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# An Educator's Guide to

the green glass glass glass

Ellen Klages

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The Activities in this guide align with Common Core State Standards and fit into the curriculum for grades 5-6

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## **Dear Educator:**

The Green Glass Sea is a layered novel that deals with **multiple themes**, such as **self-discovery**; **abandonment**, **bullying**, **friendship**, **family**, and **death**. Set in Los Alamos, New Mexico, during World War II, the novel is an excellent introduction to the secret wartime work of the **scientists and mathematicians who developed the atomic bomb**. It is especially pertinent for use in the **language arts curriculum** because it offers many options for further exploration and research about **World War II** and life in the "town that officially doesn't exist." Though some classes may read the book faster, this novel study provides discussion and activities for a **three-week unit**. Some activities may require several days to accomplish. For this reason, teachers may wish to select activities that best suit the students in specific classes. Each of the suggested activities is aligned with the Common Core Standards for Language Arts.



## **About the Book:**

Dewey Kerrigan is almost eleven years old when she boards a train in St. Louis, Missouri, to join her father in Los Alamos, New Mexico. Until World War II began, Papa was a math professor at Harvard, but the only thing Dewey knows about his work now is that it's top secret and important to the war effort. Los Alamos, known as The Hill to residents, is a town only the government knows about, and there are rules to follow. The other girls immediately label Dewey a misfit because she collects junk for her mechanical projects, but the guys don't think she's so weird. When Papa goes to Washington on business, Dewey moves in with the Gordons and shares a room with Suze, who is determined to make life miserable for "Screwy Dewey." There are national and personal tragedies that follow, and eventually the girls find a path toward a sisterly relationship. The war ends in Europe, the secret weapon code-named "the gadget" is successfully tested, and Dewey discovers a talisman that keeps Papa close to her heart forever.



## **About the Author:**

Ellen Klages is a graduate of the Clarion South writing workshop. Her story "Basement Magic" won the Nebula Award for Best Novelette in 2005. Her short fiction has appeared in science fiction and fantasy anthologies and magazines, both online and in print, including The Magazine of Fantasy and Science Fiction, Black Gate, and Firebirds Rising. In addition to her writing, she serves on the Motherboard of the James Tiptree, Jr. Award, and is somewhat notorious as the auctioneer/entertainment for the Tiptree auctions at Wiscon. When she's not writing fiction, she sells old toys and magazines on eBay. She lives in San Francisco, California.

This guide was written by Pat Scales, a former middle and high school librarian in Greenville, SC. Pat holds a BS in Elementary Education from The University of Montevallo, and an MLS from George Peabody College for Teachers. She has written columns for *Booklist, The Horn Book*, and *School Library Journal*, among other publications. She is currently a childrens literature specialist and free-speech advocate. She is actively involved with the American Library Association, where she has served a number of leadership roles.

## Classroom Lesson Plans for *The Green Glass Sea* Pre-reading Activity

Teachers: Introduce the novel by asking students to make a list of facts they know about World War II.

- Have them share their lists in class.
- As a class, construct a combined list of facts from all that are shared.
- Divide the class into small groups and ask them to categorize the facts (e.g, people, places, and events). Then ask each student to write a two-page paper called "What I Learned about World War II."
- Encourage peer editing for grammar, clarity, and structure.

\*\*Correlates to Common Core Standard Speaking & Listening: Comprehension & Collaboration 5.1, 5.3, 6.3; Presentation & Knowledge and Ideas 5.4, 6.5; Writing: Text Types & Purpose 5.4, 5.5, 6.2, 6.4, 6.5.

## WEEK 1: 1943–1944 (p. 1–101)

- 1. **Teachers**: As students read the novel, encourage them to list unfamiliar words and make note of the page number where each word is located.
  - In small groups, share the paragraphs containing the words and try to figure out the meanings of the words from the context of the paragraphs.
  - Look up the words in the dictionary.
  - How did the group score? Take the activity a step further and have students supply a synonym for each word.

