

A Teacher's Guide to
THESE SEAS COUNT!

Written by Alison Formento and Illustrated By Sarah Snow



THESE SEAS COUNT! © 2013 by Alison Formento; Art by Sarah Snow
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Praise for These Seas Count!

“Captivated readers will imagine that they feel the warm sun, salty ocean spray, and cooling breezes along with the students. An afterword and suggested web links provide additional information about keeping the marine world safe.” ~ **School Library Journal**

“Formento once again underlines the value of the learning that takes place outside the classroom.” ~ **Publishers Weekly**

“[A] useful addition to classroom units on ocean life and pollution...incorporating photos, paint, and printed elements, the colorful digital-collage illustrations create nice textural effects.” ~ **Booklist**

Story Summary

Mr. Tate's class helps clean up a local beach and listens to the sea as it tells them about all the wildlife that make it their home. One whale, two giant sea turtles, three marlins . . . and more. Of course, the class discovers that "this sea counts!" *These Seas Count!* explores the environmental impact and importance of the seas, and how crucial it is to keep them healthy.

Alison Formento's gentle story and Sarah Snow's amazing collages combine for a powerful message about the environment and what we can do to preserve our oceans.

About the Author

ALISON FORMENTO is the author of *This Tree Counts!*, *This Tree, 1, 2, 3*, *These Bees Count!*, and now, *These Seas Count!* She lives in New Jersey with her family and enjoys sand between her toes, skipping through the surf, and watching waves. Her favorite beach to visit? A clean one! Whenever she's not writing, she's splashing about books at schools, libraries, and bookstores. Learn more about Alison at www.alisonashleyformento.com.

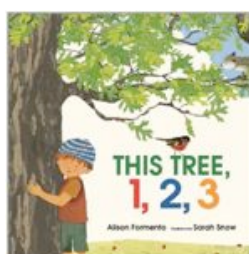


About the Illustrator



SARAH SNOW is the illustrator of *This Tree Counts!* and *These Bees Count!* She is a collage artist who combines found papers and acrylic and watercolor painting. She lives in New Paltz, New York with her family. Learn more about Sarah's work at www.sarahsnowcollage.com.

More books from Alison Formento and Sarah Snow!



Pre-Reading

Our Marine Life Friends

The following is a list of marine life mentioned in the story. Survey the class to see what they already know about the creatures on this list and any questions they may have. After reading the story, come back to the chart and add things that the students learned.

Sea Animals and Plants in the Story:	Facts We Know:	Questions We have:
whales		
sea turtles		
marlins		
sea horses		
rays		
pelicans		
jellyfish		
gulls		
harbor seals		
bottlenose dolphins		
phytoplankton		
sand crab		
starfish		

- Activate prior knowledge and anticipate what will be read or heard.

Take a Book Walk

Look at the front and back covers of the book. Where is the girl? What kind of bird is perched on the letter *t* in the title? Point out the title and names of the author and illustrator. Ask what the title means. What are the multiple meanings of “count”?

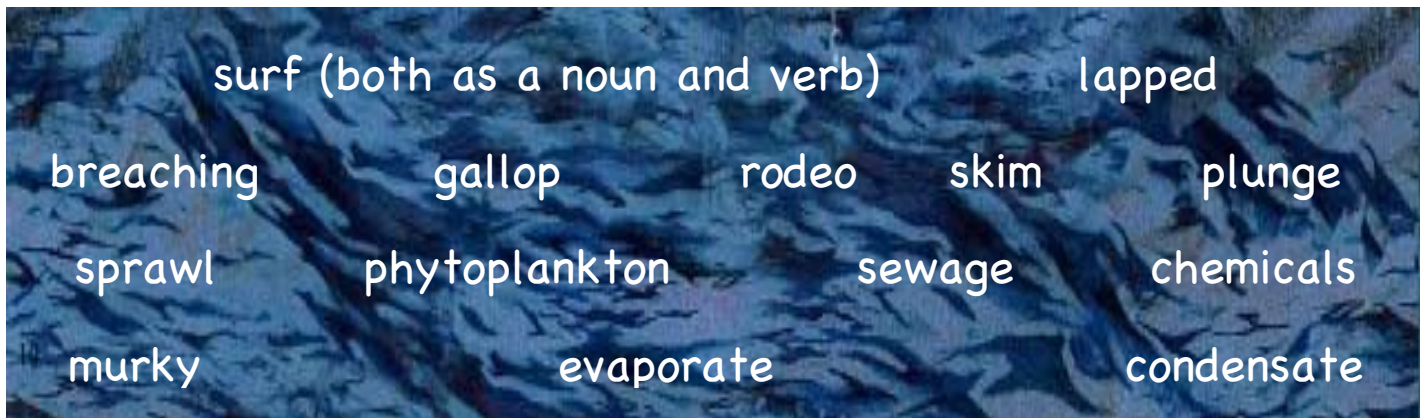
Ask students what they might find on a beach. Make a list of their responses, and then sketch their composite description.

