

# A THOUSAND PAPER CRANES: THE STORY OF SADAKO



Written by Paula Wing

Directed by Micheline Chevrier

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# **A Thousand Paper Cranes: The Story of Sadako**

Created by Micheline Chevrier and Paula Wing

Written by Paula Wing

Directed by Micheline Chevrier

## **Cast**

Cassandre Mentor

Jennifer Roberts

Nicholas (Koy) Santillo

## **Production**

Stage Manager - James Douglas

Set & Costume Designer - James Lavoie

Sound Designer - Peter Cerone

## Director's notes - The Story of Sadako

When the playwright Paula Wing and I undertook to create *A Thousand Paper Cranes: The Story of Sadako*, we asked ourselves the following question: why Sadako Sasaki? We were both amazed and perplexed by her renown, by the fact that her story continues to move and inspire people across the world to this day. What was it that made it (or her) so powerful?

And so the question made it into the play and is the driving force behind all three characters' quest as they re-enact her story and explore all its different elements.

Throughout the research phase of our creation, I was also taken by the relationship between origami, leukemia and the bomb. I was intrigued by the science of all three, the beauty or danger of them, but above all, to their power. Could this power also have something to do with the impact of Sadako's story?

Again, Paula and I, along with cast and designers, integrated this connection into the play and production.

Finally, and maybe most importantly, both of us, along with Geordie's Artistic Director Dean Fleming, wanted to discuss the idea of consequence: how a country's or an individual's actions can have tremendous impact on the world. In this case, we are looking at both a negative and a positive impact derived from the same situation.

And maybe that is what makes this story so extraordinary: the ability of one human being to transform tragedy and loss into victory and hope.

Micheline Chevrier

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# Unit 1: The Play

## Introduction

*A Thousand Paper Cranes: The Story of Sadako* tells the story of Sadako Sasaki, a young Japanese girl who was two-years old when the atomic bomb (the A-bomb) was dropped over Hiroshima, during World War II. In 2011, three young people decide to investigate her story, they ask the questions “who is Sadako Sasaki?” and “why Sadako Sasaki?”

The play looks at her life approximately 10 years after the bomb was dropped. We see Sadako as a vibrant and energetic girl, who loves running and is about to graduate from elementary school, when she is diagnosed with leukemia, also referred to as ‘an atom bomb disease’. In the hospital, Sadako learns about the thousand crane folk tale:

*“It’s an old story. To really feel better you have to make them. But they say that if you fold a thousand paper cranes the gods will be happy and they’ll grant you a wish”.*

Sadako’s story is about war, radiation, peace and determination. It shows how a city, a country and its people are affected by these themes and the events that surround them. Every year on August 6th, Peace Day, thousands of paper cranes are placed on a statue dedicated to Sadako. The words at the base of her statue say:

*“This is our cry. This is our prayer. Peace in the world.”*

This unit contains activities that relate directly to the play *A Thousand Paper Cranes: The Story of Sadako* and to the culture of Japan.

Quebec  
Competencies

- To write self-expressive, narrative and information-based texts
- To represent his/her literacy in different media
- To use language to communicate and learn
- To understand the organization of a society in its territory
- To use creativity
- To cooperate with others

Unit Vocabulary

Radiation	Peace Day
Cancer/Leukemia	Paper Crane
Nuclear	Personality
A-Bomb	Characteristics
Character Profile	Culture
Motivation	Poetry

Discussion

As a class discuss the play *A Thousand Paper Cranes: The Story of Sadako*. Some questions to help the discussion get started:

- » What did you think of *A Thousand Paper Cranes: The Story of Sadako*?
- » Had you heard of, or read the story prior to seeing the play?
- » Discuss the themes from the play (war, peace, the A-Bomb, origami etc...)
- » What was your favourite (or least favourite) scene in the play? Why?
- » Discuss Sadako - her illness, her character etc...
- » Discuss the other characters in the play (Mama, Masahiro, and Kiyō).
- » Who was your favourite character? Why?
- » What did you think of the stage design?

When the discussion is done, as a class, brainstorm activity ideas based on Sadako and the themes from *A Thousand Paper Cranes: The Story of Sadako*. Depending on the responses and ideas, you can go in many directions. For instance:

- Each student can design their own activity.
- You can group students who have similar interests.
- You can choose a few activities randomly for the class to complete.

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## POST-PLAY THOUGHTS

Students will individually select any medium they like to express their thoughts on *A Thousand Paper Cranes: The Story of Sadako*, some examples are: a blog report, a collage, a poem, a play review for a TV show, a play review in a newspaper, art etc...

Once students have completed their assignment, have them share their work with the class.

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## MY THOUGHTS – A DESCRIPTIVE PARAGRAPH

This activity is geared towards younger students. For word-based activities geared towards younger students, please refer to Appendix A.

In this activity, students will write a descriptive paragraph expressing their thoughts and opinions on *A Thousand Paper Cranes: The Story of Sadako*. To begin, they will create a web (for an example, please refer to Appendix B ). In the middle of the web, they will write *A Thousand Paper Cranes: The Story of Sadako*. From there they will have four main areas to focus on or 'branches', some examples are: Sadako, play design, origami, characters etc...They will then expand on each of their four branches by filling in their thoughts and opinions.

