

SURFACE TENSION

Nobody believes Jake. Except the terrorists.

Young Adult
Ages 13 & up
Grades 8–12
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About the Book

After witnessing an act of domestic terrorism while training on his bike, Jake is found near death, with a serious head injury and unable to remember the plane crash or the aftermath that landed him in the hospital. A terrorist leader's teenage daughter, Betsy, is sent to kill Jake and eliminate him as a possible witness. When Jake's mother blames his head injury for his tales of attempted murder, he has to rely on his girlfriend, Laurissa, to help him escape the killers and the law enforcement agents convinced that Jake himself had a role in the crash.

About the Author

Mike Mullin first discovered he could make money writing in sixth grade. His teacher, Mrs. Brannon, occasionally paid students for using unusual words. Mike's first sale as a writer earned 10 cents for one word: tenacious. Since then, Mike has always been involved with literature. One of his early jobs was shelving books at Central Library in Indianapolis. Later, he paid his way through graduate school in part by serving as a reference assistant for Indiana University's library. Mike has worked in his mother's business, Kids Ink Children's Bookstore, for more than twenty years, serving at various times as a store manager, buyer, school and library salesperson, and marketing consultant. Mike holds a black belt in Songahm Taekwondo. He lives in Indianapolis with his wife and her three cats. To find out more about Mike and his books access his website at mikemullinauthor.com.



Discussion Questions

I'm nearly overcome by a sulfurous odor so intense that I curl over the handbars and retch.

I don't notice the door of the tractor cab opening until it is too late (11).

- *The 'inciting incident' is a literary term designating the event that begins a story's problem. Authors typically establish the inciting incident as a defining moment for the protagonist. Examine how this inciting incident begins the 'story problem.'*
- *Discuss how the events in this scene changed Jake's world – physically, personality, and emotionally.*
- *Identify details in this scene that foreshadow Jake's quest to solve the story's mystery.*

I'm more than ready. I've killed the dummy hundreds of times (18).

- *Consider what Betsy's diligent preparation to kill reveals about her character.*
- *Identify Betsy's motivation to become involved her father's interests.*
- *Explore the motivation behind crashing the airplane. Is Betsy convinced that eliminating the Muslim members of Congress will "make the country pure again"(19)? Explain your answer.*
- *Discuss why Betsy is willing to kill Jake. What stops her from doing so?*

By the time I get to the kitchen, Laurissa is there. She's setting the table while Mom dishes scrambled eggs and toast onto three plates (94).

- *Analyze the action in this scene. Explain what Laurissa and Mom working together to serve breakfast for Jake reveals about their characters.*
- *Considering that Jake and Laurissa come from starkly different backgrounds – she being more wealthy than he – identify reasons why she seems devoted to him.*
- *Discuss how issues of race influence their relationship.*
- *Describe Jake's relationship with Mom. Identify ways that she plays a key role in the story.*

"Depends on the charges," Brown says, "but usually I can get them to drop the worst charges in return for a guilty or no contest plea" (202).

- *Explain why, after all of the unfairness, abuse, misrepresentation, and danger he has experienced, Jake continues to be motivated to solve the crime. What is at stake if he doesn't? Explain your answer.*
- *How would Jake benefit if he chose to "strike a deal" with the court? Would he ever be free from danger? Why or why not?*
- *Determine why, from Jake's point of view, Mom 'underestimates' Agent Tapper's role. Identify reasons why Jake's impression of Tapper differs from his mother's. Is Jake being rational about this? How so?*

It shows Jake nailing his own hand, trying to get attention. My attention. It's stupid and also a bit terrifying. How did he get my real name?

My cover was perfect (275).

- Analyze the tension created in this scene. Consider the shock both she and her father experienced when viewing Jake's bizarrely appalling video. Note how each character responded in different ways.
- After Father directs Betsy to make contact with Jake, she tries to ask him "... but do you suppose you could... (276)" Predict what the attempted request might have been.
- Consider Father's motivations. Identify what or who he cares about and why.
- Where does Betsy fit in his life? Discuss their relationship and how it inspires Betsy to make the decisions and choices that she does.

Betsy ditches her bike, right in the middle of the parking lot, and hops into the back. Laurissa has the car rolling even before Betsy can lose her door (371).

- Though she appears to despise Betsy, Laurissa permits her to ride in the car. Considering that Betsy has made several attempts in Jake's life, explain why Laurissa is willing to do so.
- Determine what each character brings to this moment in time – their strengths, weaknesses, and personal convictions. Explain what each character has to gain, personally, by foiling *The Sons'* efforts to crash the plane.

"The ride. Believing me. Trusting me" (379).

- Laurissa has vehemently remained true to Jake, despite multiple moments in which his reasoning seemed freakish and peculiar. Analyze her affection for Jake. Identify reasons why she is committed to their relationship.
- As a reader, were there times in the story that you questioned Jake's logic and/or sanity? Explain your answer.
- Consider Betsy's point of view in this scene. Describe what might have been going through her mind when Laurissa described her definition of true love.
- The word 'trust' means certainty, confidence, and faith. Antonyms for 'trust' are suspicion, disillusionment, and fear. Explore the notion that the premise of the novel fluctuates between both perspectives of the word.

"Yes. Because that's the way Jake and Laurissa want it. And I owe them a lot more than I owe you or Tapper" (410).

- Examine Betsy's willingness to help Agent Tapper "take down the rest of *The Sons*."
- Explain what and why Betsy feels that she 'owes' Jake and Laurissa loyalty.
- The novel was written in two points of view – Jake's and Betsy's. Determine how the resolution affected their characters. Trace the emotional transformation that occurred in each character by the story's end. Were each character's desires met at the end? How so?