Do a book walk, showing only the pictures in the story. What other things are found on Sunnyside Beach? Add these things to your composite sketch of a beach, and ask how the trash may have ended up on the beach. What problems might the trash cause both for visitors and creatures that live at the beach?

- *Set purpose for reading and check to verify or change predictions.*
- *Identify the front cover, back cover, and title page of a book.*
- *Name the author and illustrator of a text and define the role of each in presenting the ideas or information in a text.*

Vocabulary

Your students may be unfamiliar with the following words. When appropriate, encourage students to use picture clues and context to infer meanings.



- *Use context clues to decode new words.*
- *Use pictures as cues to check for meaning.*
- *With prompting and support, ask and answer questions about unknown words in a text.*

Discussion Questions

1. Who leads Mr. Tate's class on their field trip to Sunnyside Beach? (*knowledge*)
2. What surprises the students about the beach and the sea? (*comprehension*)
3. The children in the story are wearing bright orange life vests when they ride on the *Sea Fan*. How else could you keep safe while cleaning up your environment? (*application*)
4. Natalie says, "Beaches are fun. But it's so dirty here." Why is a dirty beach less fun than a clean beach? (*analysis*)
5. How did the children help the beach and the sea? What could you do to help the seas even if you don't live near the beach? (*synthesis*)
6. Captain Ned explains that tiny ocean plants called phytoplankton create oxygen and help clean the air, like other plants do. What else do creatures of the sea and land have in common? (*evaluation*)



Student Activities

Water Cycle Beads

Give your students a better understanding of the water cycle by helping them create water cycle bracelets. Use the following colored beads to represent each stage of the water cycle:

dark blue—water on the earth (seas, ponds, rivers, etc.)

yellow—sun (heat causes evaporation)

transparent—water droplets that rise into the air unseen due to evaporation

white—clouds formed when water droplets cool and condense

light blue—water that falls to earth in various forms of precipitation

Have students string the beads on chenille crafts stems in this order, creating a pattern. Once two sets of the beads have been strung, twist the ends together, closing the circle, and tuck the ends into the last beads. Let students use their bracelets to describe the sequence in the water cycle.

- *Model how the properties of water can change as water moves through the water cycle.*

Class Aquarium



Create marine life hats similar to the hat worn by the author in this photo. Folding construction paper in half, draw the outline of the various animals found in the book and let students choose which ones they'd like to decorate. They can use paint, paper scales or feathers, yarn for jellyfish tentacles, etc.

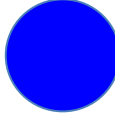
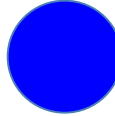

Once the hats are finished, have students stand in a circle with their hats on. Have one type of animal stand in the center of the circle, and ask which other animal has something in common with this one—either the way it moves, the way it looks, what it eats, its classification, etc.

- *Investigate and compare the basic physical characteristics of plants, humans, and other animals.*
- *Classify objects into given categories.*

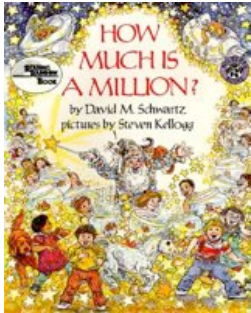
How Much Water?