Once they have completed their web, they can now use that information to write a descriptive paragraph expressing their thoughts and opinions on the play.

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## FOR A FRIEND I WOULD...

Discuss Sadako's leukemia with your students. Explain to your students what leukemia is, how it is treated or managed, and what it must have felt like for Sadako to be going through that. To get your students more involved have them look for articles (newspaper or magazine) that deal with leukemia; from a survivor's perspective, from a family member or friend's perspective, a doctor's perspective etc... Discuss what they find and what the experience must have been like for Sadako or for other children who have had leukemia.

When students have an understanding of Sadako's experience, ask them to consider what they would do for a friend going through a similar experience. Each student will then write a short paper describing what they would do to help their friend.

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## JAPAN QUEST

Before students begin their Japan Quest, have them explore the following website: <http://web-japan.org/kidsweb/explore/culture/>. They can play educational games, take quizzes on Japanese life and learn about Japanese folk legends.

Once they have explored the site (and any other Japanese materials you would like them to read or visit), have them complete the following Japan Quest (to print this and related paper-based materials, please refer to Appendix C) . Students will need access to the library and internet to answer some of the following:

1. Using the map of Japan, locate and label where Hiroshima is. Find two other major Japanese cities to locate and label.
2. Name three types of Japanese food. Have you tried any?
3. Briefly describe what daily life is like in Japan. How does it differ from daily life in Canada? List four examples.
4. List five examples of Japanese culture (anything from type of dress to type of martial arts).

5. Name one aspect of Japanese culture that you are interested in learning more about.
6. Fill out the 'What I know about Japan' chart.

Once complete, discuss some of their findings as a class. Some questions to help the discussion get started:

- » What did you know about Japan before doing some research?
- » What do you know now about Japan?
- » Has anyone ever been to Japan? What did you enjoy about it?
- » How is it different than Canada? Similar to Canada?
- » Discuss Japan's culture (origami, bonsai, movies, martial arts etc...) Are they familiar with any of them?
- » What would you like to know about Japan?

Using their answers to the last question, come up with an activity to help them learn more about Japan. You can brainstorm ideas with your students to see how they would like to go about answering what they would like to know about Japan.

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## JAPANESE POETRY

As a class, or with students in groups, research the following forms of Japanese poetry:

- Haiku- an unrhymed verse form of Japanese origin having three lines containing usually five, seven, and five syllables respectively
- Tanka - an unrhymed Japanese verse form of five lines containing five, seven, five, seven, and seven syllables respectively
- Renga - Japanese linked-verse poetry in which two or more poets supply alternating sections of a poem

Definitions taken from: <http://www.merriam-webster.com/dictionary> and <http://encyclopedia2.thefreedictionary.com/Renga>

With their research complete, discuss their findings.

- » Describe and define each form of poetry.
- » Share examples of each form of poetry.
- » Discuss their similarities and differences.
- » Write examples of each form of poetry.

### Renga Poetry

With students in pairs or small groups, have them write a Renga style poem. They should choose one of the themes from *A Thousand Paper Cranes: The Story of Sadako* as the topic of their poem and will follow the traditional style of Renga poem. When complete, have each pair or group share their poem with the class and discuss what the experience was like for them.

### Haiku or Tanga

Using one of the themes from *A Thousand Paper Cranes: The Story of Sadako*, or an aspect of Japanese culture, students will individually write a poem that follows the Haiku or Tanga form. If time permits have students share their poems with the class.

### Poetry Wrap-Up

Once students have had the opportunity to work with some of the different forms of Japanese poetry, discuss their thoughts on the different forms. Some questions to help the discussion get started:

- » What form of poetry did you enjoy working with the most? Why?
- » What form of poetry did you enjoy working with the least? Why?

Here are some Japanese inspired art activity ideas for you and your students:

### Japanese Colours

Learn how to say all of the main colours in Japanese. Once you and your students learn them, you can then say a colour out loud in Japanese and ask them to draw or write something in that colour.

### Japanese Calligraphy

Show your students some examples of Japanese calligraphy and then as a class research Japanese calligraphy (different styles, different fonts). Using paint, paint brushes and paper, students can create paintings inspired by Japanese calligraphy. You can also have students attempt to write something using Japanese calligraphy.

### Miniature Japanese Garden

For this art activity, ask students to bring in the following materials: empty egg carton, some pebbles and anything they would like to put in their miniature Japanese Garden. They will also require thick green paper, construction paper, glue, scissors and paints/markers. Using the thick green paper as a base, they can begin to build their Japanese Garden.

For instructions, please visit: <http://www.enchantedlearning.com/crafts/japan/garden/>

### Kimono art

Students can use a plain sheet to create a kimono (research instructions with your students) or they can create one using sturdy paper. Once they have their kimono made, they will then decorate it using a Japanese inspired pattern.

For instructions, please visit: <http://www.princetonol.com/groups/iad/lessons/elem/Meryl-Japan.htm> or <http://www.card-making-magic.com/kimonocard.html>



# Unit 2: The Book

## Introduction

The story, *Sadako and A Thousand Paper Cranes* was written by Eleanor Coerr in 1977. This book is intended for children and is based on Sadako Sasaki's life. *A Thousand Paper Cranes* is a story based on real life events.