\*\*Correlates to Common Core Standard Reading: Craft & Structure 5.4, 6.4; Language, Vocabulary Acquisition & Use 5.4, 6.4.

- 2. In olden days, when people traveled by train, family and friends would often write "train letters" to travelers to convey their love and best wishes. These letters were slipped in the traveler's suitcase to be discovered and read on the journey. In Chapter 1: "Traveling," Dewey Kerrigan travels from St. Louis, Missouri, to join her father in New Mexico. Ask students to:
  - Write a letter that Dewey's father sends to her to be opened once she is on her train journey.
  - Consider the fact that Dewey has been separated from her father for quite a while. What might he say in the letter about their reunion?

\*\*Correlates to Common Core Standard Writing: Text Types & Purposes 5.1, 5.2. 5.3, 6.1, 6.2, 6.3.

- **3.** Dewey sees a man on the train who is reading *LIFE* magazine with a picture of a general on the cover. Ask students to:
  - Use books in the library or sites on the Internet to research one of the following famous World War II generals: George S. Patton, Douglas MacArthur, Dwight D. Eisenhower, Omar Bradley, Joseph Stilwell, or Henry "Hap" Arnold.
  - Then have them write a feature story about the general for LIFE magazine.
  - \*\*Correlates to Common Core Standard Writing: Research to Build & Present Knowledge, 6.7, 6.8; Production & Distribution of Writing: 5.4, 6.4.

**4.** Dewey meets Dorothy McKibbin in Santa Fe and learns the rules of living on The Hill. Ask students to:

- Discuss why Dewey likes rules. Why is it necessary for the scientists and their families to follow the rules? Which rules are the toughest to follow?
- Make an illustrated book of rules that Mrs. McKibbin presents to Dewey. They should write a preface that explains the need for the rules and an afterword that discusses how the rules may change at the end of the war.

\*\*Correlates to Common Core Standard Reading: Key Ideas & Details 5.2, 5.3, 6.1, 6.3; Writing: Text Types & Purposes 5.1, 5.2, 5.3, 6.1, 6.2, 6.3; Production and Distribution of Writing 5.4, 6.4.

## Classroom Lesson Plans for *The Green Glass Sea* WEEK 1: 1943–1944 cont.

5. "Loose lips sink ships" was a common phrase used during World War II. Lead a class discussion about the meaning of the phrase.

Ask students to:

• Create a poster that conveys the meaning of the phrase to hang in Fuller Lodge, the place for all social activity on The Hill.

\*\*Correlates to Common Core Standard Reading: Craft & Structure 5.4, 6.5; Speaking & Listening: Presentation of Knowledge & Ideas 5.5, 6.5.

- 6. Hold a class discussion about Papa's comment (p. 54), "Don't make the mistake of throwing out a whole culture just because some madmen speak the same language." Ask students to:
  - Think about who the madmen are. Who is the lead madman?
  - Discuss the term "profiling" as a class. In small groups, each group should find a few copies of a local, state, or national newspaper.
  - Find articles that reveal how profiling is a continued issue today.
  - Share the articles in class.

\*\*Correlates to Common Core Standard Reading: Craft & Structure 5.4, 6.4; Speaking & Listening: Comprehension & Collaboration 5.1, 5.2, 6.1, 6.2.

- The boys on The Hill build a secret fortress, and no girls are allowed. In "Treasure at the Dump," Jack wants to invite Dewey to the fortress, but Charlie has to think about it. Ask students to:
  - In small groups, discuss what influences Charlie's decision, how Dewey is different from the other girls, and Dewey's reaction to the invitation. Also, describe Charlie from Dewey's point of view.
  - \*\*Correlates to Common Core Standard Reading: Key Ideas & Details 5.3, 6.3.

