



Illustration by Janet Pedersen

Curriculum Guide:

In Memory of Gorfman T. Frog

By Gail Donovan

For Ages 8 to 11

Dutton Children's Books

ISBN-13: 9780525420859

Middle Grade Hardcover, \$15.99

Curriculum Guide by Toni Buzzeo, MA, MLIS

BOOK SUMMARY

Joshua Tree Hewitt has more problems than any fifth grader deserves. Most of them arise from his impulsivity and related compulsive talking—until the day that he finds a FIVE legged frog in the backyard pond. Then, his problems compound and his worries multiply. Why doesn't anyone else care as much about this amphibian—whom he names Gorfman T. Frog—than he does? And how can he get to the bottom of the cause of that fifth leg when Gorfman has died, he's lost computer privileges at home, and no one will listen to what he has to say? It takes both energy and ingenuity to solve his problem. Luckily, Josh has plenty of both!

CURRICULUM SUMMARY

You'll have opportunities to address science and information literacy standards, language arts, and social studies standards in conjunction with your reading of *In Memory of Gorfman T. Frog*. Tackle science standards in relation to the food chain, the discovery of which type of frog Josh has found, frog life cycles, and the biological puzzle of Gorfman T. Frog's fifth leg. Focus on language arts reading and writing standards by analyzing Joshua's character through his words and actions and by completing two writing assignments that Joshua undertakes in the book. In social studies explore national parks and a method for resolving conflicts between students.

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FIND OUT MORE

About the Author: Students may wonder what life experiences led Gail Donovan to write a novel with strong science themes. Read more about her at:

<http://www.gaildonovan.com>

About Endangered Species: Thoroughly explore the topic of endangered species by following the recommended links on the North American Association for Environmental Education Endangered Species website at:

<http://eelink.net/EndSpp/endangeredspecies-mainpage.html>

About Frogs: Find everything from fascinating facts about frogs to links to coloring pages and a special creature-of-the-month Northern Leopard Frog link at the Minnesota Pollution Control Agency Frogs! website at:

<http://www.pca.state.mn.us/kids/frogsforkids.html>

CURRICULUM ACTIVITIES

Science and Information Literacy Activities

What Kind of Frog Are You?

Josh lives in Maine, as does his five-legged frog. When he first finds the frog on p. 13, he doesn't know what kind it is. Before reading further in the text, ask your students to try to determine what kind of frog Josh has found. It is green with big black spots and its skin is smooth.

If you are teaching in a Maine school, your library media center may have this essential reference book. If not, interloan a copy through your library.

Hunter, Malcom L. Jr., Aram J. K. Calhoun, and Mark McCullough. *Maine Amphibians and Reptiles*. University of Maine Press, 1999.

This resource includes town-by-town distribution maps, ecological and life history information, and a compact disc with the songs of Maine frogs and toads.

If you are unable to interloan the book, you may direct your students to online portions of the field guide at <http://www.umaine.edu/wetlands/guide.htm>.

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What Kind of Frog Are You? (cont.)

Ask them to read through the descriptions of these seven frogs to determine which it might be:

- Bullfrog
- Green Frog
- Gray Tree Frog
- Mink Frog
- Northern Leopard Frog
- Pickerel Frog
- Spring Peeper

To facilitate the use of complex thinking, ask them to complete the following sentences:

*The Maine frog that Josh found in the garden pool is/is not a _____
(type of frog) because its coloration is _____
_____*
and its skin is _____.

Who Eats What?

Invite students to participate in the food chain game that Ms. O'Reilly creates for her students on pp. 43-48.

1. Assign the roles of three frogs, one hawk, and a large group of grasshoppers (this group will be comprised of all remaining students).
2. Begin by scattering small scraps of paper on the area where the game is to be played.
3. Next, distribute a lunch bag to each grasshopper.
4. Instruct grasshoppers to fill their stomachs (lunch bags) with as much breakfast as they can in 60 seconds.
5. Ask the three frogs to chase and tag the grasshoppers as "eaten."
6. Finally, ask the apex predator, the hawk, to chase and tag the frogs as "eaten."

When the game is complete, ask students to discuss the implications of the food chain in the survival of all species.

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Life Cycle

In Chapter 13, while Josh and Cady are splashing around catching tadpoles, Josh explains the amazing life cycle of frogs. Review this life cycle with your students in order to prepare them to better understand what might go wrong to create frog deformities.