**\*Please note** - these activities have been designed so that you can incorporate them into your classroom prior to or subsequent to seeing the Geordie Productions' play.

## Quebec Competencies

**To read and listen to literary, popular and information-based texts**

**To write self-expressive, narrative and information-based texts**

**To represent his/her literacy in different media**

**To use language to communicate and learn**

**To use creativity**

**To cooperate with others**

## Unit Vocabulary

Non-fiction

Adaptation

Journal

Interview

Author

Folk story

Hiroshima

Japan

Synopsis

Journalist

Leukemia

Research

## Discussion

Before beginning a discussion on the book *Sadako and A Thousand Paper Cranes* by Eleanor Coerr, (or any other version of the book you like) have students read the book, either individually or as a class. While reading the book, ask students to keep a journal of what they are learning from the book, or any questions or opinions they may have. Ask students to share their journal notes with the class in the upcoming discussion on the book.

Once the book has been read, discuss it as a class. Some questions to help the discussion get started:

- » What did you think of the story?
- » Was it similar to or different to the play? Explain.
- » Discuss the characters in the story.
- » Discuss students' journal notes and opinions.

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## JOURNAL QUESTIONS

After your class discussion, ask students to choose five of the following questions to answer in their Sadako journal (to print these questions, please refer to Appendix D):

1. Think of someone whose life story is important to you. Describe their story and why it's important to you.
2. In the story, Sadako is very excited for world Peace Day. Are there any events or holidays that you like to celebrate? Why?
3. If you could change one thing in the book, what would it be and why?
4. List 3 facts about Japan during the time this story took place and 3 facts about Japan today.
5. Choose one of the characters in the book and list three facts and three opinions about them.
6. Sadako and her family were proud of her for making the relay team. What have you done to make people proud of you?

7. This story is based on real life events of Hiroshima. What do you know about the bombing in Hiroshima?
8. Sadako's parents decided not to tell her, right away, that she had leukemia. Do you agree with this? What do you know about leukemia?
9. How does Sadako's life story affect people today? What can we learn from her story?
10. Sadako learns that the paper crane story is an old story. What is the meaning of the story? Do you know of any other folk stories?

Some questions and ideas taken from:

[http://www.ngsp.com/Portals/0/Downloads/HP\\_LL\\_SJ\\_A5\\_3.pdf](http://www.ngsp.com/Portals/0/Downloads/HP_LL_SJ_A5_3.pdf) and

<http://library.thinkquest.org/5402/lit.html>

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## ADAPTATION

*A Thousand Paper Cranes: The Story of Sadako* is a story based on real life events. Another way to share a real life event (or a fictional story) is to adapt it into a movie, a play etc... by doing this, you are changing (or adapting) the story to fit into a different medium or situation.

As a class, begin by discussing what an adaptation is by having students research the definition of adaptation and also some examples of stories that have been adapted into plays for the theatre. For younger students, research the definition and examples as a class.

Once students have completed their research, discuss their findings. To help the discussion get started:

- » What does 'adaptation' mean?
- » What does it mean to adapt something?
- » Ask students to share their examples of stories adapted into plays.
- » How did the book differ from the play? Explain.

- » Are some storylines stronger in the adaptation than in the original?
- » Have they ever seen a movie or play that has been adapted from a book?  
What did they think of it?

Once students have an understanding of what it means to adapt something, ask them to consider how they would adapt Sadako's story into a different medium (ex. a comic book, a movie, a song, a television show etc...).

As a class, brainstorm different ways to adapt Sadako's story, for instance into a different medium (ex. comic book or movie) and/or into a different setting (ex. modern day setting, in a different country afflicted by war etc...).

Once the brainstorming session is over, students will now have the chance to adapt Sadako's story into a different medium and should they choose, in a different setting. Instead of re-writing the story, they need to present their adaptation with examples of what it will look like, for instance, some comic book drawings along with a synopsis of the adapted story, or a vivid description (possibly drawings) of some scenes from a movie version of Sadako's life along with a synopsis of the adapted story.

Their final project should include the following:

- A detailed synopsis describing their adapted version of Sadako's story.
- Examples of what their story would look like, whether it is through drawings, a script, lyrics to a song etc...
- A description of the setting and costumes.
- A short paper explaining the choices they made and why.

Once students have completed their assignment and if time permits, have them share their adaptation with the class.

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## SADAKO BOOK ART

Ask students to redesign the book cover for *Sadako and A Thousand Paper Cranes*. They should be as creative as possible in how they present their final art piece, for example, pasting their book cover onto a piece of wood, making a collage, using pictures of Hiroshima, including an origami crane on it etc...

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## CHARACTER INTERVIEW

In pairs, students will prepare to interview a character from Sadako's story for a newspaper interview. One student will play the role of the character and the other will play the role of the interviewer/journalist.

Things to consider:

- When is this interview taking place (after Sadako's death? After the bombing?)
- What is the purpose of the interview?
- What questions should be asked?
- How would the character answer these questions?

Once they have their questions and roles prepared, they will perform their mock interview. With the interview over, have each student write a newspaper article recounting the interview along with background information and the purpose of the interview.