Scientific Exploration – Surface Tension

"...They lose all lift in a bubble of methane. Suddenly, a machine designed to cruise comfortably at thirty thousand feet behaves exactly like a hunk of aluminum. It falls straight down. (318)"

Objective: To establish a connection between the scientific principles of surface tension and the premise of the story.

Materials: Two paperclips, one Q-tip, dish soap, a shot glass, water

Procedure: Access [this link](#) to observe a You-tube video demonstrating a simple experiment based on the scientific principles of surface tension. Perform the experiment. Write an informative essay exploring how this scientific principle serves as the foundation of the novel *Surface Tension*. Explore how surface tension effects characterization, the plot structure, and overall theme. Share your work with the class.



Surface Tension is the tension of the surface film caused by the attraction of the particles in the surface layer.

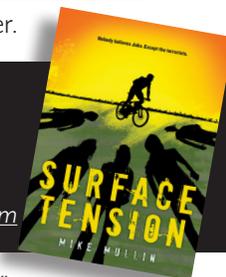


Common Core State Anchor Standards: Reading – R.1, R.2, R.3, R.6, R.10. Writing – W.2, W.4, W.5, W.8.
Speaking & Listening – SL.1, SL.2, SL.4, SL.5, SL.6.
Next Generation Science Standards: MS-PS4-2, MS-PS4.B

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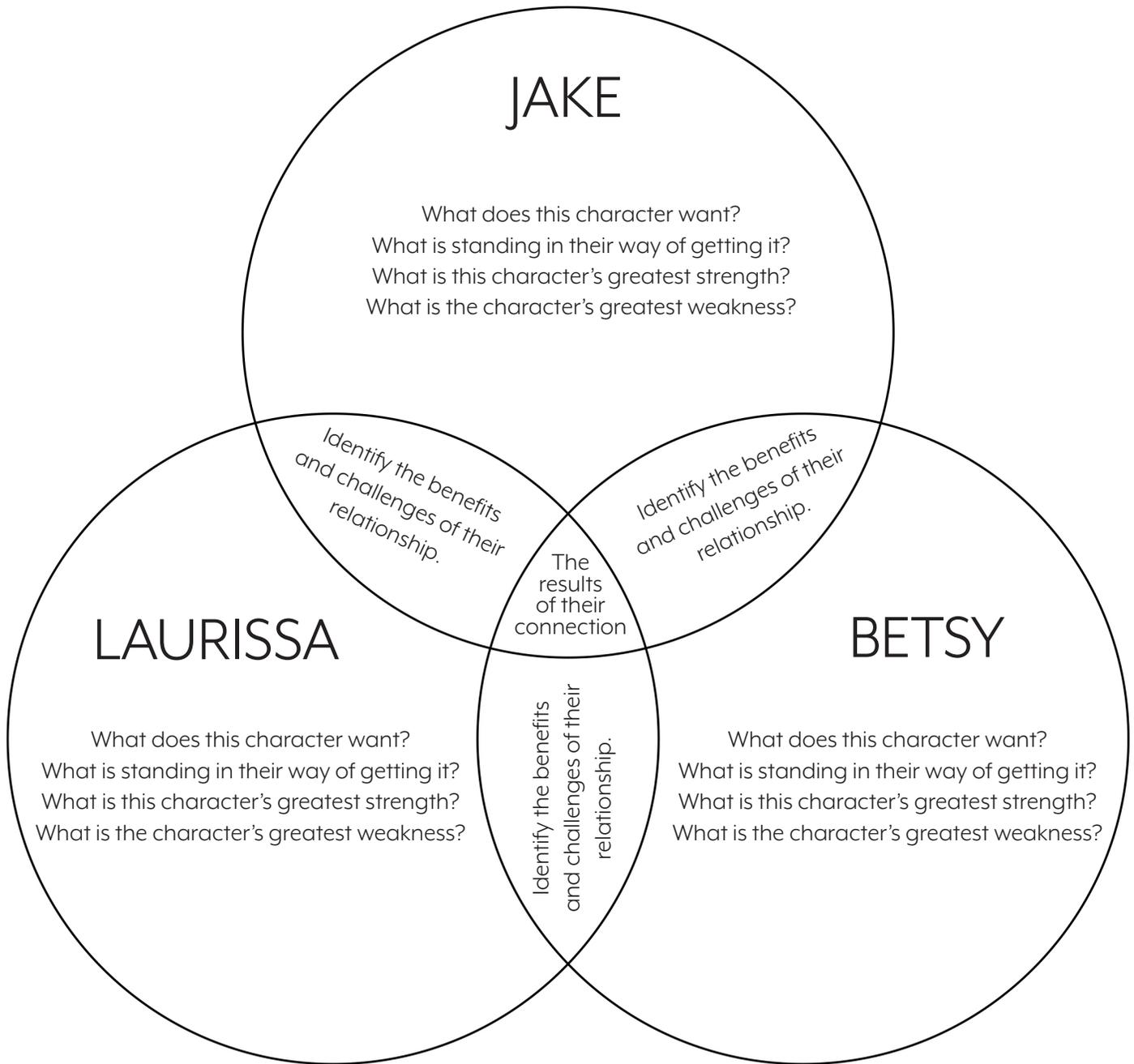
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Character Analysis

Use the Venn Diagram below as a guide to explore the connectivity of Jake's, Laurissa's, and Betsy's characters. Consider their characterization in three levels - as an individual, their one-on-one relationships, and the effects that their connectivity had on the story.



Write an informative essay examining the character connections between Jake, Laurissa, and Betsy. Explore their strengths, flaws, desires, and motivations as individuals. Tell how, together, this unlikely trio eventually brought about a satisfying resolution for themselves and others.