To help students conceptualize that approximately three-quarters of the earth is covered with water, play a game of globe toss. Using a washable marker, give each student a blue dot right above their right thumb nail. With students standing in a circle, toss and inflated or plush globe to one student. When the student catches the globe, note if his or her right thumb is touching land or water. Place a blue (for water) or green (for land) sticker on a chart to keep track of the results. After children catch the globe, have them sit down until everyone has had a turn. After several rounds, the results should be close to 75% blue and 25% green. Variation: Younger children can sit in a circle to roll the globe and put their hands behind their backs when they've had a turn.

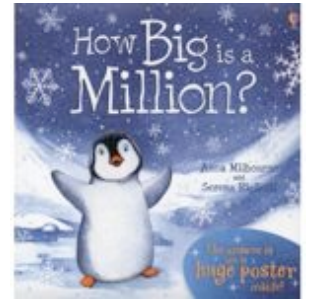
- Organize, represent, and interpret data.

Water	Land
	
	
	
	
	
	
	

Millions of Phytoplankton



In the note at the back of the book, the author explains that one teaspoon of water can hold millions of phytoplankton. Read a book like *How Much Is A Million?*, written by David M. Schwartz and illustrated by Steven Kellogg or *How Big is a Million?* written by Anna Milbourne and illustrated by Serena Riglietti.



Give each student a cup of water and a teaspoon, and ask them to imagine how small phytoplankton must be for millions of them to fit in a teaspoon of water. If we can't see them, what might they look like? Have students sketch their ideas.

Search for images of phytoplankton on the Internet to show students the range of shapes and colors of these microscopic plants. Let students paint or color their own versions of phytoplankton. Older students can add a fact about phytoplankton or a sentence about why this organism is important in the marine life food chain. Display the artwork as part of a food chain display.

- *Identify sources of energy (food) in a variety of settings (farm, zoo, ocean, forest).*
- *With prompting and support, identify basic similarities in and differences between two texts on the same topic.*

Sea Food Fest

Celebrate the seas with a “see” food party!



Pour blue gelatin in transparent plastic cups and let them chill for about an hour. Give each student a napkin with a variety of gummy fish and one wooden skewer with the point cut off so that both ends are blunt for safety. Show students how to use the sticks to push the gummy fish into the gelatin. Place the cups back into the cups and let them chill for another 2-3 hours before serving.



