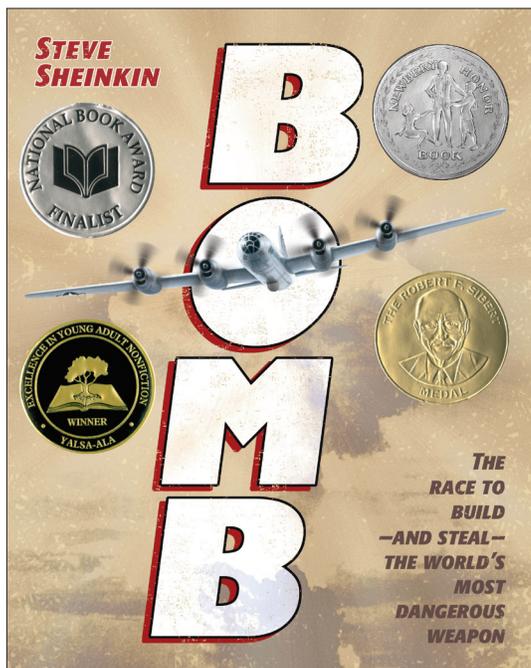


A TEACHER'S GUIDE FOR

BOMB

The Race to Build—And Steal—The World's Most Dangerous Weapon

BY STEVE SHEINKIN



Grades 5 to 9: Ages 10 to 14

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ABOUT THE BOOK

In December of 1938, a chemist in a German laboratory made a shocking discovery: When placed next to radioactive material, a Uranium atom split in two. That simple discovery launched a scientific race that spanned three continents. In Great Britain and the United States, Soviet spies worked their way into the scientific community; in Norway, a commando force slipped behind enemy lines to attack German heavy-water manufacturing; and deep in the desert, one brilliant group of scientists was hidden away at a remote site at Los Alamos. This is the story of the plotting, the risk-taking, the deceit, and genius that created the world's most formidable weapon. This is the story of the atomic bomb. *Bomb* is the winner of the 2013 Newbery Honor and the Sibert Medal, a YALSA Award for Excellence in Nonfiction for Young Adults finalist, and a 2012 National Book Award finalist for Young People's Literature.



ABOUT THE AUTHOR

Steve Sheinkin is the award-winning author of several fascinating books on American history. He lives in Saratoga Springs, New York. Visit Steve at his website stevesheinkin.com.

ABOUT THE GUIDE AND COMMON CORE STANDARDS

This guide was created in alignment with the Common Core State Standards. Questions and activities develop skills outlined in Reading Standards for Informational Text and Literacy in History/Social Studies, Writing, and Speaking and Listening. In an effort to support educators, reference is made to specific anchor standards where appropriate.



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VOCABULARY & KEY TERMS

Physicist (12), radioactive (13), particles (13), electrons (13), nucleus (13), neutrons (13), protons (13), theoretical physics (13), uranium (15), atom (15), fission (20), blitzkrieg (20), tradecraft (22), Communist (23), Allied Powers (33), Axis Powers (33), agent cultivation (39), Manhattan Project (48), KGB (60), intelligence (61), mesa (67), Los Alamos Ranch School (67), chain reaction (71), Vemork (75), comrades (78), demolition (79), saboteurs (87), “the gadget” (98), tamper (99), Army Counter-Intelligence Corps (101), censors (121), plutonium (133), monopoly (135), 509th Composite Group (147), implosion (156), *Enola Gay* (190), radar (191), incriminating (228), fusion (231), hydrogen bomb (232), nuclear war (236)

TEXT-BASED ACTIVITIES

Science/Technical Writing:

Read aloud with your students, chapters: “The U Business” (p. 13–17), “The Gadget” (p.97–102), and “Epilogue” (p. 227–236). If you’re using this in an English class, you may wish to share with students supplemental materials that explain fission and fusion (e.g., icanw.org has materials or your school science texts). Tell your students that they are now spies and it is their job to write a one-page report summarizing the key steps to the workings of an atom bomb and hydrogen bomb, including a sketched diagram of the process with accurate labeling. Let students know they will be assessed on their use of technical vocabulary, consistent formal tone, and organization of the report. RI.4, W.4, W.2, WHST.2, WHST.4, RST.4, RST.7

History:

Assign students to read and analyze primary sources. Discuss with students the impact the reading of these primary sources has on their understanding of the situations as related by Sheinkin. Example sources and sample questions to consider are provided below.

