Many visitors to Yellowstone National Park don’t realize that the boiling hot springs and spraying geysers are caused by an underlying supervolcano. It has erupted three times in the last 2.1 million years, and it will erupt again, changing the earth forever.

Fifteen-year-old Alex is home alone when Yellowstone erupts. His town collapses into a nightmare of darkness, ash, and violence, forcing him to flee. He begins a harrowing trek in search of his parents and sister, who were visiting relatives 140 miles away.

Along the way, Alex struggles through a landscape transformed by more than a foot of ash. The disaster brings out the best and worst in people desperate for food, clean water, and shelter. When an escaped convict injures Alex, he searches for a sheltered place where he can wait—to heal or to die. Instead, he finds Darla. Together, they fight to achieve a nearly impossible goal: surviving the supervolcano.

**Awards and Honors for Ashfall**

- 2011's Top 5 YA Novels, *National Public Radio*
- Best Teen Books of 2011, *Kirkus Reviews*
- 2011 New Voices Selection, *American Booksellers Association*
- 2011 ABC Best Books for Children Catalog Selection
- Gold Star Award, *TeensReadToo.com*
- “Mike Mullin's *Ashfall* glows and throbs with everyday life and the business of survival in a dystopic future, after an unthinkable disaster.” ~Richard Peck, Newbery Medal
• What are supervolcanoes and where in the world are they? Find out at this Discovery Channel site:
http://dsc.discovery.com/convergence/supervolcano/others/others.html. Using a map or globe, mark where they are located. Which one is closest to where you live? Which one is the most likely to erupt?

• On a chart like the one below, jot down what you already know about volcanoes and any questions you still have. Visit the U.S. Geological Survey site (www.solcomhouse.com/yellowstone.htm) to watch three short video clips (about seven minutes each) that give some background on the Yellowstone supervolcano. For more facts and future predictions, go to http://volcanoes.usgs.gov/yvo/publications/2009/greatesthits.php. In the last column of the chart, add any new facts that you find interesting.

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<th>What I Know About Volcanoes</th>
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• Tell about a situation in which you did—or did not—put someone else’s needs before your own. How did you feel? If a similar situation happened again, would you react any differently? Why or why not?

• Brainstorm examples of historical or modern-day heroes. What do you think makes people risk their lives for strangers? How do you think you would react in similar situations? How does hurting someone else compare to ignoring someone in need?
**DISCUSSION QUESTIONS**

- How does Alex feel about his family at the beginning of the story? How do his feelings evolve as the story progresses?

- In chapter 4, Alex describes the hours hiding in Joe and Darren's bathtub as “terrified boredom.” How can something be both terrifying and boring at the same time?

- At the end of chapter 6, Alex looks at himself and Joe covered in white ash and thinks, *The ash looked almost white in the dim light, giving us a ghostly aspect. Maybe we were ghosts of a sort, spirits of the world that had died when the volcano erupted. Now we haunted a changed land.* Do you agree with this metaphor? Why or why not?

- Why does Alex decide to leave Joe and Darren’s house to set out on his own? As Alex runs from the house, Joe calls out to him but Alex doesn’t stay to listen. What do you think Joe wanted to say? Could he have convinced Alex to stay?

- What are the rules that Principal Kloptsky sets up for the refugees at Alex’s high school? Do these strict rules make sense? Why or why not? What kind of rules would you enforce if you were running the shelter?

- In chapter 11, Alex eats the candy bars that Spork steals from the Baptists, saying, “I was so hungry that I certainly wasn’t above eating stolen food.” In chapter 13, he chides himself for not breaking into a house he’d come upon earlier: “I was cussing myself as an idiot for not breaking into that house. . . . if that farmhouse had reappeared in front of me at that moment, I would have rammed my staff through a window and climbed right in.” How does Alex reconcile his need to survive with his need to retain his humanity?

- When Alex first meets the Barslows in chapter 13, it’s Edna Barslow who convinces her husband, Elroy, to take Alex in. Which aspects of Alex’s character are reflected in both Mr. and Mrs. Barslow?