#### Reviews for The Green Glass Sea

\* "Klages makes an impressive debut with an ambitious, meticulously researched novel set during WWII." —Publishers Weekly (starred review)

\* "Klages evokes both the big-sky landscape of the Southwest and a community where "everything is secret" with inviting ease and the right details, focusing particularly on the society of the children who live there...The story, an intense but accessible page-turner, firmly belongs to the girls and their families; history and story are drawn together with confidence." —*The Horn Book* (starred review)

"Many readers will know as little about the true nature of the project as the girls do, so the gradual revelation of facts is especially effective, while those who already know about Los Alamos's historical significance will experience the story in a different, but equally powerful, way." —*School Library Journal* 

In November of 1943, 10-year-old budding inventor Dewey Kerrigan sets off on a cross-country train ride to be with her father, who is engaged in 'war work.' She's busy designing a radio when a fellow passenger named Dick Feynman offers to help her...The characters are exceptionally well drawn, and the compelling, unusual setting makes a great tie-in for history classes. *—Booklist* 

## Classroom Lesson Plans for *The Green Glass Sea* WEEK 2: 1945 (p. 105–211)

- 1. In "Time Machine," Dewey reads *Caddie Woodlawn* for school. Ask students to:
  - Think about Caddie Woodlawn and discuss why Dewey relates to her.
  - Make an annotated bibliography of ten contemporary novels with characters that possess the same qualities as Dewey and Caddie.
  - \*\*Correlates to Common Core Standard Reading: Integration of Knowledge & Ideas 5.9, 6.9.
- **2.** In "Drawing the Line," Dewey moves in with the Gordons while Papa is away. Ask students to:
  - Discuss how Suze reacts to Dewey's sharing her room and explain what Dewey means when she says (p. 147), "Don't worry, I never color outside the lines."
  - Discuss how Suze ultimately teaches Dewey to "color outside the lines." What does Dewey teach Suze?

\*\*Correlates to Common Core Standard Reading: Key Ideas & Details 5.2, 5.3, 6.1, 6.3; Craft & Structure 5.4, 6.4.

- **3.** In the chapter "Under Fire," Franklin Delano Roosevelt dies on April 12, 1945. Ask students to:
  - Discuss how Dewey and Suze react to the news. How is this a turning point in their relationship?
  - Interview older family members, friends, or neighbors who may remember the day Roosevelt died. How old were they
    when the president died? What do they remember about that day? How did his death affect the entire nation?
  - Record the interviews and share with the class.
  - As a class, discuss the various interviews and classify the reactions, taking in consideration the age of the interviewee in 1945.

\*\*Correlates to Common Core Standard Reading: Key Ideas & Details 5.3; Speaking & Listening 5.1, 5.5, 6.1, 6.65.

- 4. Ask students to:
  - Use books in the library or sites on the Internet to gather information about Franklin D. Roosevelt.
  - Create a timeline that highlights the accomplishments of Roosevelt's presidency that Dewey and Suze might have presented to their class as a tribute to the president.

\*\*Correlates to Common Core Standard Writing: Research to Build & Present Knowledge 6.7, 6.8; Production and Distribution of Writing 5.4, 6.4.

5. Divide the class into two groups. Have one group create a live radio news show set the day Roosevelt dies, and the other group produce a show on the day the war ends. Interview people like Harry S. Truman, congressmen, and everyday citizens.

\*\*Correlates to Common Core Standard Speaking & Listening: Presentation of Knowledge and Ideas 5.4, 5.5, 5.6, 6.4, 6.5, 6.6.

6. Dewey's father is a mathematician. In small groups, ask student to: discuss how Dewey has inherited his math ability They often write letters to each other using code. Ask students to write a letter in code that Dewey might send to her father in Washington that tells him what her life is like at the Gordons'.

Partner students and have them exchange letters and crack the codes. Encourage students to share their writing with the class. How many different ways is life with Suze described?

\*\*Correlates to Common Core Standard Reading: Key Ideas & Details 5.2, 6.3, 6.3; Writing, Text Types & Purposes, 5.2, 6.2; Production & Distribution of Writing 5.5, 6.5.