- *Edward Teller’s Testimony in Oppenheimer Hearings* (coincides with p. 231–235) What is the purpose of this testimony? In what ways does Mr. Gray succeed at proving his point? How does the reading of this primary source affect your understanding and opinion of the Oppenheimer hearings? Having read this transcript, do you feel that Sheinkin’s account of Oppenheimer’s hearings is sympathetic in one way or another and why?
- *Truman Announcing the Bombing of Hiroshima* (coincides with p.199) What is the date of the announcement? What is the purpose of it? What is the tone? What lines or passages most effectively accomplish the purpose of the announcement? After reading the entire announcement, do you feel Sheinkin’s extracts best represent the whole? How might different extracts affect the reader differently? RI.2, RI.4, RI.6, RI.7, RI.9, RH.1, RH.2, RH.5, RH.8, RH.9, SL.1, SL.4

Language Arts/Theater:

Before reading, assign students a key historical figure from the book. A list of people you might consider: Robert Oppenheimer, Albert Einstein, Otto Hahn, Lise Meitner, Eugene Wigner, Leo Szilard, Franklin Delano Roosevelt, Knut Haukelid, Leslie Groves, Enrico Fermi, Jens Poulsson, Robert Serber, Harry Truman, Dorothy McKibben, Richard Feynman, Moe Berg, Paul Tibbets. After reading the book, students will write and perform a monologue as their assigned historical figure. Every monologue will begin with the same first sentence, “The United States wouldn’t have succeeded without me!” Instruct students to keep notes throughout their reading of key details, phrases, and situations they can use in their monologue to show how that person was instrumental in that success and his or her emotional reaction to it. The tone should be persuasive, but also reflect the mood of the person at the end of the war. RI.1, RI.2, W.1, W.4, SL.4, SL.6, L.6

Language Arts/History:

Sheinkin quotes Robert Oppenheimer, “The safety of this nation,” he insisted, “cannot lie wholly or even primarily in its scientific or technical prowess. It can be based only on making future wars impossible” (214). Sheinkin writes, “He believed the nation should stop building bombs” (214). Assign students to write an essay agreeing or disagreeing with Oppenheimer. They should support their argument in part by referencing their knowledge of atomic warfare, quoting people from the book and the primary sources read in class or found during their own research. W.1, W.4, W.7, W.8, W.9, WHST.1, WHST.4, WHST.7, WHST.8, WHST.9

Debate:

Sheinkin explores several reasons why American scientists and citizens felt justified in spying for the KGB. Have students use the text and outside resources to list reasons for and against spying in this situation. Set up a fishbowl debate where students can tag each other in so that many students can partake. SL.1, SL.3, SL.4, RI.1, RI.3, RH.1

Writing/Film:

In the acknowledgments section of the book, Sheinkin writes of a conversation with his editor: “We were discussing an article we’d both read about an obscure World War II spy, and gradually that grew into the idea of doing an ambitious global thriller about the birth of the bomb” (260). Which elements and techniques used by Sheinkin in this book develop the thriller pacing and tone he set out to achieve? Compare the novel to the movie, *Fat Man and Little Boy*. Discuss the techniques the movie uses to engage the viewer. Discuss the differences between the two interpretations and your expectations of them. RI.3, RI.4, RI.5, RH.5, RH.6, SL.1, SL.2,

INTERNET RESOURCES & SUPPLEMENTAL MATERIALS

- Relevant Primary Sources: gwu.edu/~nsarchiv/NSAEBB/NSAEBB162/index.htm
- Article: “If the Atomic Bomb Had Not Been Used” by Karl T. Compton: theatlantic.com/past/docs/issues/46dec/compton.htm
- Video: *Barefoot Gen: The Bombing of Hiroshima As Seen Through the Eyes of a Young Boy*
- Interactive Website: PBS’s NOVA, Military + Espionage: pbs.org/wgbh/nova/military/
- International Campaign to Abolish Nuclear Weapons: icanw.org