

Rocket Boys



INTRODUCTION

BRIEF BIOGRAPHY OF HOMER HICKAM

Homer Hickam grew up in West Virginia. When he was in high school, he and a large group of friends—dubbed the “Big Creek Missile Agency (BCMA)—collaborated to design a series of amateur rockets. In 1960, their designs won the gold and silver medals from the National Science Fair. (These events form the plot of his memoir, *Rocket Boys*). Hickam then studied at Virginia Tech, graduating with a Bachelor’s degree in Industrial Engineering. Following his time in college, Hickam served as a First Lieutenant in the Vietnam War, where he was awarded a Bronze Star for his bravery. He then worked for NASA as an engineer, designing spacecraft for the Hubble Space Telescope. In 1989, he published his first book, *Torpedo Junction*, about the history of the American navy. The book was a best-seller, and enabled Hickam to write full-time. His most successful book was his second, *Rocket Boys* (1998), a memoir about his high school years with the BCMA. The memoir was an international bestseller, and within a year of its release it had been adapted as a film, *October Sky*, starring Jake Gyllenhaal. In the last 15 years, Hickam has been an energetic author and public speaker, authoring science fiction thrillers about outer space, additional memoirs about his adolescence in West Virginia, and adventure novels set during World War II. He resides in West Virginia.

HISTORICAL CONTEXT

The most important historical event related to *Rocket Boys* is the Cold War. Following the end of World War II, the United States and the Soviet Union were the only two remaining global superpowers. While the U.S. and the U.S.S.R. never fought each other directly, they competed in various indirect ways.

RELATED LITERARY WORKS

Rocket Boys is a *Bildungsroman*—a “coming of age” story. While there are thousands of *Bildungsroman*, Hickam’s memoir is a little different than the usual example of the genre, since his “protagonist,” Homer, comes of age by discovering the beauty of science, mathematics, and engineering. In this regard, one close cousin of *Rocket Boys* is Sinclair Lewis’s Pulitzer Prize-winning novel *Arrowsmith* (1925), the story of a young boy from a small town, and his ascent to the position of a respected doctor. *Arrowsmith* was hugely popular in its time, and is said to have inspired dozens of noted doctors (including several Nobel laureates) to study medicine. Hickam also wrote two other memoirs about his early life and his experiences with engineering: *The Coalwood Way* (2000) and *Sky of Stone* (2002).

KEY FACTS

- **Full Title:** *Rocket Boys: A Memoir*
- **Where Written:** Coalwood, West Virginia
- **When Published:** Fall 1998
- **Literary Period:** Cold War memoir
- **Genre:** Memoir, *Bildungsroman*
- **Setting:** Coalwood, West Virginia, United States
- **Climax:** Homer wins first prize at the National Science Fair
- **Antagonist:** Pooky Suggs, Jim Hickam, the football gang, the anti-intellectual citizens of Coalwood
- **Point of View:** First person

EXTRA CREDIT

Who says writing is for wimps?: Homer Hickam has won various honors—science awards, medals for military excellence, literary prizes—but received arguably his most impressive honor in 1984. In Alabama, Hickam aided in the rescue of a sinking paddleboat in the Tennessee River, risking his life several times to save the passengers from drowning. For his incredible bravery, Hickam was awarded the Alabama Distinguished Service Award, one of the state’s highest civilian honors.

Rocket Boys Day: In the late 90s, *Rocket Boys* was a huge bestseller, and sparked tremendous interest in West Virginia’s culture and history. In gratitude for everything Hickam did to put his state on the map, the governor of West Virginia, Gaston Caperton, declared an annual “Rocket Boys Day” in celebration of Hickam’s literary and scientific achievements.



PLOT SUMMARY

As the memoir begins, Homer Hickam Jr. is a young teenager living in the mining town of Coalwood, West Virginia. His father is Homer Hickam Sr., the superintendent of the mine, his mother is Elsie Hickam, who makes no secret of her dislike for the mine and mining, and his brother is Jim Hickam, a handsome, popular football player.