Excellent resources include:

- Frog and Toad Life Cycle
<http://www.naturenorth.com/1np/Species/amphibian/Lifcyc/Flfcyc.html>
- Life Cycle: Frog Metamorphosis
http://www.tooter4kids.com/Frogs/life_cycle_of_frogs.htm
- The Visual Dictionary: Life Cycle of a Frog
http://www.infovisual.info/02/029_en.html

Challenged Frogs

Josh's frog is challenged by a physical deformity (an extra back leg). You can find photographs of other deformed frogs at the Minnesota Pollution Control Agency website at:

<http://www.pca.state.mn.us/hot/closeup.html>
<http://www.pca.state.mn.us/hot/frogphotos.html>

Read the possible causes that Josh's classmates brainstorm on pp. 22-23. List these causes and brainstorm a list of other possible causes on chart paper.

Read more about possible causes of frog deformity:

- Deformed Frogs in Minnesota (Minnesota Pollution Control Agency website)
<http://www.pca.state.mn.us/hot/frogs.html>
- The Frog Deformity Problem (Knowledge Integration Environment website)
<http://kie.berkeley.edu/ned/data/E01-971029-002/E01-971029-002.html>.

You may want to ask your students to stage a debate between proponents of the Parasite Hypothesis and the Pesticide Hypothesis. Background information for both arguments is available at the Knowledge Integration Environment website at <http://kie.berkeley.edu/roosevelt/frogs.html>.

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Look It Up Online!

In Memory of Gorfman T. Frog gives you an excellent opportunity to discuss online searching.

“Quickly, Josh typed in ‘deformed frogs’ and started moving through the links. He liked searching for information on the computer. It was like a treasure hunt.”
(p.100)

Author Gail Donovan doesn’t tell us how Josh initiated his search. Where did he begin? Ask students to brainstorm places where Josh might have started his search and list their ideas.

In many cases, students will offer Google as a place to begin the search. Using your electronic white board or a data projector connected to your computer, model that strategy by typing “deformed frogs” into Google. You can expect a total of 151,000 results without the use of the quotation marks and 13,600 results with the use of the quotation marks.

Offer students other, wiser, alternatives to conduct their searches. For instance, if your school subscribes to Ebsco databases, search “deformed frogs” in the various databases:

- Primary Search: twelve citations, eleven of them available as full text
- Middle Search: nineteen full text results
- Searchasaurus: twenty full text articles
- Kids Search: twenty-two full text articles

Or choose a kids’ search engine such as Ask Kids at <http://www.askkids.com>. Note the additional suggested search terms that are offered on the left sidebar when you search on “deformed frogs.”

Once students have had an opportunity to conduct searches using a variety of tools, ask them to write a persuasive paragraph arguing for the wisdom of starting with databases or kids’ search engines over the use of Google.

As a follow-up activity, print a selection of the most useful and appropriate articles (show students how to determine a reading level matching their own using Kids Search).

Assign each article to a small group of students. After students have read the articles, invite them to list the possible causes of deformity as discussed in their articles and then share these with the whole class.

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Book Pairing

Consider reading a nonfiction book about frog endangerment in conjunction with your reading of *In Memory of Gorfman T. Frog*. An excellent choice is:

Hamilton, Garry. *Frog Rescue: Changing the Future for Endangered Wildlife* (Firefly Animal Rescue series). Firefly Books, 2004.

This nonfiction book examines the reasons for the dramatic decline in frog populations worldwide from habitat destruction such as hydroelectric dams that disrupt the flow of rivers, to a fungus called chytrid and a parasite causing deformities, to natural disasters and the use of frogs in medicine and high school biology classes.

Invite students to investigate organizations and conservation efforts listed in the book.

The Road to Extinction

In Chapter 14, Charu says:

“And I went back to the site and it said that leopard frogs are on a Special Concern list. That’s like one step away from endangered!” (p. 141)

Not all animals that are in danger of disappearing from the earth are classified as endangered. As a class, spend time discussing the hierarchy of endangerment. According to the U.S. Environmental Protection Agency:

“There are approximately 1300 endangered or threatened species in the United States today. **Endangered species** are those plants and animals that have become so rare they are in danger of becoming extinct. **Threatened species** are plants and animals that are likely to become endangered within the foreseeable future throughout all or a significant portion of its range.”

<http://www.epa.gov/espp/coloring/especies.htm>



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The Road to Extinction (cont.)

And according to the Center for Aquatic and Invasive Plants, University of Florida, and the Invasive Plant Management Section of the Florida Fish and Wildlife Conservation Commission, a **Species of Special Concern** (often a state designation) is:

“A species or population which warrants special protection, recognition, or consideration because it has an inherent significant vulnerability to habitat modification, environmental alteration, human disturbance, or substantial human exploitation which, in the foreseeable future, may result in its becoming threatened.” <http://aquat1.ifas.ufl.edu/guide/endanger.html>

After researching a variety of animals that are in danger in the library media center and online at the Defenders of Wildlife Kids' Planet website <http://www.kidsplanet.org/factsheets/esa.html>, ask students to create a wall display of animals that are classified as:

- Extinct
- Endangered
- Threatened
- On the Of Special Concern list

Fact Sheets for individual endangered and threatened animals can also be found at the Kids' Planet site. <http://www.kidsplanet.org/factsheets/map.html>

Language Art Activities

Show, Don't Tell

[Note: Use this activity as an introduction to the novel. Begin by reading only the first chapter aloud.]

