



## **The Wakame Gatherers Mini-Unit Plan**

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### **Meet the Designers:**

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### **Contextualizing the Picture Book:**

**Title:** The *Wakame* Gatherers

**Authors:** Holly Thompson

**Illustrator:** Kazumi Wilds

**Publisher:** Shen's Books, imprint of Lee and Low Books

**Date of Publication:** 2007

**Genre(s):** Realistic fiction

#### **Summary:**

When Nanami's Gram from Maine visits Japan, Nanami's *Baachan* (grandmother) takes them to the seashore to gather *wakame* seaweed. Seaweed turns out to be an object that connects both sides of her family, in spite of Nanami's worries about the differences between her American and Japanese grandmothers.

**About the author and illustrator:**

**Author Holly Thompson** has lived for many years in Kamakura, Japan, where she raised her children, observed the harvesting of cultivated *wakame*, and gathered it with her children. Raised in New England, she earned her M.A. in fiction writing from New York University and now teaches creative writing at Yokohama City University. She writes for both children and adults and is the Regional Advisor of the Tokyo chapter of the Society of Children's Book Writers and Illustrators. Her novel *Asb* is also set in Japan. More information about Holly Thompson is available on her website <http://www.hatbooks.com/>, as well as on her blog <http://hatbooks.blogspot.com>.

**Illustrator Kazumi Wilds** was born in Tokyo and studied art at the Women's College of Art in Tokyo and at the University of Minnesota. While producing the pictures for *The Wakame Gatherers*, Wilds stayed with Thompson at her home in Kamakura. She sketched and took pictures of the places in the story while dialoguing with the author to find common understanding. After agreeing on a concept, the paintings were rendered in watercolor with airbrush effects. Kazumi Wilds is currently attending graduate school and studying Book Art. More information about her can be found on her website: <https://wildskazumi-picturebook.jimdo.com/>.

**Sources of inspirations for the author and illustrator:** As authors of this mini unit about *The Wakame Gatherers*, we were extremely fortunate to be able to meet the author of this book. Holly Thompson has lived in Kamakura, Japan for over 20 years and her love, appreciation, and comfort with the culture of Japan is obvious. Thompson showed us personal photographs of the *wakame* gathering beach depicted in the book, and photographs of the fisherwoman who was the model for the character Baachan.

Thompson made sure to include in her story the Japanese custom of purchasing seaweed from the fishing families on the beach when gathering your own. It is a sign of respect for the livelihood of the people who fish and process seaweed. These kinds of cultural details display Thompson's deep knowledge of her subject matter and respect for the people of Japan. In addition, she has centered her story around a girl and her two grandmothers. The girl lives in Kamakura with her Japanese grandmother and her American grandmother from Maine comes to visit. Thompson has raised two American children in Japan and has personal experience of the themes the character Nanami examines in the book.

Kazumi Wilds has illustrated many English language books about Japan, and also many books in the Japanese language. Wilds is Japanese and has studied at the University of Minnesota, so she, like the author, has firsthand knowledge of both cultures depicted in this book. She told the author she wanted to get the pictures true to life, and visited the beach in Kamakura in order to depict it realistically. Thompson showed us a photograph of the woman used as a model for Baachan holding a copy of the book. The illustrator has certainly brought real world Kamakura to life!

**Geographical region(s)/time period:** 21st century, 1940s/WWII-era Kamakura, Japan

**Cultural theme(s):** Japanese culture, American-Maine culture, cross-cultural/family relationships, bicultural families, intergenerational relationships, celebrating identity, understanding family history, post-WWII healing and relationships, family and cultural relationships with food/natural resources, food cultivation and processing (seaweed), ethical tourism, acting as cultural guide, multilingual children, relationship of humans to water, comfort and healing.

**Media of illustrations:** Painting.

**Awards and other recognitions:** Notable Social Studies Trade Book for Young People 2009, National Council for the Social Studies (NCSS).