In 1957, the Soviet Union launches a satellite called Sputnik into space. Homer and his friends gather outside to watch Sputnik pass over Coalwood. As he watches, Homer realizes that his greatest ambition is to build **rockets**, and eventually to build satellites for the government, like his hero, Dr. Wernher von Braun.

Homer’s first attempts at building rockets are comical. He ends

up blowing up his mother's prized rose-garden fence, earning him much mockery from the townspeople of Coalwood. Homer Sr. angrily tells Homer to stop making rockets, but Elsie encourages him to continue. She explains that Homer Sr. thinks Homer is unfit for any work other than clerking, so by building rockets, Homer can prove to his father that he's capable of being a scientist, and he can escape from a life in the mines at Coalwood. Homer resolves to continue building rockets. He also notes that Homer Sr. is far more interested in Jim, due to Jim's talent as a football player.

Homer speaks to a classmate of his, Quentin, who is bookish and pretentious, but who also knows a huge amount about rockets. Quentin agrees to join with Homer and his friends in building rockets. Homer gathers a group of his close friends: Roy Lee, Sherman, and O'Dell, and, together with Quentin, forms the BCMA, or "Big Creek Missile Academy" (Big Creek is the name of their high school). Meanwhile, Homer tries to work up the courage to ask out his crush, the beautiful and intelligent Dorothy Plunk, but is devastated to find that she's already dating an older boy.

Quentin and Homer research fuel for their rockets, and settle on a mixture of saltpeter and charcoal. They go to Mr. Isaac Bykovski, a worker at the mine. Bykovski agrees to help Homer by making rocket shafts for him. The ensuing series of rockets—formed from Bykovski's shafts, powered with Homer and Quentin's rocket fuel—are unsuccessful, with one of them nearly burning down Homer Sr.'s office at the mine. Homer Sr. angrily repeats his command to Homer—he's not to make any more rockets. Although Homer wants to obey his father, Elsie and Mr. Bykovski subtly encourage him to continue with the BCMA.

One Sunday, the Coalwood community attends church, where the town reverend, Reverend Josiah Lanier, delivers a sermon about the importance of respecting one's children and encouraging their dreams. Afterwards, Homer Sr. relents and allows Homer to make rockets. He drives Homer out to an area far from Coalwood called Cape Coalwood, and tells him that he's free to launch rockets there.

Homer begins his junior year of high school. On the first day, the principal, Mr. R.L. Turner, announces that football has been canceled. Instead, students will be focusing on their studies—a consequence of America's desire to compete with the Soviet Union in the realms of science and math. Jim and his football friends are furious with this news, since it means that they'll in all likelihood be unable to get athletic scholarships to college. Meanwhile, the BCMA goes about building a launch area in Cape Coalwood: a launchpad made from concrete, and a blockhouse to protect the boys from shrapnel and smoke from the rockets. To obtain the necessary materials for these projects, Homer and his friends asks Homer Sr. for help, and also communicate with many other miners in Coalwood, including Emmett Jones and Mr. Bykovski. Homer meets

another important ally, Jake Mosby, a wealthy, charming man who visits Coalwood to work as an engineer in the mine. Jake provides Homer with support and encouragement, and even lets the members of the BCMA stare at the stars through his telescope.

The BCMA organizes a public rocket launch, which is attended by a modest group of people. These include Jake, Mr. Dubonnet, the leader of the miners' union (and, as a result, a frequent enemy of Homer Sr.), and Basil Oglethorpe, an enthusiastic reporter who writes gushing stories about the BCMA in his paper.

In school, Homer notices that he's becoming more popular—girls are flirting with him. One girl, Valentine Carmina, hints that Homer should forget Dorothy and go out with her instead. Meanwhile, the BCMA obtains a set of old phone lines, which they use to coordinate rocket launches at Cape Coalwood. To their horror, Mr. Van Dyke, the main superintendent of the mine, calls them to his office and informs them that they've stolen company property. They promise to pay off their debt—35 dollars—over the course of the next year. Homer gains another valuable ally, the chemistry teacher Miss Riley. Miss Riley oversees student entries to the county science fair, and she encourages Homer and his friends to enter in the event. While Quentin is eager to compete, Homer is more reluctant, and he insists that the BCMA isn't ready for competition yet.