## Classroom Lesson Plans for *The Green Glass Sea* WEEK 3: 1945 (p. 212–316)

- 1. Ask the class to define the word "clique." Talk about how cliques can lead to bullying. Debate whether the Girl Scouts in the chapter "Jumping Rope" are a clique:
  - How do they bully Suze? Who is the ringleader of the scout troop?
  - How does Dewey deal with the girls? By the end of the novel, Suze has learned to take up for herself. Cite specific scenes that illustrate how Dewey helps Suze come to terms with the Girl Scouts. What does this reveal about gaining a sense of self?

\*\*Correlates to Common Core Standard Reading: Key Ideas & Details 5.1, 5.3, 6.1, 6.3.

- 2. Abandonment is a central theme of the novel. Ask students to
  - Trace the way Dewey deals with abandonment throughout the novel.
  - Papa tells Dewey that she is brave. Divide the class into small groups and ask them to:
    - Identify specific passages from the novel that confirm Papa's assessment of Dewey is true.
    - Ask the groups to discuss whether being abandoned so many times may have contributed to Dewey's bravery. How
      does Suze feel abandoned, even though she has both parents? Contrast the ways the two girls deal with their situation.
      After completing the novel, have students write an essay that Suze might write at the beginning of the school year called
      "Dewey: The Bravest Person I Know," citing specific scenes in the book to support Suze's ideas.

\*\*Correlates to Common Core Standard Reading: Key Ideas & Details 5.1, 5.2, 6.1, 6.2, 6.3; Writing: Text Types and Purposes, 5.1, 5.2, 5.3, 5.7, 5.9, 6.1, 6.2, 6.3.

- **3.** Explain the following simile to the class (p. 71): "Suze felt like a commando, a member of the resistance sneaking through enemy lines." Ask students to:
  - Find other examples of similes in the novel.
  - Then, write a simile that best describes Dewey and Suze's relationship at the end of the novel.

\*\*Correlates to Common Core Standard Reading: Key Ideas & Details 5.3, 6.3; Craft & Structure, 5.4, 6.4.

- 4. Dewey is reading a biography of Faraday. In the chapter "Heroic Figures," Suze introduces Dewey to comic books. Ask students to:
  - Research the life and work of Faraday.
  - Then, create a comic book about him that Suze might write and illustrate as a gift to Dewey.

\*\*Correlates to Common Core Standard Reading: Integration of Knowledge & Ideas 5.7; Reading: Informational Text: Integration of Knowledge and Ideas 6.7; Writing: Types and Purposes 5.2, 5.3, 6.2, 6.3; Production & Distribution of Writing 5.4, 6.4.

- 5. Ask students to:
  - Write a paper contrasting Dewey's idea of family at the beginning of the novel with her idea at the end when she lives with the Gordons.
    - Point out the first time that Terry Gordon shows an interest in Dewey as a person. Dewey is close to her father, but she
      needs a mother. How does Terry Gordon become a mother to her? What is Dewey's reaction when she first hears the
      words family and home from Suze? What about Suze's changing feelings concerning Dewey?

\*\*Correlates to Common Core Standard Reading: Key Ideas & Details 5.3, 6.3; Speaking & Listening 5.1, 6.1.

- 6. In the last chapter of, *The Green Glass Sea*, the Gordons take Suze and Dewey to see Trinity for Suze's birthday. Ask students to:
  - In small groups, discuss the significance of the trip. How does visiting the site help Dewey deal with Papa's death?
    - Write a diary entry that each girl writes after her trip.

\*\*Correlates to Common Core Standard Writing: Text Types & Purposes 5.3, 6.3.

- 7. Suze is good in art, and Dewey is good at making mechanical devices out of "junk." Ask students to complete one of the following activities:
  - (1.) Create a picture, collage, or diorama of Trinity that Suze gives to Dewey to hang over her bed.
  - (2.) Make a movable object out of "junk" that Dewey gives to Suze for her bookshelf.

Allow students time to explain their creations in class.

\*\*Correlates to Common Core Standard Speaking & Listening: Presentation of Knowledge & Ideas 5.5, 6.5.