Authors use a technique referred to as Show, Don't Tell in which they reveal character traits through the actions of their characters and the way they respond to other characters and situations rather than simply naming the characters traits. Gail Donovan does an excellent job of showing rather than telling as she introduces us to Joshua Tree Hewitt in Chapter 1 of *In Memory of Gorfman T. Frog*.

After reading the first chapter of the novel aloud to your class, brainstorm a list of things Josh says and does that reveal his personality. Use a T chart to record responses, collecting all of the words and actions on the left side as you brainstorm. Then, ask students to go back and think about what is revealed about Joshua in each example (note that some words or actions may reveal more than one trait).

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Show, Don't Tell (Cont.)

Things Josh DOES or SAYS	Personality Trait Revealed
"It's a hit!" he boomed. "Hewitt is on base! Let's hear it for Joshua Tree Hewitt!"	Imaginative Loud

Return to the T chart after students have read or heard the complete novel and ask them to assess the traits they listed in the right-hand column. Which accurately describe Josh's personality?

What Went Wrong: An Essay

In Chapter 3, Josh's parents have a serious talk with him about his behavior that first morning. They impose two consequences for his behavior, no computer for a week as a punishment and an essay as "community service." His father says:

"You're going to write a short essay about what went wrong this morning and how to make sure it doesn't happen again." (p. 35-36)

Before reading Joshua's essay, invite your students to write the essay from Joshua's perspective. If you are working on "voice" in your students' writing, you will want to emphasize Josh's voice in the dialogue thus far in the novel. Ask students to identify Josh's tone, his brevity or loquaciousness, his vocabulary.

This activity can also support students' ability to analyze perspectives, particularly if you assign one group to write from Josh's point of view, one group to write from Cady's point of view, and one group to write from Mom's point of view.

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Get-Gorfman-Back Silent Lunch Flyer

In Chapter 15, Josh sneaks from bed and ignores his parents' embargo on the family computer. His plan is to construct a flyer making his case to the student body of Hollison Elementary School in the hope that they will join him. His flyer begins:

“Do other kids in your family get more stuff than you? Do grown-ups ever take stuff away from you for a reason that isn't your fault? Then they say that life isn't fair! If you agree that it isn't fair that life isn't fair, please help me.” (p.149)

Josh is interrupted in his task when his parents come upstairs for bed and he does not complete the flyer.

Begin by discussing the tone and voice in Josh's flyer. Discuss whether the flyer is in keeping with Josh's usual communication style as well as the pros and cons of this approach. Then, invite students in teams of two to four to write their own version of the Get-Gorfman-Back Silent Lunch Flyer.

Social Studies Activities

Exploring Joshua Tree

Invite your students to explore Joshua Tree National Park, the park that Josh's mother named him after. Begin by investigating the park's website at <http://www.nps.gov/jotr> using your electronic whiteboard, a mobile laptop lab, or the computers in the library media center or technology lab.

Draw students' attention to this text on the opening page:

“Viewed from the road, this desert park only hints at its vitality. Closer examination reveals a fascinating variety of plants and animals that make their home in this land shaped by strong winds, unpredictable torrents of rain, and climatic extremes.”

Discuss how Josh's name may be well-suited to his personality.

Continue your exploration by reading more about Joshua Trees, a giant member of the lily family bedecked with hazardous spines. Start at the park website at: <http://www.nps.gov/jotr/naturescience/jtrees.htm>.

For a curriculum guide comprised of eleven units entitled Mojave Desert Discovery visit: <http://www.nps.gov/jotr/forteachers/mdd.htm>.

Contact the park education office at 760-367-3011 to arrange to borrow one or more park videos listed at: <http://www.nps.gov/jotr/forteachers/videos.htm>.

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Working it Out

In Chapter 7, Josh remembers a unit presented by the school social worker called “Working It Out!” He recalls role-playing in various skits, including one where he was required to apologize. The formula for a good apology is:

- Say you’re sorry
- Say what you did.
- Include the person’s name.

Josh uses this formula to apologize to Payson for punching him.

Pass a basket full of index cards describing difficult situations in which one student might owe another an apology. Ask students to role play a conversation in which one person is the wronged party and the other delivers an apology following the formula.



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