Hiroshima and Nagasaki

Physical Science & World History

A CALLA Lesson for ESL Instruction
Incorporating Language Learning Strategies
Hiroshima and Nagasaki
CALLA Lesson

Topic: Physical Science & World History Extension in ESL
Grade Level: 9th - 12th grades
Language Proficiency: Intermediate or Advanced

Language Learning Strategies

1. Metacognitive Strategies
   a) Advance Organization
   b) Organizational Planning
   c) Selective Listening
   d) Selective Reading

2. Cognitive Strategies
   a) Imagery from Text
   b) Note-taking
   c) Resourcing

3. Social/Affective Strategies
   a) Cooperation
   b) Questioning for Clarification

Materials:
Language Learning Strategies Chart
Student Language Learning Strategies Handouts
Videotape: "Day One: The Development of the Atomic Bomb"
Vocabulary Cards
Literature Selections:
   * Faithful Elephants*, Yukio Tsuchiya
   * Hiroshima*, Laurence Yep
   * Hiroshima and Nagasaki*, Jane Claypool
   * Hiroshima and Nagasaki*, R. G. Grant
   * Hiroshima No Pika*, Toshi Maruki
   * The Atom Bomb*, Tamara L. Roleff, Editor
   * The Day of the Bomb*, Karl Bruckner
   * The Manhattan Project*, Don E. Beyer

Overall Goal of the Lesson: By completing the activities included in this lesson that supports content classes in Physical Science and World History, ESL students will develop an awareness of specific learning strategies that will assist them in a variety of language learning situations. These language learning skills, combined with included content material, will enable students to increase their academic vocabulary and improve their communicative competence in these and other classes.

Lesson Objectives: After (1) watching clips from the movie, "Day One: The Development of the Atomic Bomb"; (2) listening to the reading of a portion of the book *Hiroshima* and identifying related vocabulary words; (4) discussing the bombing of Hiroshima and Nagasaki; and (5) viewing documents and graphics related to the bombing of these two cities,

   The Learner Will:
   1. Listen for selected sentences, checking them off on a handout as a portion of *Hiroshima* is read aloud. (metacognitive strategy - selective listening)
   2. Create a mental picture by illustrating the part of the book that was read aloud (cognitive strategy - imagery from text)
   3. Predict, skim, and scan and complete an organizer before reading *Hiroshima No Pika* (metacognitive strategy - advance organization)
   4. With a partner, read aloud and discuss *Hiroshima No Pika* (social/affective strategy - cooperation)
5. Read silently the handout, "The Attack" and working in teams highlight selected vocabulary words found in the handout (metacognitive strategy - selective reading; social/affective strategy - cooperation)
6. Complete a note-taking handout while watching clips from "Day One: The Development of the Atomic Bomb" (cognitive strategy - note-taking)
7. With a partner, share and discuss the notes made while viewing the movie clips (cognitive strategy - self assessment)
8. In teams, write at least three questions regarding the atomic bomb, Hiroshima, Nagasaki, or other related topic to be used in web search (social/affective strategy - cooperation; metacognitive strategy - organizational planning)
9. Conduct a web search with a partner for the purpose of locating information to answer self-generated questions (cognitive strategy - resourcing; social/affective strategies - cooperation and questioning for clarification)

Instructional Procedures:

Set
The teacher will show selected clips from the movie "Day One: The Development of the Atomic Bomb". After viewing the clips, students will discuss the topic with the teacher, identify vocabulary words for the lesson and briefly discuss the bombing of the two Japanese cities at the end of World War II. Related documents and graphics will be available to facilitate the discussion.

Mini-Lesson
The teacher will explain the use of Language Learning Strategies as a means to improve language skills while using content material. After briefly modeling selective listening, the teacher will read aloud a section of the book Hiroshima.

Individual Application of Language Learning Strategies
1. The student will apply selective listening as a portion of the book Hiroshima is read aloud, completing the student handout while listening.
2. The student will apply imagery from the text, illustrating the section of the book that was read aloud.
3. The student will predict, skim, and scan and complete an organizer before reading Hiroshima No Pika in order to apply advance organization.
4. The student will apply note-taking strategy by completing a handout while watching further clips from "Day One: The Development of the Atomic Bomb".

Cooperative Application of Language Learning Strategies
1. In teams of two, the students will apply cooperation as they read aloud and discuss Hiroshima No Pika.
2. The students, working in teams of two, will apply selective reading and cooperation by highlighting selected vocabulary words found in the handout, "The Manhattan Project".
3. The students will apply self-assessment as they share and discuss with a partner the notes made while viewing clips from "Day One: The Development of the Atomic Bomb".
4. In teams of two, the students will apply organizational planning and cooperation as they write at least three questions regarding the atomic bomb, Hiroshima, Nagasaki, and related topics to be used in a web search.
5. The students will apply cooperation, resourcing and questioning for clarification as they conduct the web search with a partner.