**Other Curriculum Guides:**

**[Lee and Low Books](https://www.leeandlow.com/uploads/loaded_document/385/The_Wakame_Gatherers_FINAL_Teacher_s_Guide_2017.pdf)**

([https://www.leeandlow.com/uploads/loaded\\_document/385/The\\_Wakame\\_Gatherers\\_FINAL\\_Teacher\\_s\\_Guide\\_2017.pdf](https://www.leeandlow.com/uploads/loaded_document/385/The_Wakame_Gatherers_FINAL_Teacher_s_Guide_2017.pdf))

**[Program for Teaching East Asia \(CO\)](https://www.colorado.edu/cas/tea/curriculum/texts-and-contexts/two.html)** (<https://www.colorado.edu/cas/tea/curriculum/texts-and-contexts/two.html>)

**Analyzing the Picture Book:**

*The Wakame Gatherers* has an inviting cover with bright colors, and clearly depicts a child protagonist and a seeming child-elder relationships theme. Neither of us (Lani nor Robin) read any summaries before reading the book, and we were both surprised and challenged by the war content. We recommend not reading the summaries that are available on the book jacket or online before experiencing *The Wakame Gatherers*, as they oversensationalize the very important and somewhat subtle conflict that drives this book. (On top of that, there is at least one error in the book jacket summary, which Holly Thompson pointed out to us at her lecture.) By not reading these summaries we were able to use this Mini-Unit work to explore and puzzle out the subtly nuanced content as librarians, educators, and a parent.

I (Robin) have a previous history with *The Wakame Gatherers*, having checked this book out from the library a few years ago. I had picked out a number of books quickly to read with my children, grabbing things that stood out by the artwork on the jacket. This book's cover art appealed to me because I have been to Japan twice and recognized the word *wakame*, and I was enticed by the image of a beach, bright blue water, and the two older women and girl—all with smiles on their faces.

I read the book with my children before previewing the rest of the text and art in the book. I remember that the story was going along in a gentle way, with the characters going to the beach to collect seaweed for food and seeming to have a pleasant day out—the kind of story I'm happy to share with my children. Then came the memories of the Japanese grandmother, Baachan. She had

been standing on the very same beach the day the Allied forces bombed her city during World War II. It was a tragic event for her. As a mother reading with my young children, I was surprised and moved by this turn of events in the story. It was difficult for me to encounter the double page spread of fire, darkness, and a warplane in a book I believed to be about a fun day gathering seaweed at the beach.

Despite being nervous people at times, my young readers were fine—but I remember being so astonished by this book. It was unlike any I'd encountered before. It didn't reliably fit the model I thought it would when I checked it out, and perhaps that is why it has stuck with me.

Five years later, I was excited to see this title on our reading list for the Doors to the World Institute. I now work at the library where I first checked the book out from. I retrieved it from the shelf and felt like I was with an old friend I hadn't seen for a while. There has been something enduring in the text and art of *The Wakame Gatherers* and upon further analysis using the Whole Book Approach and Visual Thinking Strategies, I have a better understanding of the reasons why it has stayed with me. This book has many amazing layers. The text is rich and the art is beautiful, and the unapologetic interjection of wartime memory leads the reader to ask themselves what type of book this actually is—a sweet picture book? A war story? A book about family and types of food? Is it a story about globalization? Bilingualism? It's actually all of those—and for me, very unexpected.

I (Lani) had no prior experience with this book, and have very little experience with Japan and Japanese culture. I've never traveled to Japan or received any significant coverage of Japanese history or geography in school. Most of my cultural reference points come from Japanese acquaintances and a short teenage obsession with author Haruki Murakami.