Homer continues to rely on Mr. Bykovski for help with designing rockets. Shortly after he gets some rocket nozzles from Bykovski, Homer discovers that Homer Sr. has punished Bykovski by sending him to work deep in the mines. When Homer apologizes to Mr. Bykovski for getting him in trouble, Bykovski only laughs and tells Homer to keep building his rockets. Homer also notices that someone—perhaps even his father, he thinks—is leaving extra ingredients for him to use for rockets: scrap iron, concrete, etc.

At the end of 1958 Homer asks Dorothy to the high school dance, but she turns him down. Nevertheless, Homer has a wonderful Christmas—Elsie has written a letter to Dr. von Braun, and has received a reply: a signed photograph of von Braun, addressed to Homer. Shortly afterwards, Homer and the BCMA organize more rocket launches. Their rockets, featuring a stable form of rocket fuel, and carefully designed by Mr. Bykovski, attain heights of many thousands of feet. Homer notices that many people are showing up for the launches, many of them pretty women.

One day, Homer and Quentin agree that they need to master calculus if they're to build more efficient rockets. Together, they talk to their math teacher, Mr. Hartsfield, and then Mr. Turner, both of whom are reluctant to establish a new class. Shortly after their request is denied, Homer and Quentin are called to the office, where they find two state troopers. The offices accuse Homer and Quentin of starting a vast forest fire. Miss

Riley bursts into the office, where she defends her students. Quentin saves the day when he proves that the “rocket” that supposedly caused the fire isn’t a BCMA rocket at all, but a flare, probably dropped by a passing airplane. Embarrassed by the incident, Mr. Turner agrees to introduce a calculus class at Big Creek. Ironically, Homer is unable to take the class, because his grades aren’t good enough: Dorothy Plunk takes his position.

Homer is disappointed that he can’t learn calculus from Mr. Hartsfield, but Quentin volunteers to teach Homer himself. Homer Sr. seems irritated that Homer is teaching himself mathematics for the sake of rocketing—he reminds Homer that he should be concentrating on his career in the mine.

One night, Homer and the BCMA go dancing at a party organized by Ed Johnson, a local music-lover. There, Homer is horrified to see Dorothy dancing with Jim. Homer turns to Valentine, who’s also at the dance, and it’s implied that Homer loses his virginity to Valentine that night. Afterwards, Homer walks home, where he finds the town in chaos over a horrible mining accident: a fan has stopped working, meaning that the miners are losing their only source of oxygen. Homer Sr. dives into the mine, where he badly injures his eye, and Mr. Bykovski dies. Homer is horrified by Bykovski’s death—he thinks that if it hadn’t been for his rockets, Bykovski would never have been sent into the deepest part of the mine to begin with.

Homer falls into depression following Mr. Bykovski’s death. The town reverends, Reverend Lanier and Reverend “Little” Richard, encourage him to stop feeling sorry for himself and continue with his rockets. Miss Riley tells Homer that if he doesn’t pursue his rockets now, he’ll regret it for the rest of his life. Homer reluctantly agrees to continue with his designs, and at the next rocket launch, his rocket reaches a height of 4,000 feet—a record for the BCMA. Homer argues with the other members of the BCMA over the specificities of their new rockets, and Roy Lee accuses Homer of being too self-focused. Homer reluctantly admits that Roy Lee is exactly right, and henceforth, he resolves to be a “team player.”

