

Literacy Skills Teacher's Guide for The Fire Bug Connection by Jean Craighead George

Book Information

Jean Craighead George, The Fire Bug Connection
Quiz Number: 10259
HarperCollins Publishers, Inc, 1993
ISBN 0-06-021491-0; LCCN
148 Pages
Book Level: 4.6
Interest Level: MG

A young girl turns into a scientific investigator when she tries to find out what is killing the insects in her experiment.

Topics: Insects, Misc./Other; Mysteries, Misc./Other; Read Now with Power Up Recommended Lists, Just Connect: Relationships; Science, Biology; Series, Ecological Mystery

Main Characters

Andy and Grace Winter neighbors of the Mercers near the research station who help care for Maggie and Mitch while their parents are gone

Capek Has a graduate student from Eastern Europe, who brings fire bugs to Maggie

Maggie Mercer the principal character of the story, a twelve-year-old girl who stays with her parents at a biological research center

Mitch Waterford the ten-year-old computer whiz and troublemaker who arrives at camp and often annoys Maggie

Vocabulary

arachnid a class of eight-legged arthropods, which includes spiders

baffling perplexing

diabolical devilish or fiendish

exuberant joyously unrestrained

metamorphosis a fundamental change in form accompanying the transformation of a larva into an adult

omen an event believed to be a warning of a future occurrence

plague used as a verb; to torment or harass

prestigious highly regarded

Synopsis

Maggie Mercer enjoys nature. Her parents are research scientists who spend summers at the Biological Research Center, or Bug Camp, as Maggie calls it in the mountains of Maine. The summer that Maggie turns twelve, a graduate student from Europe, Capek Has, arrives to work with the Mercers. He brings along a batch of interesting fire bugs, which he gives Maggie for her birthday.

The Mercers, Capek, and Dr. Waterford leave to study at a different station, leaving Maggie and Mitch in the care of the Winters. During this time, the larvae, instead of transforming via a spectacular metamorphosis into fire bugs, begin to die. Maggie is compelled to find out why.

In the meantime, she is somewhat frightened by the appearance of a raven near the camp. Maggie's grandmother told her of the superstition that ravens are associated with murder. Although Maggie is a realist and understands the Winters' Indian lore concerning the raven's part in the creation of Earth, a small part of her still worries that the raven could be a bad omen.

Maggie and Mitch eventually team up to discover the mystery of the bugs' deaths. When the larvae eat paper that is in the bottom of their terrarium, they are consuming a poison that alters their growth hormones. Their discovery leads Capek to believe the children have stumbled upon a breakthrough for a natural pesticide.

Open-Ended Questions

Use these open-ended questions as the basis for class discussions, student presentations, or extended writing assignments.

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Initial Understanding

In marking the bats with paint, what was Mitch trying to prove?

Mitch was sure that the bats would care for any bat baby that needed a mother, rather than the mother bat having a strong bond with her own baby. This was one of many arguments between Maggie and Mitch. At first, Maggie appeared to be correct; she wanted to believe that bats formed bonds with their own babies; then it appeared Mitch was correct --- one day the babies were with the "incorrect" mother. However, Maggie and Mitch were able to watch as the bats actually "traded" for the correct bat baby. This gave Maggie much satisfaction.

Literary Analysis

Think of someone who reminds you of Mitch. How would he behave?

Mitch is intelligent, a "computer whiz," but also annoying and is compared to the raven as a "rascal." In the past, he pulled some pranks that were hi-tech and disastrous, but he has no evil intentions.

Inferential Comprehension

Even though Maggie knows from past experiences that Mitch is a troublemaker, why does she continue to put up with his antics?

Deep down inside, Maggie and Mitch are of a like mind, although they express themselves in far different ways. Both are extremely curious and intelligent, but Maggie is rather mature for her age, and Mitch is immature for his. They continue to work together because they have a common goal to find the "murderer" of the fire bugs.

Constructing Meaning

Even though Capek assured Maggie that he had been allowed to bring the bugs into the United States, why was she worried?

Maggie, always sensitive to environmental concerns, worried that if the bugs escaped, they could become a pest, much the same as the gypsy moth, which she mentions. It did not mean that she was fearful of the bugs themselves.

Teachable Skills

Understanding the Author's Craft Throughout history, the raven has been associated with various omens, from the Native American view that it stood for life, to the current superstition that ravens are a sign of death or murder. The author of this story goes to great lengths to explain how clever and intelligent this particular bird appears to be. Research the raven, and discuss its habits and why it is often viewed with fear and suspicion.

Comparing and Contrasting The author of this book portrays Maggie and Mitch very differently. Mitch can almost be viewed as an antagonist, while Maggie is written about in a more favorable light. In a flashback, the author has Maggie remembering some of the tricks Mitch pulled, such as the time he jammed the school TV equipment and caused the convergence of a show on Mozart with the sounds made by whales. Discuss how this contrast creates a good conflict in the book, and despite these conflicts, how Maggie and Mitch eventually learn to set aside their differences to work together.

Making Predictions When the mystery of the bugs' deaths is solved, Capek realizes that the children may have stumbled upon a new, natural pesticide. Predict what this might mean for Maggie and Mitch if research for the pesticide was followed up by scientists. Perhaps write a short sequel telling Maggie and Mitch's involvement in the research, if they gained notoriety, royalties, or more trouble for themselves.

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Recognizing Details Metamorphosis is a fascinating phenomenon of nature. In this story, the larvae fail to change into spectacular fire bugs during the fifth molt. To bring the author's appreciation of nature closer to the class, research and compare the metamorphosis of various bugs. Find out more about the fire bug, *Pyrrhocoris apterus*. Do they exist? Where do they live?