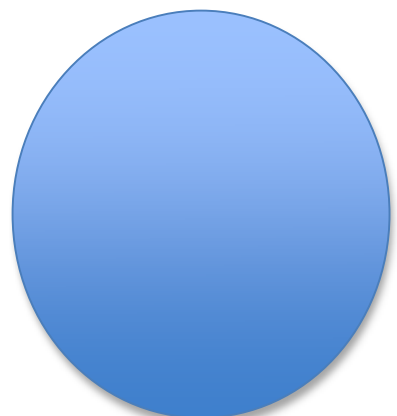
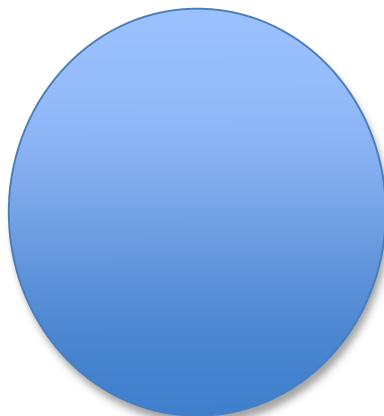
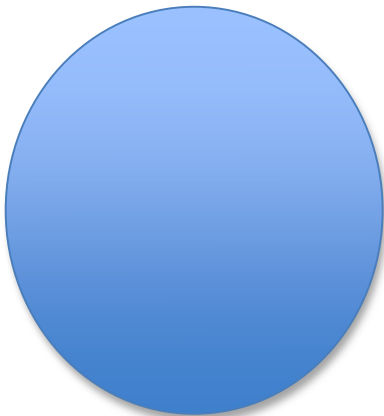
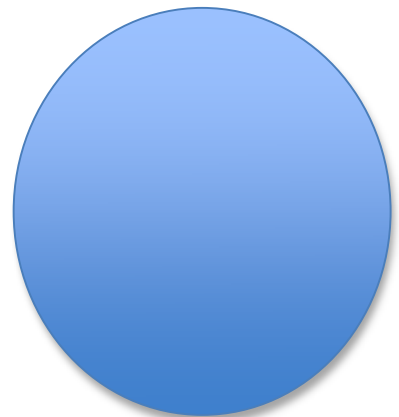
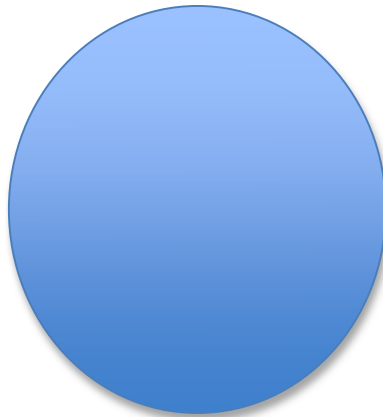
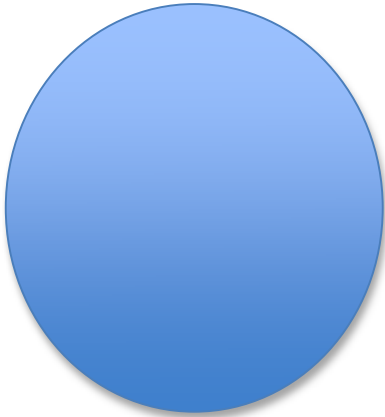
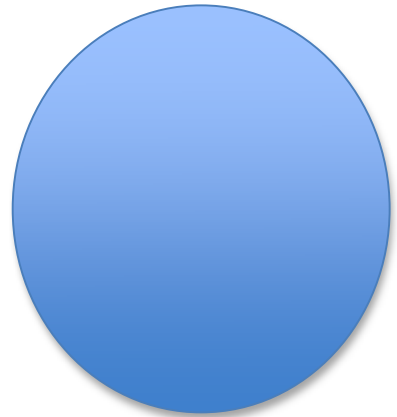
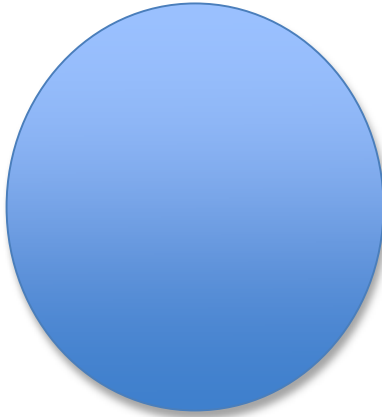
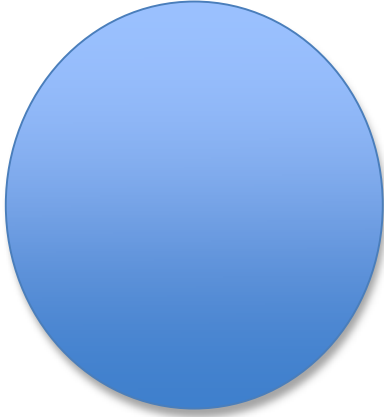
Fill plastic cups with goldfish crackers and have students estimate how many are in their cups. Have them record their estimates on the following page, then count them by piling ten in each circle. Let them count by tens and add any extra to find the total number of fish before they begin snacking.

- *Understand that the two digits of a two-digit number represent amounts of tens and ones.*
- *Count to tell the number of objects.*



How Many Fish?

I estimate that there are _____ fish in my cup.



Total: _____

How Long??

The author took photos of the signs below during her research for *These Seas Count!*. Visit the New Hampshire Department of Environmental Science site to find the stats on other common materials that find their way into our oceans:

http://des.nh.gov/organization/divisions/water/wmb/coastal/trash/documents/marine_debris.pdf

Bring in as many of the items on the list as you can find. Have students sit in a circle and place the items in the center. Ask them to predict: Which items take the longest to decompose in the ocean? Which ones take the shortest time to decompose?

