, will allow it to divert nuclear fuel to a clandestine weapons program. Iran's exploitation of a loophole in the treaty would allow it ultimately to violate the treaty but such a discovery would come too late. Because it cannot be trusted to only develop nuclear power for peaceful, civilian purposes, the international community must apply political and economic pressure to encourage Iran to dismantle its nuclear power program.

The IAEA argues that stronger means can be applied to assure that Iran is not diverting its nuclear fuel for weapons use and thus the integrity of the NPT can be maintained.

## Teacher Resource VI A: Debate Roles

**Directions:** Give each pair of students one of the following roles to guide the debate.

### **US Government:**

Re-negotiating the NPT would take considerable time and effort, in order to gain the consensus of all 189 signators to the treaty. The U.S.' concern is that in the interim, while the world is hashing out a new treaty, a country like Iran would go "North Korea." By that, the U.S. fears that Iran would continue to declare their nuclear facilities, allow IAEA inspections and continue to get IAEA approval and technical aid—until such time as their nuclear experts have perfected the process of enriching uranium and/or reprocessing spent nuclear fuel rods. At that point, the country would withdraw from the treaty and move quickly toward the development of a bomb or bombs. North Korea did so in 2003 and it is now estimated to have developed enough nuclear fuel for 6 to 8 bombs.

Thus, the U.S. would like to use firm and immediate international pressure (from the U.S. and the European Union in particular) to get states like Iran to give up programs that enrich nuclear materials altogether. While the NPT specifically allows countries to develop nuclear energy for civilian uses (and even helps provide assistance in doing so) in return for a pledge not to develop such energy for military uses, the U.S. proposal would be to keep the technology and know-how for civilian uses of nuclear energy out of the hands of all states that do not already have peaceful nuclear energy programs (primarily, the U.S., Europe, and Japan). Instead countries with such nuclear capacity would supply the necessary nuclear fuel for those countries that need it while abstaining from providing any technology to do so. This would prevent such countries from manufacturing their own nuclear fuel and, presumably, prevent any country from covertly producing bomb-grade fuel.

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### **IAEA:**

Dr. Mohammed El Baradei, Head of the IAEA, proposes a five-year moratorium on building new facilities for uranium enrichment and plutonium separation; the conversion of reactors and all peaceful nuclear applications to operate with low enriched uranium instead of high-enriched uranium (necessary for bombs). His proposal also strengthens the inspection capacity of the IAEA and urges the UN Security Council to act swiftly and seriously to isolate any country that withdraws from the NPT and get all states to pursue and prosecute those engaged in any illicit trading in nuclear materials and technology. It will also be critical to get all five nuclear weapon states party to the NPT to accelerate implementation of their "unequivocal commitment" to nuclear disarmament. It will be hard logistically, as well as morally, to enforce compliance with the NPT if it appears that the major powers are doing little to reduce their own nuclear arsenals.

## Teacher Resource VI B: Beyond the NPT – The Fissile Material Cutoff Treaty

The idea of creating a treaty that would stop the production of fissile material [see *Distinguishing Between Civil and Military Stocks*] was first mentioned in a resolution to the U.N. General Assembly in 1957. Although the subject has been raised both in the U.N. and in bi-lateral talks since then, states have continued to produce weapon-grade fissile material far beyond their capacity or their intent to use. It has been estimated that only 20% of all the currently held military stocks of fissile material are necessary to satisfy all foreseeable needs, making four-fifths of this material excess stock. Although the proposed Fissile Material Cutoff Treaty (FMCT) was never signed, many of the states currently possessing nuclear weapons have effectively ceased the production of fissile material. Thus critics of the proposed treaty say that there are few tangible benefits to be gained, since significant production has stopped and there will be considerable verification costs associated with such a treaty [see *Verification*]. Supporters of the FMCT argue that a new treaty would add another important layer to the attempt to control and limit nuclear material worldwide, strengthening the NPT regime. They also point out that the treaty would draw attention to verification and safeguarding issues still unresolved by the NPT.