If your students show an interest in this activity, you can extend it by having them prepare for a television interview for the evening news. Students will use the same questions and roles prepared earlier, but this time, their interviews will be filmed. Once complete, watch the interviews as a class. See who is able to answer questions that reflect the character's point of view and experiences and how professional the interviewer acts.

# Unit 3: The Science of ...



## Introduction

Science can be found in many different aspects of our lives, as demonstrated by the play *Sadako and A Thousand Paper Cranes: The Story of Sadako*. In our daily lives we use science more than we realize, for instance, mixing vinegar and baking soda to create a paste for cleaning a bathtub, adding some lemon to milk so that it curdles and can act as a substitute for buttermilk when baking a cake.

In this unit, we will look at how science plays a role in origami, nuclear energy and magic; all themes found in *Sadako and A Thousand Paper Cranes: The Story of Sadako*.

## Quebec Competencies

**To read and listen to literary, popular and information-based texts**

**To write self-expressive, narrative and information-based texts**

**To use language to communicate and learn**

**To explore the world of science and technology**

**To propose explanations for or solutions to scientific or technological problems**

**To use creativity**

## Unit Vocabulary

Science

Nuclear Energy

Blood Cells

Renewable Energy

Origami

Radiation

Inquiry

Magic

## Discussion

Discuss the following themes and concepts with your students and how they may relate to one another:

- Science – good or bad?
- Origami
- Nuclear Energy
- Magic

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## QUICK ACTIVITIES

The following is a list of activity ideas based on the themes in this unit for you to develop and/or implement with your students:

- Use a microscope to look at different types of cells (plant, animal etc...) and write a descriptive paragraph about it
- Learn about blood cells and then build one
- Find uses of science and magic in the following: at home, in the kitchen, at the park....
- Watch a documentary on nuclear energy
- How is origami science? Investigate.
- Create a diorama of different types of renewable energy sources

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## ...ORIGAMI

Begin by showing your students some examples of origami.

As a class discuss origami. Some questions to help the discussion get started:

- » What is origami (research the definition and its history).
- » Have you ever made anything with origami? If so what? What was your experience with origami like?

If students show an interest, research the history of origami to learn more about it and discuss their findings as a class. Suggested resources to help them begin their research, can be found at the end of this activity.

## Paper Crane Origami

Students will now learn how to make an origami paper crane. Begin by having students' research instructions on origami paper cranes and types of paper to use. With their research complete, discuss their findings and choose a set of instructions to use (or have each student use the instructions they found and after compare which instructions were the easiest to follow).

Suggested resources for origami ideas and instructions, can be found at the end of this activity.

## Origami à la Carte

Now that students have mastered how to make an origami paper crane, have them choose their own object to make with origami. Once they have determined what they would like to create, begin by having them research a set of instructions to follow and the types of paper to use before beginning. Display their finished work in the class for everyone to admire.

### Origami Resources

Harbin, R. (2011) Get Started with Origami

Meinking, M. (2010) Easy Origami: A Step by Step Guide for Kids

Sakade, F. (2002) Origami Japanese Paper Folding

Origami Paper Crane:

<http://www.origami-resource-center.com/paper-crane.html>

Make your own origami crane!:

<http://www.operationmigration.org/Origami.pdf>

Origami Club:

<http://en.origami-club.com/animal/index.html>

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## HOW IS PAPER MADE?

This activity will teach students how to make recycled paper, and is intended for younger students but if you think your students will find it interesting then please use it with them as well.

To begin, discuss paper with your students; different textures, patterns, colours, thickness, etc... Show students different types of paper when having this discussion. Ask them to bring in different or interesting types of paper to share with the class.

To begin making recycled paper, you'll need the following materials:

- scraps of construction paper
- magnifying glass
- water, bowl
- electric blender
- plate
- small milk carton or other small container
- fiberglass window screen
- embroidery hoops (larger than a coffee can lid)
- coffee can
- cookie cutters (the kind that are open on both top and bottom)
- newspapers
- paper towels
- tray
- books

### Step 1

Have students tear collected scraps of paper (use interesting paper with different textures, thickness etc...) into pieces smaller than 1" and place them in a bowl. The paper can be sorted by color or mixed all together. Ask students to hold up a scrap of paper and look closely at the torn edge with a magnifying glass (or microscope).

Explain to students that the tiny threads they see are the cellulose plant fibers that are used to make paper. To make new paper the plant fibers must be separated from each other and then rearranged to form a new sheet of paper.

### Step 2

Add water to the bowl of paper scraps and leave them to soak overnight.

### Step 3

The next day, pour 4 cups of water and about 1/4 cup of the soaked paper pieces into an electric blender. Blend until the paper is completely broken up. (Don't be tempted to add more paper. You could burn out the blender motor.) This is your paper pulp. Pour a small amount of the pulp out onto a plate. Have students look at and feel the paper fibers. Explain that the blender has separated the cellulose fibers from each other.

### Step 4

Stretch fiberglass screen across an embroidery hoop by stretching the screen across the inner ring and fitting the outer ring over it to hold the screen securely in place, just as you would with fabric. Trim extra screen from the edges and place the screen-covered hoop over the open end of a coffee can.