But like Robin, I have some personal connections to the text. I grew up near the ocean in South Florida, and in my late teens and early 20s spent a fair amount of time in Maine. I had two very different grandmas with some surface WWII-related disconnects—an urban Jewish grandmother with Germanic roots and a Catholic, partially Germanic rural grandmother. And I'm a huge fan of eating and cooking with seaweed. The combination of our very different experiences allowed Robin and I to engage in this puzzle: How can we help our students, library patrons, and family members connect to *The Wakame Gatherers*?

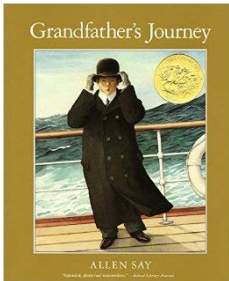
I am always looking to help my preK-6th grade students access the information that they need about our world—including history—and to grow their critical thinking skills. Current Japanese-U.S. cultural relationships in the context of WWII history is a rich subject in which to engage my students in valuable educational experiences, but I personally have very minimal background knowledge about Japanese culture and history. How then do I help my students understand the complexities of the roles the U.S. and Japan both played in WWII? How can I help them understand the ambiguity behind the U.S. "winning" the war through the introduction of the atomic bomb, or how we as individual citizens take responsibility for actions committed by our respective militaries?

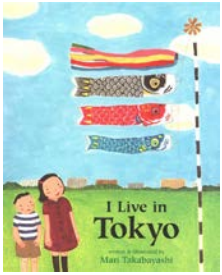
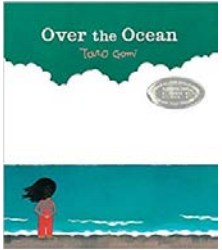
And so we were challenged. By incorporating the critical analysis tools of the Whole Book Approach and Visual Thinking Strategies, we were able to engage with these challenges from our different perspectives, and imagine the breadth of experience our students will bring to the text. We encourage you to do the same. The content of *The Wakame Gatherers* is deep and layered, and the opportunity to hear directly from Holly Thompson deepened our experience of the book further. For instance, understanding the context of why the author included a line about buying *wakame* directly from the fisherpeople in Kamakura—and why this custom is important to the people the author works with—emphasized how the concept of “work” is a critical backdrop for the text. It is in turn an important context that we, as educators, should explore with our students.

The cover of *The Wakame Gatherers* is full of action, with many shades of blue and an image of a girl and two older women at the seashore. The cover image bleeds into the back cover without being a full wrap around cover spread. A giant wave is hitting the girl, and the look on her face is interesting. Is she excited and laughing, or is she shocked by the cold water? She could be nervous and thrilled at the same time. Is the object she’s holding in her hand *wakame*? Is it a strange animal? Is it a plant? I recognize the language of the word as Japanese but I’m not sure what it means. It looks as though the beach is not just for collecting *wakame*—there is a surfer on the shore, and people walking, enjoying the day. Why is this beach used for collecting *wakame* and also used for enjoyment? The beaches in both of our hometowns are only used for leisure. The idea of using a beach for leisure and also gathering seaweed begs the question: is *wakame* gathering for fun (like picking up sea shells) or for livelihood? Why are the older women holding strange poles? The poles have stripes at the top, as do the letters in the title, and the girl’s shirt. Are the stripes important in any way?

The endpapers look like pages taken from an old fashioned book about plants and flowers, with sketches to use to identify. I keep looking for the identification tags next to the plants, but they are not there. Maybe this is *wakame*. The colors are gentle and pleasing to the eye—the background is a vanilla color and the plants are printed all in a yellow green. The parts of the plants are detailed, and the paper is printed in such a way that it would be a very lovely wallpaper.