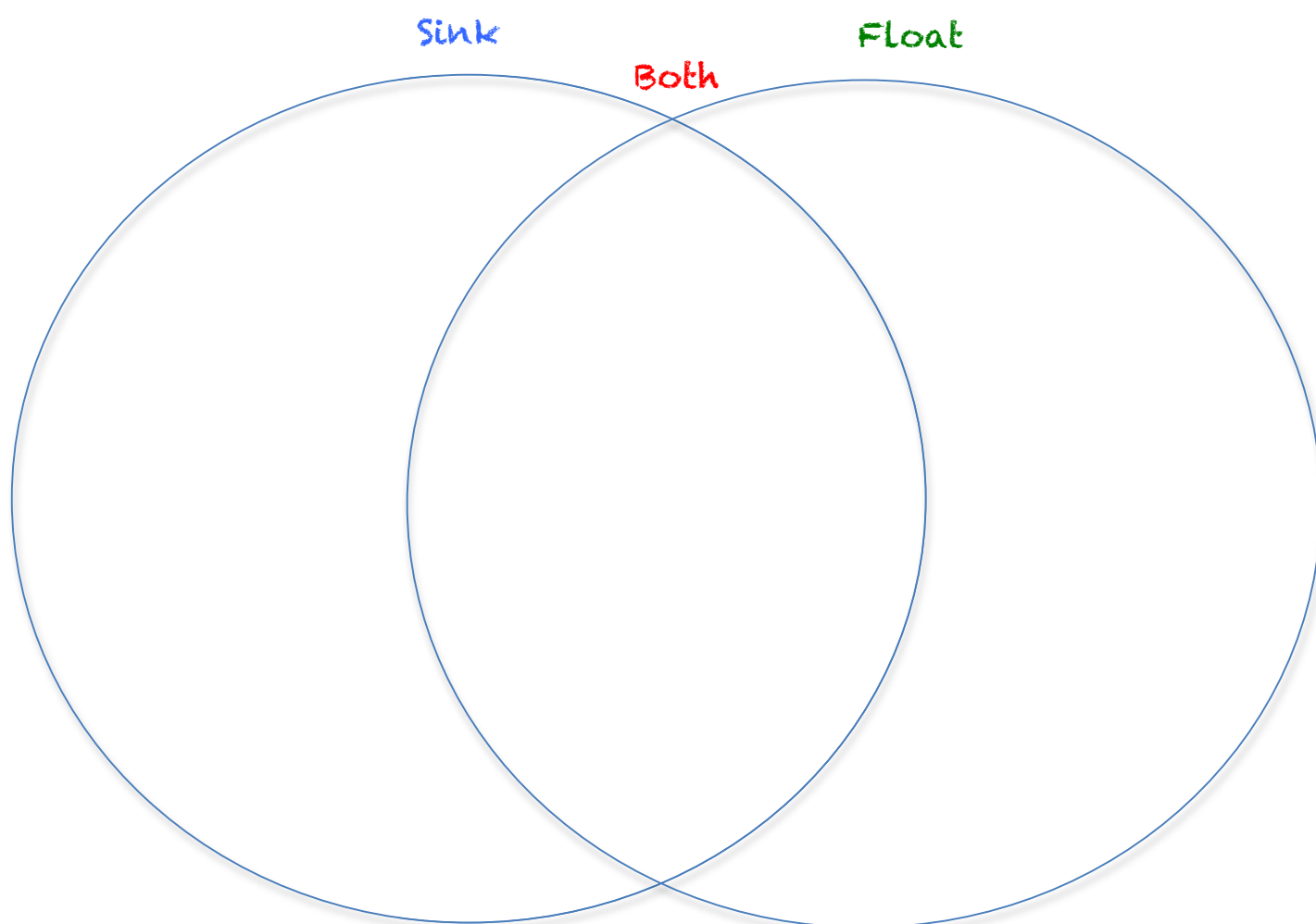
Place the items in order from least to greatest decomposition time according to the students' predictions. Take a digital photo to record their rankings. Afterwards, share the information in the above link and have students rearrange the items according to the data in the chart. Take a digital photo and compare it with the photo of their earlier predictions.