- How does Alex’s reaction to the family in chapter 15 compare to his reaction to the family he and Darla meet in chapters 37 and 38? How does Alex change? What causes this change?
After injuring Target in a fight, Alex thinks, *I thought about chasing him. But I'd either have to beat him to death, which didn’t appeal to me at all, or . . . do what? I didn’t even want to get close to him.* Does Alex make the right decision to spare Target’s life in this scene? Why or why not?

How does Darla act when she first meets Alex? How does her mother, Mrs. Edmunds, act? Why are their reactions to Alex so different?

Reread the scene in chapter 21 where Darla teaches Alex how to skin a rabbit. Which part would be the most difficult for you? Why?

As Alex starts to have feelings for Darla in chapter 21, he thinks, *I wish we’d met before the eruption, when everything was normal. Maybe then she would have seen me as something more than a helpless kid.* How might Darla have narrated this scene? Would she have liked Alex better before the eruption? Why or why not?

When Alex and Darla arrive in Worthington to get help for the sick rabbits, how do the townspeople respond to them? How does this differ from the reception that Darla normally expects in town?

In chapter 27, after seeing what Ferret has done to Mrs. Edmund, Alex attacks and kills him. How do Alex and Darla react to the murder? Would their reactions have differed if Darla had been the one who had killed Ferret? How does Alex react the next day, after he kills Target? Explain why you think there is a difference in Alex’s reactions in the two scenes.

When Darla hits Alex, blaming him for her mother’s death, he thinks, *I let her hit me. Made no move at all to defend myself. What if she was right?* Is Darla right? Why or why not?

Why does the rabbit become so important to Darla after she and Alex flee from her farm?

Why does Alex decide to leave the shelter of St. Paul High School’s gym in Worthington? Would you have made the same decision? Why or why not? Alex is surprised that Darla follows him. Were you surprised?

When does Darla finally snap out of her silence? Without this catalyst, would Darla have ever recovered from the shock of her mother’s death?

In chapter 35, Darla and Alex find an ash-covered mirror in the bedroom where a man’s corpse lies. Alex narrates: *She dragged her splayed fingers across its surface, and our reflections appeared, fractured into five narrowed lines by the paths she’d drawn.* Why do you suppose this scene was incorporated into the book’s cover?
• When Alex tells Darla how he feels about her, he says, “You’re an amazing girl. I’ve never met anyone who works as hard as you do. Or knows as much about machines.” A few months ago, what qualities would Alex have looked for in a girl?

• Before little Katie dies in her mother’s arms, Alex says of her eyes, “They were a rich blue, like the last August sky before the volcano.” Why do you think he chose this particular simile to describe her eyes?

• Why does Alex give away some of Darla’s and his food to the mother and children? Darla says that “it was dumb, not wrong.” What does she mean? How can something be “dumb” and yet the right thing to do?

• In chapter 40, Alex flashes back to memories of his father. What do these memories say about the relationship the two have?

• When Alex and Darla rappel down onto the barge, Alex overcomes his fear of heights by mentally listing the horrors he’s been through over the last few weeks. How do you convince yourself to overcome a fear?

• Why are the refugees at the F.E.M.A. camp treated so poorly? How does living in the camp change Alex and Darla for the better and for the worse?

• What is the official hierarchy of food distribution in the camp? Is this a fair system? Why or why not? Who do you think really gets the most food at the camp?

• How do the Baptist volunteers at the camp differ from the Baptists in chapter 11? Why does Gloria take a risk to slip Alex extra food? What do you think happens to Gloria?

• Why is Alex thrown into the punishment hut? Why is Darla angry about what Alex did?

• Uncle Paul says to Alex, “People have changed. Your dad’s not the same man he was. Heck, you’re not the same either—I don’t see any sign of the sullen kid who used to bury his nose in a computer game or book the moment he got here.” Based on what you know about Alex’s relationship with his dad, how do you think the two would get along now?