### Juxtaposing Texts:

Book	Title / Authors	Thematic connection
	<i>Grandfather's Journey</i> by Allen Say	Bicultural experiences

	<p><i>The Airport Book</i> by Lisa Brown</p>	<p>Demystifying airplane travel</p>
	<p><i>The Kamishibai Man</i> by Allen Say</p>	<p>Kamishibai theater / Japanese culture &amp; traditions</p>
	<p><i>I Live in Tokyo</i> by Mari Takabayashi</p>	<p>Japanese life</p>
	<p><i>Over the Ocean</i> by Taro Gomi</p>	<p>Japanese life / island life</p>
	<p><i>The Granddaughter's Necklace</i> by Sharon Dennis Wyeth (author), Bagram Ibatouline (illustrator)</p>	<p>Transcultural experiences</p>

	<p><i>Unusual Chickens for the Exceptional Poultry Farmer</i> by Kelly Jones</p> <p>(Note: not a picture book)</p>	<p>Bicultural experiences, child relationship with grandmother</p>
	<p><i>The Truth of Me: About a Boy, His Grandmother, and a Very Good Dog</i> by Patricia MacLachlan</p> <p>(Note: not a picture book)</p>	<p>Child relationship with grandmother, family relationships to land</p>
	<p><i>I'm a Manatee</i> by John Lithgow</p>	<p>Songs about seaweed, sea animal life</p>
	<p><i>How My Parents Learned to Eat</i> by Ina R. Friedman (author), Allen Say (illustrator)</p>	<p>American and Japanese table manners, eating customs</p>
	<p><i>The Way We Do it in Japan</i> by Geneva Cobb Iijima (author), Paige Billin-Frye (illustrator)</p>	<p>Adjusting to life in a foreign country</p>

## Learning Experiences:

### Learning Experience Design #1: Hook Learning Experience—Wakame Experience

#### Objectives:

- \* Introduce the mini-unit with focus on object-based learning.
- \* Gain background knowledge about *wakame* through experiential learning.
- \* Introduce *transformation* and *connection* as two important themes in the book.
- \* Ask questions based on observations.

#### Activity:

Hand out dried *wakame* to each student without providing the name or any information about it.

#### Student instructions:

- \* OBSERVE. (You may want to look, touch, smell, or taste.)
- \* RECORD. (You may want to write, draw, or think.)
- \* What do you think you know about this?
- \* What do you observe?
- \* What do you wonder?

*This is wakame. It is a seaweed, and it is an important object and symbol in The Wakame Gatherers. Part of what is important about it is how it connects people and ideas, and how it transforms.*

Hand out a cup of warm water to each student and have them put what's left of their *wakame* into the water. Give each a spoon in case they want to taste it after the warm water transforms it. (The *wakame* should expand, soften, and turn green.)

#### Student instructions:

- \* OBSERVE. (You may want to look, touch, smell, or taste.)
- \* RECORD. (You may want to write, draw, or think.)
- \* What do you think you know about this?
- \* What do you observe?
- \* What do you wonder?

*We have watched the wakame transform, and in the book transformation (change) of feelings and ideas is important. Making connections with people is also important. So now you will make a connection.*

#### Student instructions:

- \* MAKE A CONNECTION: Find someone who made a similar observation.

## Connecting Picture Book to Family, Community, and Current Events/People:

In this book we see a household where a grandmother lives with a nuclear family made up of two parents and two children.

- \* Is this common or uncommon in the United States? Is it common or uncommon in other parts of the world? Could living arrangements like these be normal for some groups in the United States and unusual for others?
- \* What would be the good things about having a grandmother live with the nuclear family? What would be uncomfortable about this?
- \* Where do older people in your family live? Where did older people in your family live 100 years ago?
- \* Did your parents live with their grandparents when they were growing up?

One striking thing about the topic of community in this book is the comparison of the two communities Baachan and Gram come from. The first page after the title page has illustrations of the two communities. Nan comes from Maine, and the illustration depicts a rocky seashore. There is a boat, an island covered with trees, but no people. In contrast, the seashore of Baachan's town is gentle and sandy. There are people playing, a man walking with a surfboard and his dog, and a bustling street scene with streetcars and shops.