## Thinking About conflict and Conflict Resolution

Understanding a conflict—whether it is between friends or strangers—is a very difficult task. There are often so many issues involved that it is hard to sort them out. Understanding a conflict that is taking place in another part of the world adds to the complexity, as you have to learn about the history, geography, political, economic, and social conditions that surround the conflict. But understanding the nature and dynamics of conflict is the first step in deciding how to respond to the situation. Once you know what the conflict is about, how it began, what is fueling it, and who the players are, you may be able to identify some ways to resolve the conflict.

### Conflict Analysis

In order to analyze a conflict, it is useful to develop a framework that looks at the following factors:

**Actors:** Who are the key people (antagonists, decision-makers, peacemakers, neighbors, influential outsiders) involved in this conflict? What power do they possess? What are the important institutions?

**Issues and underlying factors:** What is this conflict about? What does each party want? Are the issues that the adversaries say they are fighting about the only issues that divide them? Does each side have other concerns and needs that must be dealt with in order for the conflict to be resolved?

**Relationships:** What is the relationship between the adversaries? Do they communicate, and if so, how? What power do they possess? Are they equally balanced in terms of power? What relationships do they have with other actors, including outsiders?

**Characteristics of the conflict:** When did this conflict begin and what triggered it? How long has it gone on? What are its dynamics? Is there active fighting, and if so, is it violent? Has it changed in intensity or gone through phases? Is it confined to a specific space or distributed over a large area? Could this conflict spread to neighboring regions? What would the consequences be?

**Capacities:** What resources do the adversaries have to continue the conflict? Have these changed over time?

**Context:** What is the context—history, political system, economic, social and environmental conditions—in which this conflict is occurring? What is happening internationally that would affect the conflict?

**Conflict Resolution:** What has been the history of peacemaking efforts? Have the parties tried to solve their problems without outside help? If outsiders have helped, what has been the result of their efforts?

## **Responding to Conflict**

Once you have developed this framework, you may start to develop some ideas of how to respond to the conflict. If the problem centers around a lack of contact and communication, you might think of ways to increase interaction between the parties in conflict: starting dialogue groups, student exchanges, common projects that will bring antagonists together. If you are analyzing a civil conflict or a conflict between two countries, you might think of activities that would work at the official level (i.e. with the government) and at the non-official level (i.e. with religious institutions, schools, community groups, and other non-governmental associations). The following is a list of tools that policy-makers, mediators, and private peacemakers use to promote peace in international conflict. Which ones would work for the conflict you have analyzed?

### ***Political instruments***

#### **Confidence-building Measures**

A joint activity undertaken by parties to a conflict, usually designed to reduce tensions, demonstrate the benefits of cooperation, and build trust between parties. An example of confidence building that includes outside parties is monitoring and verification. This is a process by which outside actors and/or monitoring technology can observe and confirm that parties to an agreement are in compliance. Successful monitoring and verification can help build trust, reduce suspicion, and increase incentives for cooperation.

#### **Fact-finding**

Fact-finding helps provide decision makers with timely and accurate knowledge by inquiring into the facts of a dispute and reporting on them (without offering a solution).

#### **Mediation and facilitation**

Active engagement by an outside party to a dispute in the search for a negotiated settlement. Facilitation is usually limited to bringing the parties into communication. Mediation may be more directive and include creating an agenda for negotiations, chairing negotiating sessions, recommending solutions, and holding out rewards or threats as inducements.

#### **Official Diplomacy**

Diplomacy is the principal means by which states communicate with each other via a system of open, formal, regularized communication. This allows states to conduct their business peacefully with each other through negotiation. Traditionally, government representatives carry out diplomacy and conclude treaties and other international agreements.

Communications between disputants or antagonistic parties may be maintained through formal diplomacy, public diplomacy (communications and, at times, negotiations that are carried out publicly often for domestic consumption or to give a particular perspective on an issue) or secret diplomacy (negotiations in which the content of negotiations or the fact that they are even being conducted is kept secret).

#### **Unofficial Diplomacy**

Third-party peacemaking carried out by an individual or non-governmental organization and may include capacity building, dialogue groups, facilitation, and mediation. These processes may be pursued on their own or as a supplement to official negotiations or mediation.