### Step 5

Pour about 1/3 cup of the paper pulp into a small, clean, milk carton. Have a student place a cookie cutter on top of the screen and slowly pour the pulp from the milk carton into the cookie cutter. Ask the student to completely cover the inside shape of the cookie cutter with not more than 1/4" of pulp. Give the water a moment to drain from the pulp and then have the student remove the cookie cutter leaving a pulp shape on the screen.

## Step 6

Ask a student to turn the screen with the pulp shape over onto a stack of newspapers. Then have the student absorb some of the water by lightly pressing straight down on the back of the screen with a paper towel. This will also help to press the pulp shape onto the newspaper. Next ask the student to slowly pick up the screen in a rolling motion, watching that the pulp shape sticks to the newspaper. After several students have placed shapes on the newspaper, cover them with dry newspapers, a flat tray, and several books. After about 15 minutes, remove the shapes and place them onto dry newspapers to finish air drying.

## Step 7

When students have mastered the technique, they can add some variety to the shapes they make by pouring a very thin layer of pulp into a cookie cutter and then laying items such as scraps of yarn, paper dots, or torn paper pieces into the cookie cutters and finally pouring additional paper pulp over the items. The finished shapes will have the items embedded in them.

This activity is taken from the Reading Rainbow's A Thousand Paper Cranes Unit and can be found here: <http://www.libraryvideo.com/guides/J1159.pdf>

### **Paper Making Resources**

Learn how to make homemade paper:

<http://www.tutorials.com/06/0697/0697.asp>

How to make paper:

<http://tlc.howstuffworks.com/family/make-paper2.htm>

Make recycled paper:

[http://www.childrenoftheearth.org/Kid%27s%20Entries/Make\\_Paper.htm](http://www.childrenoftheearth.org/Kid%27s%20Entries/Make_Paper.htm)

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## ...NUCLEAR ENERGY

As a class, discuss nuclear energy. You may wish to begin by asking students to research its definition. Some questions to help the discussion get started:

- » What is energy? Nuclear energy?
- » Do you know of any other types of energy? What are they?
- » What is radiation? Where does it come from?
- » Do you know what renewable and/or non-renewable energy is?
- » Can you think of examples of how we use energy (specifically nuclear) in our daily life?
- » Is nuclear energy good or bad?

With the discussion complete, ask students to further investigate the use of nuclear energy in our daily lives. Ask students to focus on the following during their research:

- One or two examples of nuclear energy use.
- One myth about nuclear energy and a corresponding fact.

Students will each share their findings with the class. Use this to continue the discussion on nuclear energy and other types of energy.

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## NUCLEAR ENERGY AND MEDICINE

Nuclear energy and radiation from it can be both good and bad. On the one hand, too much exposure to radiation can lead to developing certain types of cancer (leukemia being one of them) and other diseases. While on the other hand, radiation can help to diagnose, treat and potentially cure certain types of cancers and diseases.

As a class, or in small groups, research how nuclear energy and radiation are used to diagnose, treat and cure certain types of cancers. If you like, expand the research to also include how nuclear energy and radiation overexposure can also lead to people developing certain types of cancers.

Reconvene as a class to discuss their findings and how the use of radiation may have helped Sadako to live longer.

Using the knowledge they now have about radiation and nuclear energy, ask students to write a short about Sadako's life had radiation been available to treat her. What would she have been like at age 15? At age 20? Or maybe it wouldn't have helped her? Based on their research, it is up to them to determine what would have happened in their short story about Sadako.

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## NUCLEAR ENERGY: GOOD OR BAD?

By now students should not only have a reasonable understanding of nuclear energy but they should also be able to form an opinion on whether they agree with it being used or not.

Divide the class into two groups - one side will be for nuclear energy and the other side will be against it. Each group will research nuclear energy (if necessary), focusing on the strengths and weaknesses of their position (why it's good, why it's bad etc...).

Instead of having a traditional debate, students will create persuasive materials to convince members of the other team to join their side. Some materials they may create:

- Posters
- Brochures/Pamphlets
- Commercial
- Blog

Once students have completed their research and materials, they can display them in the classroom and present them to the class.

If you like, at the end of the presentations, ask for a show of hands to see if anyone

has been persuaded to change their view on atomic energy.

As an alternative to this activity, have each student use any medium that they wish to communicate their position on the use of nuclear energy. They should be as creative as possible, while also making their point of view clear to their audience.

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## RENEWABLE ENERGY

In small groups, students will research one of the following types of renewable energy:

- Wind power
- Hydropower
- Solar energy
- Biomass
- Biofuel
- Geothermal energy

Their research should focus on describing the type of energy, why it's renewable and the pros and cons of using it.

Each group will present their findings to the class. After each group has presented, discuss what types of renewable energy are logical and reasonable to use and why we aren't using these types of energy more often.

### **Nuclear Energy Resources**

Adams, T.H. (2010) Nuclear Energy: Power from the Atom

Kindersley, D. (2007) See for Yourself Energy

VanCleave, J, (2005) Energy for Every Kid: Easy Activities That Make Learning Science Fun

Weakland M. (2010) Onion Juice, Poop, and Other Surprising Sources of Alternative Energy

In the play, Jennifer says the following:

*“There’s magic like this everywhere if you know where to look for it”.*

As a class discuss her statement and magic. Some questions to help the discussion get started:

- » What is magic?
- » What is science?
- » Can you think of examples of magic in everyday life?
- » How does magic relate to the play?
- » How do magic and science relate? Examples?
- » Can you think of examples where science is magic?