- \* Looking at the pictures of the beaches, how do they make you feel? Is it warm or cold in the picture?
- \* If you were to spend the day at the seashore in this picture, what would you be doing? Who would you see? Who would you talk to?
- \* Does this look like a rural area or an urban area?
- \* How would you get to and from the beach? How would you go food shopping in these places when you wanted something to go with the *wakame*?
- \* What would you hear or smell in these two places?
- \* How are the people connected?

This book has a two-page spread of Baachan's experience during World War II in Japan. Against a black background, the top third of the page is filled with fire and a fighter plane. Baachan is shown as a child, huddled up with her big brother.

When we see the picture of the happy child collecting seaweed in the surf with her grandmothers, and on the next two pages see the picture representing wartime, we notice many differences.

- \* What differences can you see?
- \* How can you tell the war picture is from a long time ago?
- \* How do you think the children feel in the picture? What are the children doing?
- \* What can you hear and smell?

The picture after this one takes us back to the beautiful beach. When you look at this picture:

- \* How is it similar to the previous picture of the girl collecting seaweed? How is it different?
- \* What do the shapes of the grandmothers' bodies tell you?
- \* Have you ever had to protect someone? Is there a group or someone in your family, neighborhood, or school in need of protection?
- \* Have you ever had to protect an idea? Which ideas would you fight to protect?

Somehow the beach is transformed by us knowing the horrible things that happened there before. The scene appears very ordinary—people having a lovely beach day—yet our protagonist is standing in the center of a triangle made by her two grandmothers. They are telling her to “always protect this peace”. Peace is something usually thought of as calm, as inaction, and here the grandmothers are giving the child a directive, a call to action. Protect the ordinary! Protect the everyday! The usual! The right of people to be able to wake up, to go to the beach, and enjoy the day without fear! The grandmothers are in a protective posture over Nanami during this exchange.

## **Learning Experience Design #2: Reader's Theater**

### **Objectives:**

- \* Use tableau to explore what Gram, Baachan, and Nanami feel while remembering and discussing WWII.
- \* Use tableau to understand what about daily life in Kamakura is both different and familiar.

### **Activity:**

After reading the book using critical thinking and interactive methods such as Whole Book Approach and Visual Thinking Strategies, introduce the idea of “The Pacific Ocean theater”.

Ask students:

- \* What do you think you know about WWII?
- \* What do you think you know about the U.S. and Japan during WWII?

### **Turn and talk**

Gram and Baachan were both children during WWII. We know that Baachan saw bombs, had to leave her home (with her brother), and lost her mother in WWII. We don't know who else in her family was hurt by the war. We don't know much about Gram's experience with WWII, but because she lived in Maine we can assume that she did not see bombs fall on her home, and she probably did not have to leave her home. She may have seen lots of pictures and newspaper articles about the war, and she likely heard a lot on the radio. At school and at home, she probably had to practice what to do if bombs were dropped. Now they are two older women meeting each other for the first time.

Before they've met each other, how do you think they feel? What might they be thinking about?



*Note: If you include four Nanamis for the first spread and a dog for the third, then there are 21 total roles.*

Finish reading the book. Ask students:

- ✱ What else did you learn about Baachan, Gram, or Nanami this time around?

### **Learning Experience Design #3: Seaweed Learning Experience (an extension of the Hook Learning Experience)**

#### **Objectives:**

- ✱ Identify seaweed as an ingredient used in food dishes.
- ✱ Recognize two parts of the world (Japan and US/Maine) where seaweed is used for food (and how), based on access to natural resources.
- ✱ Compare and contrast the farming methods of planting seeds in soil in the ground with growing spores in ropes in the ocean.
- ✱ Identify the three main parts of the *wakame* plant.