## **Post-reading Activities**

- 1. Using a class white board, explore the website of the museum at Los Alamos, www.losalamoshistory.org/Museum.htm. What is significant about the address of the museum? Instruct students to:
  - Print the map of the walking tour of the secret town.
  - Then, label each place on the tour that Ellen Klages makes reference to in the novel. How accurate is the setting?

\*\*Correlates to Common Core Standard Reading: Craft & Structure 5.5, 6.6; Integration of Knowledge & Ideas 5.7, 6.7.

## **Additional Websites for Research**

#### www.nps.gov/wwii/photosmultimedia/index.htm

The official website of the National World War II Memorial.

#### www.lanl.gov/history/wartime/index.shtml

This website offers the history of the National Science Laboratory.

#### www.gwu.edu/~nsarchiv/NSAEBB/NSAEBB162/index.htm

This website of the National Security Archive provides information about the Atomic Bomb and the end of World War II.

#### www.atomcentral.com

A website dedicated to documenting the history of atomic bomb testing, including Trinity.

#### ellenklages.com

The official website for Ellen Klages.

#### Awards and Honors for The Green Glass Sea

2007 Scott O'Dell Award for Historical Fiction

2007 Judy Lopez Memorial Award for Children's Literature

2006-2007 Book Sense #1 Children's Pick

2007 Quill Award Finalist

2007 Northern California Book Award (Children's)

2007 Locus Award Finalist (Best First Novel)

2007 New Mexico State Book Award (Young Adult)

2007-2008 Maine Student Book Award List

2007-2008 New Hampshire Isinglass Teen Read List

2008 Hawaii NeNe Award List

2008 Kentucky Bluegrass Award Master List

2008-2009 South Carolina Junior Book Award List

2009 Rhode Island Teen Book Award List

2009 Illinois Rebecca Caudill Young Readers Master List

# A Q&A with *The Green Glass Sea's* author **Ellen Klages**



#### Q: How much research did you do before writing The Green Glass Sea?

A: I did about a thousand hours of research, which works out to roughly three hours of research for every page in the book. I did background research — history, WWII timelines, nuclear physics, memoirs from Los Alamos personnel, clothing and popular culture — for perhaps six months while I was thinking about the characters and their story. I filled three binders with notes and sketches and bits of scenes and dialogues.

Once I had my setting firmly in mind and started writing the story, I did a little research every day, filling in blanks and confirming details. Several times the story veered in a new and interesting direction, and I'd go off to find out more about 1940s comic books or crystal set radios.

My research starts with books, but history is more than just facts and dates, so I try to visit the geographical sites (with my digital camera and my notebook) to experience the setting with all five senses; I track down magazines and catalogs from the period for visual references about how people actually lived; I bought CDs and DVDs of WWII-era radio broadcasts and newsreels; and I used the internet for details like the popular songs for a given week, or the phase of the moon on a particular date.

#### Q: Did you know how the book would end when you began writing?

A: Several years before I began working on the novel, I wrote what would become the last chapter of the book as a stand-alone, science-fiction short story (also called "The Green Glass Sea"). When I started thinking of it as a longer piece, I thought that scene in the desert in early August of 1945 was the middle of the story, and that the novel would continue on through 1947.

Here's where it gets interesting. I thought I was writing a science-fiction novel, and its original ending was set in Roswell, New Mexico, in July of 1947, the weekend of the infamous UFO sighting. My plan was to end the book with the aliens landing and taking Dewey back with them to their home planet.

My editor, Sharyn November, asked me to rethink that. I did, and cut out the aliens.

My science-fiction novel eventually became two historical fiction books. I continued the narrative into 1947 in the sequel, *White Sands, Red Menace.* And, somewhat ironically, *The Green Glass Sea* does end with my original short story.

The writing process is an interesting journey. Rarely a straight line.

#### Q: How long does it take you to write a novel?

A: About two years, on average. *The Green Glass Sea* took three, because I was starting from scratch, but I completed *White Sands, Red Menace* in one, using a lot of the research I'd already done, and continuing the stories of the same characters.





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