Demonstrate the following magic “tricks” to your class. After each one, discuss and analyze the “tricks”.

#### Lemon-Aided Circuits

<http://familyfun.go.com/crafts/crafts-by-type/educational-craft-activities/science-projects/weird-science-701815/6/>

#### Egg in a Bottle

<http://chemistry.about.com/od/chemistrydemonstrations/a/egginabottle.htm>

As a class, research proper scientific analysis and inquiry:

- What is scientific analysis and inquiry?
- What are the steps of scientific analysis and inquiry?
- What are the key elements of scientific method?
- Can you apply these steps and methods to the experiments shown in class?

Now ask your students to each find a science related magic “trick” to share with the class. Analyze some of the “tricks” using the scientific method taught in class.

Have each student, write a paper where they analyze their own magic “trick” using the scientific analysis and inquiry method discussed in class.

## Magic as Science Resources

Buttitta, H. (2007) It's Not Magic, It's Science!: 50 Science Tricks that Mystify, Dazzle & Astound

Gardner, M. (2011) Martin Gardner's Science Magic: Tricks and Puzzles

Glass, S. (2006) Analyze This: Understanding the Scientific Method

Scientific Method for Kids:

<http://www.science-fair-projects-and-more.com/scientific-method-for-kids.html>

## SCIENCE AND MAGIC

### Nicholas

*You folded the paper in a set sequence to make the crane.*

*That's science.*

### Jennifer

*Science is magic.*

### Nicholas

*Science is facts. Provable facts.*

Discuss Jennifer's and Nicholas' opinions on science and magic with your class. Is science magic or is science based on provable facts? If possible, turn the discussion into a debate.

With the discussion complete, each student will write a short paper on whether they think that science is magic, or that science is based on provable facts. They should include citations and a bibliography to help support their position.

Now that students have an understanding of how science and magic are related, brainstorm activity ideas to see what students would like to further explore.

To do this, have each student (or in pairs if you prefer) create a mind map based on science and magic. As they brainstorm, ask them to focus on the class discussion and activities based on this topic. Once complete, go over the mind maps with your students and continue the science of magic discussion. From this point, you can ask students to discuss activities they would like to do based on their mind maps. Depending on the responses and ideas, you can go in many directions. For instance:

- Each student can design their own activity.
- You can group students who have similar interests.
- You can choose a few activities randomly for the class to complete.

Once you've chosen the direction you'll take, work with students to develop an evaluation scheme so that they are aware of what is expected of them.

If you are unfamiliar with mind mapping, or would like to use online software there are many available online (and most have free trial periods). To help you get started, here's one that we suggest: <http://www.mindmeister.com/>



# Unit 4: War and Peace

## Introduction

**War (Hiroshima):** On the morning of August 6, 1945, the world changed in a matter of seconds as a result of the USA dropping a uranium atomic bomb (A-Bomb) on Hiroshima, Japan (7th largest city in Japan). The power of this bomb was so large and destructive that within minutes half of Hiroshima vanished. It was estimated that around 70 000 people were killed or missing, 140 000 injured and many were homeless as a result of this destructive bomb.

For the survivors, the radiation exposure led to many adverse health effects. As of 2006, survivors were still feeling these effects and the younger the person was at the time of the bomb combined with high levels of radiation meant they had a higher risk of illness. Some of these side effects include; cancers, burns (thermal, beta, and gamma), and internal radiation poisoning.

**Peace:** August 6th, the day the A-Bomb was dropped over Hiroshima, is now considered to be Peace Day. There are numerous memorials, monuments and museums in Japan and around the world that commemorate this day and the events that occurred. The Hiroshima Peace Memorial Park, the Children's Peace Monument and the Memorial Cenotaph are just a few of the memorials, monuments and museums that are available for the public to go to.

On August 6th, there are also events held to remember those that perished because of the A-bomb and also to remember that day so that it doesn't happen again. This day is also for all victims of war and to promote a nuclear free and war free world.

This unit contains activities that explore both Hiroshima (war) and peace.

Quebec  
Competencies

- To read and listen to literary, popular and information-based texts
- To write self-expressive, narrative and information-based texts
- To represent his/her literacy in different media
- To use language to communicate and learn
- To use information
- To use information and communications technologies

Unit Vocabulary

Hiroshima	Museums
War	Commemorate
Peace	Monuments
Nuclear Weapons	The A-Bomb
Memorials	Survivor

Discussion

As a class discuss Hiroshima, war and peace. Before beginning the discussion, have students research Hiroshima and definitions for 'war' and 'peace'. Some questions to help the discussion get started:

- » What do you know about Hiroshima? About the A-Bomb?
- » How would you define 'war'?
- » How would you define 'peace'?
- » When you hear the word 'peace' what do you think of? And when you hear the word 'war'?
- » Discuss how peace relates to *A Thousand Paper Cranes: The Story of Sadako* and Sadako's story.
- » What are the consequences of war?

To further introduce Hiroshima, war and peace to your students, have them complete the following WebQuest. To print this out for your students, please refer to Appendix E.