#### **Seaweed Learning Experience Activities:**

For an introduction to *wakame* science it is important to connect this plant used for food to plants the students use for food. The method used depends on the life experiences the students bring to the classroom. My own experience growing up in the Midwest did not include growing or using seaweed for consumption. As a teacher in a similar area, I would try to expand upon knowledge of local plants grown for food. Seaweed—*wakame*—is also a plant that is eaten, even if it is a bit different from the ones in our local gardens.

- ✱ The class could grow their own seeds in soil in clear cups, observing the roots of the plant digging down, and the shoots growing up. The students could do observational drawings or written observations of the plants.
- ✱ Share a diagram of the *wakame* plant (there is a good one at [ala.org.au](http://ala.org.au) because *wakame* is an invasive species in Australia), and discuss the parts of the plant. Compare and contrast the *wakame* plant with the plants grown in the classroom. It would be very interesting to grow *wakame* in the classroom, however this plant grows in the ocean underwater.

*The three main parts of the wakame plant are the blade (leaves), the stipe (stem), and the holdfast (the part of the plant that attaches in order for it to grow). Some seaweeds live and grow on top of the water, but wakame grows under the water. Wakame plants do not make seeds. Seeds contain an embryo of a plant surrounded by a nutrition source. Wakame produce spores, which are different in that they do not contain a food source for the young plant. When a plant reproduces using spores it is usual for the plant to produce many, many spores. Often they can withstand harsh conditions before finding a good place to grow.*

*Both wakame plants and the plants we grew in the classroom are green. The green color is from chlorophyll, the chemical both plants use for photosynthesis—the process of turning sunlight into energy for the plant to live and grow.*

Have students write or draw their observations. A Venn diagram to compare and contrast could also work well here

- ✱ The following song can be sung to the tune of *Twinkle, Twinkle, Little Star*. It's to help remember the information about *wakame*:

*Wakame, wakame*, in the sea,  
Reproduces sporically.

Little plants on ropes they grow,  
Under water, down below.

Blade and stipe and holdfast too,  
Tastes so good for me and you.

- ✱ After learning a bit about the plant itself, introduce the idea of local food to the students. Post photos around the classroom of different natural environments. Include forest, farm, oceanside, riverside, desert, and tundra. Give the students sticky notes to draw or write what they think people in these environments would be able to find for food. Have the students walk around the classroom and post their notes by the photos. Discuss how people can live in all kinds of environments. The human body needs a certain number of calories per day to survive and certain vitamins and minerals. These environments look quite different but people get the nutrition they need in different ways. People in Maine and Japan use seaweed as a naturally grown and farmed plant to get the nutrition they need. Discuss the nutritional value of green plants and the amount of vegetables children are recommended to eat in one day (1.5 cups per day for 4-8 year olds).
- ✱ As a wrap-up activity, have the students bring in an empty food box. Analyze the design of the box. With a partner or on their own, they will design a package for *wakame*. Drawing on knowledge from the lesson, they can create their own pretend *wakame* company to sell this food item. Will they be selling *wakame* to people for whom *wakame* is new or unusual, or to people already familiar with it? They can add slogans, drawings, or pictures of *wakame*, free recipes, or coupons to the box. They can also add nutritional information. This project would be best done on paper that is then affixed to the box after completion. The students could create a commercial to present to the class, or simply discuss their projects.

## Summative Learning Experience:

**Themes:** Family, bridging differences, acting as cultural guide

### Questions to explore through object-based learning:

- \* What is your *wakame*?
- \* What is an object that represents how the people in your life love each other despite their differences?
- \* What is an object that connects you to your background or heritage, or to a place that's important to you, or to family?

### Day 1

Turn and talk:

- \* Why is *wakame* important to Baachan?
- \* Why is *wakame* important to Nanami?
- \* Why is *wakame* important to Gram?

Group discussion:

- \* How does *wakame* connect Baachan, Nanami, and Gram?

Make a drawing:

- \* What are some things in your life that connect you with people who are important to you, even when you're different?