Closure
The teacher will ask students to share with each other the answer(s) found during the web search to at least one of their self-generated questions.
Enrichment Activity
As an enrichment activity for the student who finds this subject particularly interesting, the teacher may wish to show the entire video, "Day One: The Development of the Atomic Bomb" and allow the student to answer the Reflection questions included at the end of the lesson.

Evaluation/Assessment of Application and Effectiveness of Language Learning Strategies:
1. Discussion of the topic - informal
2. Selective Listening - formal
3. Imagery from Text - formal
4. Advance Organization - formal
5. Note-taking - formal
6. Questioning for Clarification - formal
7. Cooperation - formal and informal
8. Selective Reading - formal
9. Self Assessment - informal
10. Organizational Planning - formal and informal
11. Resourcing - informal
Hiroshima
By Laurence Yep

The Attack

In the Enola Gay the bombardier shouts, "Bomb away!"
The huge, heavy bomb drops from the airplane. Suddenly the
Enola Gay is much lighter, and it jerks up into the air. Colonel Tibbets is skillful. He keeps control
of the airplane and swings it to the right.

The bomb whistles as it plunges down, down through the air.
On the Enola Gay, a crewman flips a switch on a special radio. It sends a signal to a
special gun inside the bomb.

This time the gun works. It shoots a cone-shaped bullet of uranium into a larger ball of uranium.

Everything is made up of tiny particles called atoms. They are so small they are invisible
to the eye. The atoms are also made up of even smaller parts. Energy holds these parts together
like glue. When the atom breaks up into its parts, the energy goes free and there is a big explosion.

Inside the bomb, one uranium atom collides with another. Those atoms both break up.

Their parts smash into more atoms and split them in turn.

This is called a chain reaction. There are millions and millions of atoms inside the bomb.

When they all break up, it is believed that the atom bomb will be equal to 20,000 tons of
dynamite. In 1945, it is the most powerful weapon ever made.

As the chain reaction builds, the bomb falls faster and faster. But it does not go off over
the bridge. It explodes over a hospital instead.

There is a blinding light like a sun.

There is a boom like a giant drum.

There is a terrible wind. Houses collapse like boxes. Windows break everywhere. Broken
glass swirls like angry insects.

The wind strikes Sachi back like a hammer and picks her up. She feels as if she has
fallen into boiling oil. It tears away her special hood and even her clothes. The wind sweeps her
into the whirlwind of glass.

There is no time to scream. There is no one to hear.

There is only the darkness. . . .
URANIUM

ATOMIC BOMB

IMPLOSION

ENOLA GAY

WASTELAND

CONTAMINATION

RADIATION

FLASH
"Day One: The Development of the Atomic Bomb"
Reflections
Extension /Enrichment Activity

Answer on another sheet of paper and attach to this sheet.

1. Why do you think New Mexico was selected to be the testing site for the atomic bomb?

2. What is an implosion?

3. Do you think the concerns of the scientists working on the atomic bomb were largely ignored because they were mostly of Jewish or eastern European descent?

4. Do you think the fact that the Japanese were not considered “white” impacted the decision to use the bomb in any way?

5. Are we still using “shock value” in waging war today?
DAY ONE
Note-Taking Sheet

Use the questions below to help you take notes as you watch clips from the movie, "Day One: The Development of the Atomic Bomb".

<table>
<thead>
<tr>
<th>1. What is an atomic bomb?</th>
<th>2. Were all the scientists in agreement on the use of the atomic bomb?</th>
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<tr>
<td></td>
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<tr>
<td>3. What was Oppenheimer’s job?</td>
<td>4. What was General Groves’ response to concerns about using the bomb?</td>
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<td></td>
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<tr>
<td>5. Which 3 elements were used in making atomic weapons?</td>
<td>6. List two reasons for given in the video for dropping the bomb.</td>
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<tr>
<td>7. What famous scientist regretted his approval of the making of the atomic bomb?</td>
<td>8. What famous military leader voiced strong concerns about using the bomb?</td>
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Predicting

☞ First-look at the cover of the book
☞ Second-read the title
☞ Third-What do you think the book is about?

_____________________________________________________

_____________________________________________________

☞ Fourth-Read the first paragraph
☞ Fifth-What is the main idea?

_____________________________________________________

_____________________________________________________

Skim and Scan the Text

1. **Skim**-read the first sentence in each paragraph.

2. **Scan**-go back through the book and look for these words.

<table>
<thead>
<tr>
<th>Enola Gay</th>
<th>collapsed</th>
<th>radiation</th>
</tr>
</thead>
<tbody>
<tr>
<td>atomic bomb</td>
<td>wasteland</td>
<td>explosion</td>
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