It's the year 2080 and you are researcher and need to find out more information about Hiroshima. Complete the following tasks to assist you in your research:

1. Find pictures of Hiroshima before and after the A-Bomb was dropped on it. Describe what a survivor would have seen directly after the bomb was dropped. How would they have felt? Include one picture with your answer.
2. 2005 marked the 60th anniversary of the A-Bomb being dropped over Hiroshima. What event(s) led up to the dropping of the A-Bomb? How did they mark this anniversary? What is the city like now? Include one or two pictures of Hiroshima (post 2005).
3. Hiroshima wasn't the only Japanese city that had a bomb dropped on it. What was the name of the other city? Find a printable map of Japan and locate and name the other city that was affected by the A-Bomb.
4. Find more pictures of Hiroshima after the bomb was dropped. Write an acrostic poem describing your thoughts on it. Include any pictures that inspired your poem.
5. Go to: [http://www.pcf.city.hiroshima.jp/kids/KPSH\\_E/top\\_e.html](http://www.pcf.city.hiroshima.jp/kids/KPSH_E/top_e.html) and read some of the messages about peace. Submit your own.
6. At the Hiroshima Peace Memorial, there is a statue of Sadako. There is an other statue of her in the United States. Where is it located? Include a picture of it with your answer.

When everyone has completed their WebQuest, reconvene as a class to discuss what they learnt from their research.

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## SURVIVOR STORIES

In this activity, students will research Hiroshima survivor stories. After students have read survivor stories, they should prepare some questions for an in-class discussion.

With the discussion complete, students will choose one survivor whose story touched them and will write a letter to them.

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## IMAGES OF PEACE AND WAR

To begin this activity, show students some images of peace and war. Discuss the effects these images have on your students.

- » Which is more effective, the pictures showing peace or the ones showing war?
- » Do the images of war/violence propagate war/violence? Or do they have the reverse effect?

Students will now creatively communicate their thoughts on peace and the consequences of war. They can use creative writing, poetry, a sample television script, a poster etc... to express their opinions.

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## PEACE IN THE WORLD

*“This is our cry, this is our prayer. Peace in the World”*

Many schools have started paper crane origami projects; where students string together their paper cranes and then it gets forwarded on to students in Japan.

As a class, design an activity that promotes peace. Begin by brainstorming ideas for an activity. Once the activity is chosen, you can ask students in other classes, schools, cities, provinces etc... to participate.

You can see some examples at the following site:

[http://www.pcf.city.hiroshima.jp/kids/KPSH\\_E/top\\_e.html](http://www.pcf.city.hiroshima.jp/kids/KPSH_E/top_e.html)

## Appendix A

### Vocabulary from A Thousand Paper Cranes

C U L T U R E E  
Y G R E N E T C  
O R I G A M I N  
N H E E S T O E  
A R Y O C F S I  
P A D A K A O C  
A C R A N E E S  
J O U R N A L P

CRANE

CULTURE

SCIENCE

ENERGY

JAPAN

PEACE

JOURNAL

ORIGAMI

With the left over letters, solve the mystery sentence!

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## Mystery Sentence Decoder

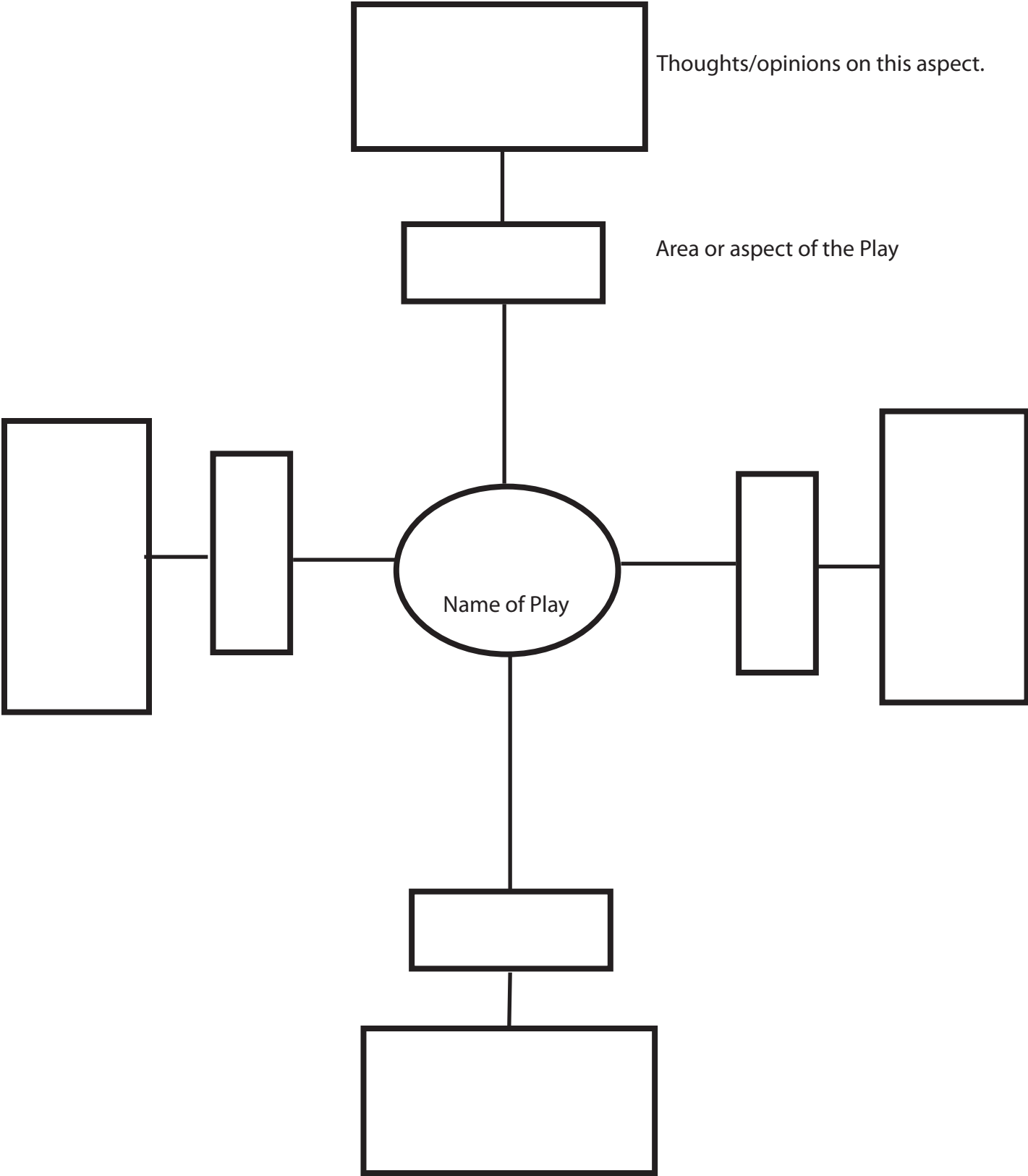
Using the decoder, create a mystery sentence using a theme or line from *A Thousand Paper Cranes: The Story of Sadako*. See if any of your friends can solve it!