Explain your drawing to a partner:

- \* Who do these objects connect?
- \* How are you connected to these objects?
- \* What are the differences between the people that are connected by these objects? What are the similarities?

### Day 2

Each student should bring in an object (or draw/print a picture of an object) that they decide is their *wakame* to share with the class. It can be one of the objects that they brainstormed during the drawing activity or anything else that they decide.

Gallery walk:

- \* Everyone in class can see all of the objects brought in.

Show and tell:

Done in small groups. The presenting student can choose to talk about any of the following:

- \* Who does this object connect?

- \* How are you connected to this object?
- \* What are the differences between the people that are connected by this object?
- \* What are the similarities?
- \* Why is this object important to you?

## **Standards:**

### **2017 Massachusetts English Language Arts and Literacy Curriculum Framework Guiding Principles for English Language Arts and Literacy Programs**

- \* **Guiding Principle 6:** Students should have frequent opportunities for discussing and writing about their readings in order to develop critical thinking skills and to demonstrate understanding.
- \* **Guiding Principle 10:** Social and emotional learning can increase academic achievement, improve attitudes and behaviors, and reduce emotional distress. Students should practice recognizing aspects of themselves in texts (self-awareness), struggling productively with challenging texts (self-management), tailoring language to audience and purpose (social awareness), grappling vicariously with choices faced by others (responsible decision making), and collaborating respectfully with diverse peers (relationship skills).
- \* **Guiding Principle 11:** Educators should select works of fiction and nonfiction that instill in students a deep appreciation for art, beauty, and truth, while broadening their understanding of the human condition from differing points of view. Reading, discussing, and writing about high-quality prose and poetry should also help students develop empathy for one another and a sense of their shared values and literary heritage, while learning about who they are as individuals and developing the capacity for independent, rigorous thinking.

### **College and Career Readiness Anchor Standards for Reading**

Key Ideas and Details:

- \* 3. Analyze how and why individuals, events, and ideas develop and interact over the course of a text.

Craft and Structure:

- \* 6. Assess how point of view or purpose shapes the content and style of a text.

### **College and Career Readiness Anchor Standards for Speaking and Listening**

Comprehension and Collaboration:

- \* Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.
- \* Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.

## College and Career Readiness Anchor Standards for Language

### Vocabulary Acquisition and Use:

- ✱ 4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.

## 2016 Massachusetts Science and Technology/Engineering Curriculum Framework

### Grades Pre-K–2: Overview of Science and Engineering Practices

- ✱ Raise questions about how different types of environments provide homes for living things; ask and/or identify questions that can be answered by an investigation.

### Grades 3–5: Overview of Science and Engineering Practices

- ✱ 7. Construct an argument that animals and plants have internal and external structures that support their survival, growth, behavior, and reproduction; distinguish among facts, reasoned judgment based on data, and speculation in an argument.
- ✱ 8. Obtain and summarize information about the climate of different regions; gather information on possible solutions to a given design problem; obtain information about renewable and nonrenewable energy sources.

### Pre-K-3: Life Science

#### LS1. From Molecules to Organisms: Structures and Processes

- ✱ PreK-LS1-1(MA). Compare, using descriptions and drawings, the external body parts of animals (including humans) and plants and explain functions of some of the observable body parts.
- ✱ K-LS1-1. Observe and communicate that animals (including humans) and plants need food, water, and air to survive. Animals get food from plants or other animals. Plants make their own food and need light to live and grow.
- ✱ K-LS1-2(MA). Recognize that all plants and animals grow and change over time.
- ✱ 1-LS1-1. Use evidence to explain that (a) different animals use their body parts and senses in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water, and air, and (b) plants have roots, stems, leaves, flowers, and fruits that are used to take in water, air, and other nutrients, and produce food for the plant.
- ✱ 3-LS1-1. Use simple graphical representations to show that different types of organisms have unique and diverse life cycles. Describe that all organisms have birth, growth, reproduction, and death in common but there are a variety of ways in which these happen.