• Why are Alex’s aunt and uncle suspicious of Darla when they first meet her? Do they have a right to be? Why or why not?

• Discuss the reasons Uncle Paul gives for not letting Alex and Darla share a room and the reasons Alex gives for wanting to share a room with Darla. Why does Uncle Paul grant Alex’s wish? Do you agree with that? Why or why not?

• How will Uncle Paul’s injury change the family dynamics?

• Why is Alex hopeful at the end of the story? Should he be? Why or why not?
Projects and Activities

The following projects incorporate Dr. Howard Gardner’s theory of multiple intelligences. Consider having students choose culminating projects that best match their learning styles.

**Taekwondo**
*Bodily-Kinesthetic*

Visit author Mike Mullin’s blog (http://mikemullin.blogspot.com/2012/01/east-coast-tour.html) for a short clip on his taekwondo demonstration. Have students research the philosophy of Taekwondo on the American Taekwondo Association site (www.ataonline.com).

How do the teachings of respect and peace factor into Alex’s decisions to use this martial art form throughout the story? When does he forget about these principles?

Invite a taekwondo instructor to your class to lead an introductory lesson for your students.

**The Good Samaritan**
*Interpersonal*

When asked what kind of people maintain their humanity in the event of a natural disaster, author Mike Mullin offers the following insight:

Start with the people themselves—how likely are they to react altruistically in the case of a disaster? There’s considerable psychological research on altruism. For most of us, how we behave is determined far more by the situation than any innate characteristic—there’s a famous study of seminary students that showed that a majority of them would stop to help a person in distress if they were told they had plenty of time, but not if they were late to a presentation (on the good Samaritan, no less). There’s a minority—something on the order of 1 in 10—who will behave altruistically regardless of the circumstances. There’s an even smaller minority who will act in a self-interested manner regardless who they hurt.

So, in real disasters, we have people like the mayor of San Francisco, who ordered that Chinatown be bombed after the 1906 earthquake to make way for a development he had a financial stake in. In ASHFALL, Target is this kind of actor—a person who will act in his own perceived self-interest, regardless of the consequences to others.
But for most of us, the situation matters more than our innate character. The key factor here is how do we see the victims of the disaster? If they’re people like us, then incredible utopian communities often emerge, like the free food kitchens that formed following the San Francisco earthquake. If we see survivors as different from ourselves, we get police and volunteers lining up to shoot African-Americans attempting to flee the Superdome in the wake of Hurricane Katrina. In ASHFALL, I capture the range of responses in my depiction of Worthington and later via the division of Americans into “red state” and “green state” groups.

Have your students write a reflective response to the author’s insight on altruism. Ask students to begin their response by completing the graphic organizer below:

<table>
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<th>A situation in which I would <strong>definitely</strong> help someone else:</th>
<th>A situation in which I’m <strong>not sure</strong> if I would help someone else:</th>
<th>A situation in which I <strong>definitely would not</strong> help someone else:</th>
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How do these situations differ? What criteria did students use to categorize the situations in each column?
What Luxury . . .

_Intrapersonal_

Which luxury would your students miss most if they found themselves in Alex’s world? Give each student an index card. On the front, have them write the one luxury item they would miss most. On the back, they should write their rationale for why this item is important and what the ramifications would be if it were no longer available.

Looking only at the front of the cards, ask students to group the answers into categories as they see fit. Categories may include items that:

* meet/do not meet basic needs
* money can/cannot buy
* were mentioned/were not mentioned in the book

How did the students categorize their answers? How did they decide on a definition for luxury? Let students with similar answers compare the rationales they wrote on the backs of their cards.

When asked the “luxury” question, here is how author Mike Mullin responded:

The toilet. Ha, that’s not a luxury, you say? I take it you’ve never dug a pit toilet. Or trudged to an outhouse when it’s below zero outside.

If the plumbing quits working, we have two choices: 1) Defecate wherever and suffer the disease that will result, or 2) Dig pit toilets, trenches, etc. and tend them: digging new ones as necessary, adding layers of dirt and lime, etc.