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
4	10	20	21	1	16	8	25	3	17	26	13	7	11	15

P	Q	R	S	T	U	V	W	X	Y	Z
22	5	18	9	24	12	2	6	23	14	19

Appendix B

A Thousand Paper Cranes Web



## Appendix C

### Japan Quest

The following materials will assist your students with their Japan Quest.

1. Using the map of Japan provided, locate and label where Hiroshima is. Find two other major Japanese cities to locate and label.
2. Name three types of Japanese food. Have you tried any?
3. Briefly describe what daily life is like in Japan. How does it differ from daily life in Canada? List four examples.
4. List five examples of Japanese culture (anything from type of dress to type of martial arts).
5. Name one aspect of Japanese culture that you are interested in learning more about.
6. Fill out the 'What I know about Japan ' chart.

Japan



## What I know about Japan

Instructions: Fill in the 2 columns in the chart below. When you are done, discuss your answers with your classmates and teacher. As a class, brainstorm activity ideas based on the responses in the “What I would like to know about Japan” column.

What I know about Japan	What I would like to know about Japan

## Appendix D

### Journal Questions

Choose 5 of the following questions to answer in your journal.

1. Think of someone whose life story is important to you. Describe their story and why it's important to you.
2. In the story, Sadako is very excited for world Peace Day. Are there any events or holidays that you like to celebrate? Why?
3. If you could change one thing in the book, what would it be and why?
4. List 3 facts about Japan during the time this story took place and 3 facts about Japan today.
5. Choose one of the characters in the book and list three facts and three opinions about them.
6. Sadako and her family were proud of her for making the relay team. What have you done to make people proud of you?
7. This story is based on real life events of Hiroshima. What do you know about the bombing in Hiroshima?
8. Sadako's parents decided not to tell her, right away, that she had leukemia. Do you agree with this? What do you know about leukemia?
9. How does Sadako's life story affect people today? What can we learn from her story?
10. Sadako learns that the paper crane story is an old story. What is the meaning of the story? Do you know of any other folk stories?.

## Appendix E

### Hiroshima Quest

It's the year 2080 and you are researcher and need to find out more information about Hiroshima. Complete the following tasks to assist you in your research:

1. Find pictures of Hiroshima before and after the A-Bomb was dropped on it. Describe what a survivor would have seen directly after the bomb was dropped. How would they have felt? Include one picture with your answer.
2. 2005 marked the 60th anniversary of the A-Bomb being dropped over Hiroshima. What event(s) led up to the dropping of the A-Bomb? How did they mark this anniversary? What is the city like now? Include one or two pictures of Hiroshima (post 2005).
3. Hiroshima wasn't the only Japanese city that had a bomb dropped on it. What was the name of the other city? Find a printable map of Japan and locate and name the other city that was affected by the A-Bomb.
4. Find more pictures of Hiroshima after the bomb was dropped. Write an acrostic poem describing your thoughts on it. Include any pictures that inspired your poem.
5. Go to: [http://www.pcf.city.hiroshima.jp/kids/KPSH\\_E/top\\_e.html](http://www.pcf.city.hiroshima.jp/kids/KPSH_E/top_e.html) and read some of the messages about peace. Submit your own.
6. At the Hiroshima Peace Memorial, there is a statue of Sadako. There is an other statue of her in the United States. Where is it located? Include a picture of it with your answer.