- *Demonstrate emergent awareness for conservation, recycling, and respect for the environment.*



Sink or Float

What sinks and what floats? Bring in a variety of fruits and vegetables of various shapes and sizes. Set them up in a central place where students can hold them and compare their weights. With older children, weigh each item and record its weight on a chart. Ask students to predict which ones will sink and which will float, and why they think so. Have students make their predictions by placing the fruits and veggies in a Venn diagram like the one below. Will any sink before floating back to the top, or float for a few seconds before sinking? If so, those go in the center under "both." Create the Venn diagram on the floor with hula hoops, yarn, or tape.



Bring in a plastic tub of water and let the kids experiment. Have them rearrange the fruits and veggies according to their findings.

- *Predict if an object will sink or float using evidence and reasoning.*
- *Measure and estimate liquid volumes and masses of objects.*

Dive into to an Ocean of Fun!

<p>World Oceans Day is June 8th!</p> <p>Check this site to see if there are events planned in your area and learn how you can plan an event at your school to celebrate our Oceans.</p>	<p>http://worldoceansday.org/</p>
<p>Dr. Seuss celebrates World Oceans Day</p>	<p>http://worldoceansday.org/?page_id=59</p>
<p>“Just for Kids” ocean activities</p>	<p>http://worldoceansday.org/?page_id=74</p>
<p>Gorgeous peaceful, serene 3 minute YouTube video of humpback whale and divers.</p> <p>You really feel like you're in the ocean with the whale in this video!</p>	<p>http://www.youtube.com/watch?v=Y7AxQZ6xKOA&feature=youtu.be</p>
<p>National Geographic Ocean site</p>	<p>http://ocean.nationalgeographic.com/ocean/</p>
<p>Ten Things You Can Do to Save the Oceans</p>	<p>http://ocean.nationalgeographic.com/ocean/take-action/10-things-you-can-do-to-save-the-ocean/</p>
<p>Environmental Protection Agency site</p> <p>Teachers can scroll down for lots of great links and study guides for K-12 on all things ocean, including marine debris and keeping oceans clean.</p>	<p>http://water.epa.gov/type/oceb/kids.cfm</p>
<p>Link for older kids about medicines that come from animal and plant ocean life to help fight illnesses such as cancer.</p>	<p>http://oceanservice.noaa.gov/education/projects/oceandrugstore.pdf</p>
<p>How to help the oceans by the way</p>	<p>http://oceana.org/en/living-blue</p>

you live	
Marine life—lots of great links and photos	http://oceana.org/en/explore/marine-wildlife
This page has numerous links on all kinds of fun and helpful ocean facts.	http://marinebio.org/oceans/
Marine Bio kids' link	http://marinebio.org/marinebio/games/index.asp
Ocean Conservancy site with lots of links on why the ocean matters	http://www.oceanconservancy.org/the-ocean-matters/
<i>The Sweet Spot in Time: Why the Ocean Matters to Everyone, Everywhere</i> , an essay written by Dr. Sylvia Earle, an ocean pioneer and one of the author's sources for <i>These Seas Count!</i>	http://www.vqronline.org/articles/2012/fall/earle-oceans/
Discovery Education site	http://school.discoveryeducation.com/schooladventures/planetocean/
Fun Ocean Craft site for teachers	http://www.enchantedlearning.com/crafts/ocean/
Great link with helpful photo instructions how to make origami whale, dolphin, fish, stingray, tortoise...and lots of other animals, too	http://www.origami-instructions.com/origami-animals-instructions.html

WAYS YOU AND YOUR FAMILY CAN HELP SAVE OUR SEAS AND OCEANS



- When visiting the seashore, take care of the beach.
 - Never toss trash off a boat.
 - Clean up litter around your neighborhood ponds, streams, and rivers.
 - Bike, walk, and use public transportation to help decrease CO₂ in our air.
-
- Recycle glass and plastic containers.
 - Use reusable bags and water bottles.
 - Eat fish caught in the wild or from sustainable fish farms.
 - Don't buy items made from fragile marine creatures, such as coral or sea turtles.
 - Involve your school and community to plant trees and grasses to help slow beach erosion.
 - Visit a marine habitat or sea research center, or check their websites to learn more ways to help.

An Interview with Alison Formento



How did you become a writer?