LS3. Heredity: Inheritance and Variation of Traits

- ✿ 1-LS3-1. Use information from observations (first-hand and from media) to identify similarities and differences among individual plants or animals of the same kind.

LS4. Biological Evolution: Unity and Diversity

- ✿ 2-LS4-1. Use texts, media, or local environments to observe and compare (a) different kinds of living things in an area, and (b) differences in the kinds of living things living in different types of areas.

### **Next Steps for Your Learning:**

Learn about chlorophyll and photosynthesis—check out the official video for “Photosynthesis” by They Might Be Giants on YouTube (<https://youtu.be/LgYPeeABoUs>).

Make and use natural *wakame* paint—the *wakame* is cooked in a crock pot with water for 12 hours and the resulting pigment is used as an ink or paint (Natural Plant Dyes <https://kinderart.com/art-lessons/painting/plantdye>).

Investigate other types of seaweed and how they are used or not used for food (Seaweed is Good Goo <https://www.kidsdiscover.com/teacherresources/seaweed/>).

*Wakame* is an invasive species in Australia (<https://www.ala.org.au/blogs-news/have-you-seen-this-seaweed-in-victoria>). Discuss the food chain/food web and how it is disrupted with species from other places. How are plants and animals moving around the globe like never before? What are some good and bad things about such an interconnected planet?

Design your own mini-museum. *Wakame* is an object connecting Nanami and her family. Museum curators collect and preserve objects which tell a story and connect visitors to other people. What would you collect and preserve and why? Have any museum objects made an impact on you and your life? On how you felt about the world and your place in it?

- ✿ Resource for the teacher: Connecting Kids to History With Museum Exhibitions, D. Lynn McRainey and John Russick, editors.
- ✿ Resource for teachers (can be shared with the class): The Museum Book: a Guide to Strange and Wonderful Collections, by Jan Mark, illustrated by Richard Holland.
- ✿ Smithsonian Learning Lab (<https://learninglab.si.edu/create>)

Explore various cultural and national experiences of Japanese and U.S. involvement in WWII through readings of historical fiction and nonfiction such as:

- \* *When My Name Was Keoko* (middle grade novel about Japanese occupation of Korea told from the perspective of two Korean children).
- \* *Sadako and the Thousand Paper Cranes* by Eleanor Coerr, illustrated by Ronald Himler (based on the true story of a Hiroshima child survivor).
- \* *Baseball Saved Us* by Ken Mochizuki; illustrated by Don Lee (picture book about a son and father building community in a Japanese internment camp through building a baseball diamond).
- \* *Remembering Manzanar: Life in a Japanese Relocation Camp* by Michael Cooper (nonfiction for upper elementary about Japanese internment in the U.S.).
- \* *I Survived the Bombing of Pearl Harbor, 1941 (I Survived #4)* by Lauren Tarshis (short accessible historical fiction novel told from the perspective of a child who was there).

## Bibliography

Other Curriculum Guides:

- \* [Lee and Low Books](#)
- \* [Program for Teaching East Asia \(CO\)](#)

Atlas of Living Australia, [ala.org.au](http://ala.org.au) (diagram of *wakame* plant, photos of *wakame* plant)

About the book:

- \* Kazumi Wilds (illustrator) website: <https://wildskazumi-picturebook.jimdo.com/>
- \* Holly Thompson (author) websites: <http://www.hatbooks.com/> and <http://hatbooks.blogspot.com>

Learning Activities Resources:

- \* Kids Discover, [www.kidsdiscover.com](http://www.kidsdiscover.com)
- \* Kinder Art, <http://www.kinderart.com/art-lessons/painting/plantdye>
- \* Smithsonian Learning Lab, <https://learninglab.si.edu>
- \* “They Might Be Giants - Photosynthesis (official video)”. Online Video Clip. YouTube. <https://youtu.be/LgYPeeABoUs>