Some readers have wondered why ASHFALL spends considerable time on bathroom issues—a subject most novels avoid. I wrote those scenes specifically to help readers internalize how different the world would be after this kind of disaster—even something we take for granted, like a decent place to urinate—becomes a challenge.

Share this response with your class and let them discuss it as a group. Did anyone have a similar answer written on their card? How does one’s definition of luxury change depending upon the circumstances?

_Variation:_ This activity may be done before reading the book and then again afterwards. Students can compare their “before and after” answers and discuss how _Ashfall_ changed their definition of what a luxury item is.
In the News

*Linguistic, Mathematical*

Have your students create a series of newscasts reporting the different stages of the eruption as well as “interviews” with Alex, Darla, and other survivors. If multiple students are working on this project, they can work in pairs or small groups to film different segments or record their newscasts using www.voki.com.


Volcano Museum Curator

*Naturalistic*

Pretend your students are the curators of a museum 50 years after the eruption that occurs in *Ashfall*. Create a virtual museum with one of the PowerPoint templates developed by Dr. Christy Keeler, pedagogy scholar (http://christykeeler.com/EducationalVirtualMuseums.html). Include information on the science behind the volcano as well as “artifacts” from Alex’s world that would have been found in the aftermath.

Trailer Points of View

*Musical, Visual-Spatial*

Show students the book trailer that a fan made for *Ashfall* (found on the author’s site: www.mikemullinauthor.com). Divide the class into small groups and either assign or let them choose a character from the book. Show them how to make a book trailer (on a site such as www.animoto.com) and then let them create a trailer of the story or a scene from that character’s POV. In addition to the main characters, include characters who only make short appearances in the story, such as the mother that Alex and Darla meet in chapters 37 and 38. Set the trailer to music and offer a rationale for the type of music chosen and the mood it evokes.
Where did the idea for ASHFALL come from?
The idea for Ashfall started with another book—Bill Bryson’s A Short History of Nearly Everything. Dozens of novel ideas lurk within its pages, but the one that stuck with me was the idea of a supervolcano eruption at Yellowstone. A few weeks later, I woke at 3:30 am with a scene occupying my head so completely I was afraid it would start spilling out my nostrils and ears. I typed 5,500 words, finishing just before dawn. Then I put the project away and let it gestate for nine months. When I returned to it after researching volcanoes and volcanic ash, I realized the inspired scene I wrote in the middle of the night wouldn’t work, and ultimately that whole section had to be scrapped.

How did you research ASHFALL?
I had an interest in volcanoes before I started, but it was the sort of “look, shiny!” kind of interest lots of people have in Mother Nature’s most impressive temper tantrums. I definitely didn’t know enough to write ASHFALL without a ton of research.

How is ASHFALL so different from other dystopian novels in the market today?
I thought about this question a lot as I was writing ASHFALL. While I love the current crop of dystopian and post-apocalyptic novels, I often find myself wondering: Could this really happen? Little details knock me out of the story—toilets that still function after a brutally cold winter without power, for example.

I decided I’d attempt to differentiate ASHFALL by making it unflinchingly realistic. So, for example, I asked myself whether ASHFALL should include any mention of cannibalism. The obvious answer is that no, it shouldn’t, because it will gross out the teachers, parents, and librarians who are so influential in putting books in the hands of teens.

I attempted to portray the full range of human behavior in an apocalypse, from the most brutally savage to the most sublimely selfless. Rebecca Solnit’s A Paradise Built in Hell was useful for stimulating my thinking—it chronicles responses to real natural disasters ranging from the San Francisco earthquake to Hurricane Katrina.
Could you survive in Alex's world?
No. And I live in Indiana, where things would initially be much better than in Iowa, where Alex starts.

The super volcano I depict in ASHFALL would directly kill hundreds of thousands, maybe millions. But the bigger death toll would be from global starvation and disease in its wake. Twenty percent of the world’s grain supply is produced in the United States, primarily in areas that would be buried in ash. Globally, we have less than a 60-day supply of stored grain. Starvation would reach epidemic levels very quickly following a supervolcano eruption.