Reading led me to writing. I've always loved reading. As a child growing up in Arkansas, I'd walk to the local grocery store where the Book Mobile parked every Saturday and check out a giant stack of books. I grew strong toting those books back and forth each week! In high school, I took a class in poetry and Nobel literature that made me want to write like e.e. cummings and Pearl Buck. When I joined the speech

and debate team, writing and research became a habit. My love of creative writing was further fueled in college, where I fell in love with Shakespeare. I went on a binge of writing sonnets and wrote a number of short plays, some in iambic pentameter, too. Reading hundreds of plays, the classics and contemporary, truly fed my desire to write dialogue and develop believable scenes between characters. I wanted to put words on the page that a reader or actor could bring to life.

How did you get the idea for *These Seas Count*?

My family and I enjoy spending summer days at the "shore" as it's called here in New Jersey, but the idea for *These Seas Count!* was inspired by a beach walk in Santa Monica, California. After a long plane flight and a school visit sharing *This Tree Counts* at an elementary school in Santa Monica in October 2011, I needed some fresh air and sunshine and went for a long walk along the beach. Sea birds were flying out over the water and as I walked past a woman sitting on a towel with a young boy, I heard her say, "Let's count how many birds we see." I looked out and began counting the sea birds, too—there were fifteen—and something clicked in my mind and I began imagining counting different ocean creatures. Sometimes words inspire me and sometimes a nature walk is what I need to be inspired. For *These Seas Count!*, inspiration came from both words and nature. I'm glad I heard "Let's count..." on that beach that day.

Once the idea came to you, what happened next?

I began drafting the story that night. I started writing the middle of the story first—the poetic section when the seas "talk" to show the different creatures that live and thrive in and around the ocean. I knew I wanted Mr. Tate and all of the children in his classroom to experience the same feeling of wonder that I felt gazing out over the ocean and envisioning

the creatures there. That night I also emailed my editor at Albert Whitman who had worked with me on *These Bees Count!* and asked what she thought about my idea of a book about our seas and oceans. She emailed back an encouraging note expressing her excitement over the idea, which is something every author longs to hear from an editor.

This is the third time that Sarah Snow has illustrated one of your books. Did you work together?

Abby Levine, our wonderful editor, sends my story to Sarah Snow who then works her fabulous collage and paint magic around my words—at least, it seems like magic to me with Sarah's stunning art.

What were some of the challenges and rewards in writing this book?

Writing *These Seas Count!* presented a huge author challenge in the vast, or what I saw as fathomless, amount of information to research and pare down to use for this story. I spoke with several oceanographers and marine biologists who study and work to care for our seas and oceans every day. The hardest part of my job was to sort through all of the information about oceans and marine debris that I gathered and choose what would fit best for my characters as they visited Sunnyside Beach for clean-up day.



Dr. Tom Grothues

Dr. Tom Grothues at Rutgers Institute of Marine and Coastal Science was my key go-to expert to verify all of the sea life mentioned in *THESE SEAS COUNT!* He spent many hours helping me understand fully the importance of phytoplankton and the effects of marine pollution on our oceans and seas. Speaking to experts and researching about a topic is always rewarding when it enhances my story. I never stop learning from my books. Many beekeepers and apiarists I met working on *These Bees Count!* still send me interesting bee news and information, and now I've got a whole new network of ocean scientists I've met virtually and in my visits to area aquariums and coastal nature preserves. Continuing to learn about trees, bees, and seas is an immense reward.



For more information on the sea fan, visit www.ceoe.udel.edu/kiosk/seafan.html

Are there any “fun facts” about the book that readers might not know?

Captain Ned's boat is called the *Sea Fan*. Captain Ned says he loves the seas and I'm a huge fan of the seas and oceans, too, but that's only part of the meaning of the name *Sea Fan* on the boat. When I was thinking of a name for the boat in the story I tried lots of names like *The Sea Star*, *Sea Ray*, *Wave Rider*...but those didn't feel quite right so I looked at some underwater pictures for inspiration. That's when I discovered *Sea Fan*, which are fan-shaped coral and grow in a variety of gorgeous shapes and colors. Some even look like underwater trees! It's no secret that I love trees. The moment I saw a *Sea Fan*, I knew I had the name for Captain Ned's boat.