#### **Arbitration**

The process of adjudication of a dispute by a third party or an ad hoc tribunal acceptable to the disputants. The disputants agree to accept the decision of the arbitration as final and binding.

## ***Military and Coercive Instruments***

### **Peacekeeping**

Operations that use impartial and non-threatening military forces and/or civilian personnel *at the request of the parties* to a dispute to help supervise a cease-fire agreement and/or separate the parties. The object of peacekeeping is the cessation of violence through such means as assisting in the establishment of a ceasefire or truce, supervising the withdrawal of troops, or serving as a buffer between opposing forces.

### **Peace-enforcement**

Military operations that *forcefully* restore peace between belligerents who may be engaged in combat, either between states or within a state.

### **Arms embargo**

Measures that prohibit or block the targeted actor or group of actors from securing access to or purchasing weapons and munitions that have been prohibited by the targeting actor/s.

### **Economic sanctions**

The targeted and coercive use of economic measures by an actor or a group of actors against another actor (or group of actors) considered a threat to peace. The goal is to secure the targeted actors' compliance by denying them access to certain goods and services.

## ***Aid-Based Peacemaking Tools***

### **Capacity building**

Non-military measures that often involve strengthening political, economic, social, and legal institutions in a bid to address the structural causes of conflict and help reconstruct societies after a war.

### **Humanitarian Assistance**

Humanitarian assistance is emergency aid or relief to provide basic means of survival—food, water, shelter, sanitation, health care—and sometimes advocacy and protection for victims of war or violence following emergencies characterized by civil conflict, weak or collapsed state authority and structures, food insecurity, and massive population displacement.

### **Military and economic assistance**

Outside parties may lend military equipment, personnel, supplies, and economic support for either peacekeeping or peace enforcement measures. Such assistance may also be extended into areas of capacity building and re-building infrastructure.

## Special Feature: Extension Activities

The following extension activities would give your students opportunities to expand their knowledge about non-proliferation. In addition, if your state or school requires students to complete a large project prior to graduation from high school, the National Peace Essay Contest and these activities may be used to satisfy this requirement.

- Conduct a public opinion poll on questions related to the peace essay topic. Analyze the results in a written and/or oral presentation that includes graphic depictions (bar, pie, and line graphs).
- Interview your member of Congress, staff person from your Senator's office, a local college professor of International Relations or U.S. Government, or a person with expertise or experience related to the topic. Write a report of this interview.
- Write letters to elected officials, newspapers, or magazines expressing your opinion on the topic.
- Participate in or establish a web-site related to the topic, including a chat-room for interested persons to share their opinions.
- Create a video documentary about non-state actors who may gain access to nuclear weapons.
- Create a work of visual or performance art expressing your ideas about non-proliferation, for example: drawing, painting, sculpture, collage, dance.

## Tips for Helping Students Write a Successful Peace Essay

Below are some ideas for improving the quality of your students' essays and making them potential contest winners:

- ❑ Be sure students carefully read all the rules and guidelines for successful essays.
- ❑ Encourage students to read winning essays from past years which appear in the guidebook and on the U.S. Institute of Peace website ([www.usip.org](http://www.usip.org)).
- ❑ If students select non-proliferation efforts that are still underway at the time their essay is written, be sure they acknowledge this situation in their essay and have the most up-to-date sources possible at the time of writing.
- ❑ English and Social Studies teachers can complement each other's knowledge and abilities if they work together to help students with the peace essay. Consider collaborating or team teaching for this project. You may choose to permit students who have research paper requirements in courses in both departments to use the NPEC to satisfy both assignments.
- ❑ After all essays are written, consider asking one or more colleagues to read and rate the strongest ones. Students whose papers receive high ratings can then prepare them for submission to the NPEC by correcting all typographical or grammatical errors, updating information as needed, and making last-minute improvements.
- ❑ Emphasize that ALL parts of the essay question must be covered in the essay.
- ❑ Direct students who are not writing the essay as a class assignment to use the "Tips for Students Working Independently" at the end of each lesson.