In thinking about who would survive and how, I found research on the Donner party very useful. I have two strikes against me: I’m too old, and I’m male. Being female roughly doubles your odds of survival in a starvation situation. Women start out with an average of a third less muscle mass and higher body fat than men. So they both need fewer calories to survive and have a greater reserve.

Being between the ages of 6 and 35 also roughly doubles your odds, and I’m past that. (Only by a day or two . . . maybe. Ha!) The other thing that roughly doubles your odds is having family close. While my wife and I are lucky enough to have both sets of parents in town, they’re obviously even older than we are.

So my odds aren’t good. If the Yellowstone supervolcano erupts tomorrow, my goal will be to try to live the short remainder of my life in a way that helps the younger generation survive and rebuild.

What's the best piece of writing advice you've ever been given?
The most helpful advice I’ve received accompanied an agent’s rejection of ASHFALL. Here’s a taste, “The tone of the book doesn’t seem to match the horror of the details you’re conveying. Even when things are at their bleakest, the tension doesn’t seem to fully ratchet up,” Jim McCarthy, Dystel & Goderich.

Literary agents don’t owe unpublished writers anything. There’s no upside to offering this kind of useful criticism and a lot of downside. I’m still grateful to Jim for his generous advice—so much so that I mention him in the acknowledgements, and I named a (nice) character in his honor.

Are any of your characters based on people you know?
Almost everyone in ASHFALL is loosely based on someone I know. The original inspiration for Alex, for example, was Ben Alexander. He was sixteen when I first met
him, a third-degree black belt and instructor at my taekwondo school. I chuckle every time I read a review that doubts a teen could be as good at taekwondo as Alex is. I want to see them spar with Ben Alexander. He can kick my butt and make it look easy, and I’ve got almost a foot in height and 100 lbs. of mass on him.

Uncle Paul, Aunt Caroline, Max, and Anna are named for my brother’s real family. They’re far nicer in person than their characters are in the book, of course. My brother, Paul, was a huge help in figuring out Darla’s MacGyver moments. I also learned about goats, ducks, and greenhouse farming from them.

**Describe your writing process. How long did it take to write this book?**

As I mentioned above, I wrote 5,500 words in the middle of the night and then set ASHFALL aside for eight months to gestate. When I returned to the book, I drafted a five page outline—well, the word outline is a bit grandiose—call it five pages of random notes. It took me about six months to draft the novel, and then another six months to revise it.

**What are you planning to write next?**

I finished the third draft of ASHEN WINTER, the sequel to ASHFALL, yesterday (8/17/11) and sent it off to my critique group. It will be published by Tanglewood Press in October 2012. Once that’s finished, I’ll start work on the final volume of the ASHFALL trilogy. I’m also planning to start a sixth rewrite of my YA horror novel. Oh, and I had a crazy idea for a funny middle grade novel the other day. And there are about fifteen other book ideas at various stages of conceptualization on my hard-drive. Some of them are just a half-page of random notes. Others are 5-10 pages with detailed ideas about plot and character. So many books to write, so little time!

**Is there any advice you could give aspiring authors?**

The most important part of being a writer is reading. You have to read to experience the despair of prose so lovely you know you can never match it and the vicious little satisfaction of whispering “I can do better” to yourself after reading a particularly bad piece. If you don’t read widely in whatever genre you choose to write in, how will you know if your work is original or not? That great idea for a post-apocalyptic reality show in which children battle to the death? Yeah, it’s been done.

I read more slowly now that I’m writing professionally. I often reread sections and puzzle over word and plot choices, trying to answer the question: how did the author do that? But although my pace has slowed, if anything, the volume of reading I do has increased. And that’s one of my greatest satisfactions in writing—I can curl up on the couch with a good book and a cat in my lap and honestly say, “I’m working.”

Learn more about Mike Mullins at www.mikemullinauthor.com!