Do you have a writing routine?

I have to move my legs before I can write. For me, there's some connection in moving and getting my brain active, too. If possible, I take a walk, hike, play tennis, some sort of physical activity first thing in the morning. Next comes a necessary cup of tea, and then I settle into work at my too messy desk or at a local library with my laptop. I open whatever story is “on deck” and start right away.

What's the best piece of writing advice you've ever received?

That's easy. “The more you write, the more you write.” That simple statement is so true. If I sit down to write every day, I'm going to produce. It's a matter of bringing myself to the work. I can have a brain full of fabulous story ideas, but if I don't commit to putting pen to paper or banging out a few pages of a new story on my keyboard each day, then I'm not doing my job.

What advice do you have for young writers?

Don't try to sit down and write a 300 page novel. Try writing poetry, or very short pieces first. The short story is still one of my favorite forms of writing. Knowing that you're writing a story less than ten pages will help you focus on finishing. Also, if you're passionate about a subject, then do the research and write about it. Magazine editors and local newspapers are eager to find new, strong writers. Always keep a notebook and pencil handy. You never know when you'll have a great idea. One more piece of advice is to be brave and share your writing with trusted writing friends or a favorite teacher. Writing is

a solitary activity, so it's important to be able to give and receive feedback for your writing. Joining a critique group has been so valuable in my growth as a writer.

When you aren't writing, what are some of your favorite things to do?

Spending time with my family always comes first. We enjoy traveling, seeing movies and plays, hiking, swimming and playing tennis. But there's one certain activity I do every day, all on my own. I read! I'm always in the middle of reading two or three books. I even listen to books in the car. It really is my favorite activity.

What is your favorite fact about the sea?

This is as difficult as choosing my favorite tree. It's impossible to choose just one. There are so many fun and interesting facts about our oceans and seas, but I suppose it is the unknown that most intrigues me most. Scientist have guessed that there are perhaps a million yet-to-be discovered marine life forms. A million! We know so many amazing sea facts such as there are phytoplankton too small to see which help make our air breathable and there are whales the length of several school buses who can communicate in their own language, but imagine what else we don't know yet about marine life. Our oceans and seas are a place of mystery and wonder and we must care for them as we would a garden in our own backyard. I've learned many sad facts about marine debris and fossil fuel pollution and I hope THESE SEAS COUNT! shows the importance of clean beaches, seas, and oceans.

An Interview with Illustrator Sarah Snow



When did you begin to think of yourself as an artist?

Although I did a lot of art in high school, I really didn't think of myself as an artist until college. It is still hard to think of myself as an artist even today. Just seems too good to be true.

What type of media do you like working with the most?

I really love collage. Putting together found paper and different kinds of paint, always felt like a jigsaw puzzle with a surprise outcome.

How did you break into the children's book illustrating profession?

I was an illustration major in college. After college, I worked in book design and began to get illustration work slowly through the years.

This is the third book that you've illustrated in this series. How does the process differ with each book?

I just feel like I get better at it each time. This is by far my favorite.

How long did it take to illustrate THESE SEAS COUNT?

About 4 months.

How does having non-fiction elements in the story affect the way you do the illustrations?

I have to do more research about the specifics of the story, which is always a great learning experience. I love the knowledge I have gained from these books.

Are any of the characters or the setting modeled on real-life people and places?

Yes, Natalie, was based on a girl (also named Natalie) who was in my son's 1st grade class. I would volunteer to help the teacher when they had art class. We were doing self portraits one day and I was sitting with Natalie. She had all these great pony-tails with different colored pony-tail holders and hair clips. She and I had a great time coloring her portrait that day and it really turned out beautiful.

**Pablo Picasso once said, "All children are artists. The problem is how to remain an artist once he grows up." Do you agree?**

Yes, I absolutely agree. Whenever I look at my kid's art I always wish I could draw like them. There is a simple purity that I love in art made by children that I wish I could emulate as a grown-up.

What do you like to do in your spare time?

Playing with my kids, being outdoors, finding new music to listen to.

What is your favorite sea creature?

I would have to say whales. They always show up in my dreams.