**Note:** *Students are permitted to submit essays to the National Peace Essay Contest as individuals or as part of a classroom submission by a teacher.*

## Additional Resources

Bunn, Matthew and Anthony Wier. "The Seven Myths of Nuclear Terrorism." *Current History: A Journal of Contemporary World Affairs*, Vol. 104, No. 681. April 2005.

Dingli, Shen. "Non-proliferation and WMD terrorism: Addressing terrorist threat through cooperation." *INESAP-Bulletin* No. 19, March 2002.

<http://www.inesap.org/bulletin19/bul19art13.htm>

Graham, Thomas. "Sixty Years after Hiroshima, a New Nuclear Era." *Current History: A Journal of Contemporary World Affairs*, Vol. 104, No. 681. April 2005.

Levi, A. Michael and Michael E. O'Hanlon. *The Future of Arms Control*. Washington, DC: Brookings Institution Press, 2005.

Scheffran, Jurgen (eds). *Beyond the NPT: A Nuclear-Weapon-Free World*. Preliminary Findings of the INESAP Study Group 'Beyond the NPT' presented on the occasion of the NPT Review and Extension Conference on 25 April 1995 in New York

*Darmstadt and New York, April 1995*. INESAP- Bulletin No. 14, November 1997.

<http://www.inesap.org/bulletin14/bulletin14.htm>

Scheffran, Jurgen (eds). *The Challenge of Hiroshima*. INESAP-Bulletin No. 24, December 2004.

<http://www.inesap.org/bulletin24/index.htm>

Schwartz, I. Stephen. *Atomic Audit: The Costs and Consequences of U.S. Nuclear Weapons Since 1940*. Washington, DC: Brookings Institution Press, 1998.

<http://www.brook.edu/fp/projects/nucwcost/contents.htm>

### **Useful Websites**

Center for Non-proliferation Studies

<http://cns.miis.edu/>

50 Facts about U.S. Nuclear Weapons.

<http://www.brook.edu/FP/PROJECTS/NUCWCost/50.HTM>

The Nuclear Age Peace Foundation's Nuclear Files project

<http://www.nuclearfiles.org/index.html>

The Carnegie Endowment – Proliferation News and Resources

<http://www.carnegieendowment.org/npp/>

International Atomic Energy Agency – Youth Resources Website

<http://www.iaea.org/Resources/Youth/>

Nuclear Threat Initiative: WMD 411

[http://www.nti.org/f\\_wmd411/f\\_index.html](http://www.nti.org/f_wmd411/f_index.html)

## National Content Standards

The lessons in this guide apply to the following National Content Standards of the Mid-continent Regional Educational Library.

### **Civics Standards**

- Understands how the world is organized politically into nation-states, how nation-states interact with one another, and issues surrounding U.S. foreign policy.
- Understands the impact of significant political and nonpolitical developments on the United States and other nations.
- Understands issues regarding personal, political, and economic rights.
- Understands how participation in civic and political life can help citizens attain individual and public goals.
- Understands the importance of political leadership, public service, and knowledgeable citizenry in American constitutional democracy.

### **Language Arts Standards**

- Demonstrates competence in the general skills and strategies of writing.
- Demonstrates competence in the stylistic and rhetorical aspects of writing.
- Uses grammatical and mechanical conventions in written compositions.
- Gathers and uses information for research purposes.
- Demonstrates competence in the general skills and strategies of reading.
- Demonstrates competence in the general skills and strategies for reading a variety of informational texts.
- Demonstrates competence in speaking and listening as tools for learning.

### **Life Skills Standards**

- Performs self-appraisal.
- Understands and applies the basic principles of presenting an argument.
- Effectively uses mental processes that are based on identifying similarities and differences (compares, contrasts, classifies).
- Applies decision-making techniques.
- Displays effective interpersonal communication skills.

### **United States History Standards**

- Understands developments in foreign policy and domestic politics between the Nixon and Clinton presidencies.

### **World History Standards**

- Understands the search for community, stability, and peace in an interdependent world.
- Understands major global trends since World War II.