With Jake’s help, the BCMA obtains a valuable new fuel source, zinc oxide. They use this fuel to develop rockets that can reach far greater heights than their predecessors. Meanwhile, there is a union strike, and Mr. Van Dyke is forced to leave Coalwood. He’s replaced by Mr. Fuller, a loud, pugnacious man whom nearly everyone dislikes. When Fuller learns about the BCMA, he angrily orders them to desist their dangerous activities. At first, Homer Sr. tells Homer to comply with Fuller’s orders, but then, urged by Elsie, he negotiates with Fuller so that the BCMA can continue its launches.

Homer and Quentin learn calculus and gas equations in order to calculate the optimal shape for their rocket nozzles. Finally, they master the necessary design problems, and proudly present their findings to Miss Riley and Mr. Hartsfield. Homer enlists the help of Mr. Ferro and Mr. Caton, two mining

workers, to help him build the intricately shaped nozzles needed for rockets that can reach heights of three miles.

At their next rocket launch, the BCMA’s rockets reach impressive heights, but far less than what they’d hoped for. After the launch, Homer goes to a school dance with Melba June Monroe, a pretty classmate of his, and they make out.

In early 1960, John F. Kennedy has begun his campaign for the presidency. Meanwhile, there is a series of union strikes, which grow increasingly large and violent. One day, someone tries to shoot Homer Sr. in his home. Although Homer discovers that the bullet fired is only a .22—a nonlethal, pop gun pellet—he’s still disturbed. Shortly after the incident, Elsie announces that she’s purchased a house in Myrtle Beach. For years, she explains, she’s been using Homer Sr.’s money to invest in the stock market, so that now, she and Homer Sr. have enough money to live comfortably for the rest of their lives.

Homer learns that Miss Riley has been diagnosed with cancer. He resolves to enter in the upcoming county science fair, perfecting his rocket designs so that he’ll have a chance to win. Miss Riley is glad to hear that Homer will be competing. She tells him that only one member of the BCMA can present at the fair—this should be Homer, since he’s the President of the BCMA, and the most prepared member.

In the weeks leading up to the science fair, Mr. Caton is unable to help Homer any further, because the union is on strike. Homer plans to sneak into Mr. Caton’s machine store and finish the rocket designs himself. He does, only to find Mr. Caton himself, secretly working on the rocket. Mr. Caton promises to leave the finished rocket for Homer very soon.

Homer attends the county science fair, armed with his presentation, his knowledge of propulsion and physics, and the new rockets Mr. Caton has made for him. The judges at the fair are initially dismissive of Homer’s designs, since they seem dangerous, but in the end, Homer and the BCMA win first prize. Miss Riley and Mr. Turner are overjoyed with this news. Shortly afterwards, Homer attends a school dance with Melba June. Homer then attends the state science fair, which he wins, meaning that he’ll be attending the National Science Fair in Indianapolis.

At their next rocket launch, the BCMA launches rockets to a height of 15,000 feet, exactly as Homer has predicted. After the launch, Roy Lee comes to Homer with startling news: he’s learned who fired at Homer Sr. The culprit feels horrible about his crime, however, and will likely leave town soon. Homer is touched by this news, and decides not to ask Roy Lee for this person’s name. Homer realizes that Coalwood is full of good, honest people, like Roy Lee and his father.

In preparation for the National Science Fair, Homer goes to a suit store in a neighboring town and purchases a shocking orange suit. Afterwards, he attends a surprise rally where John F. Kennedy is speaking. Kennedy takes questions from the

audience, and, noticing Homer's suit, asks Homer to speak. Homer asks Kennedy if he'll send men to the moon, and Kennedy enthusiastically replies that he will. Afterwards, Homer returns his suit and trades it out for a more modest blue one.

At the National Science Fair in Indianapolis, Homer is dismayed to find that his competitors have polished, highly sophisticated projects. He's afraid that he'll come back to Coalwood empty-handed, confirming, in the eyes of the townspeople, that he's an arrogant, overly ambitious young man. The night before the fair, Homer discovers that his rocket nozzles and casings have been stolen. Frantically, he calls his mother in Coalwood, and begs her to find a way to send him more materials. Miraculously, Elsie tells him that there will be nozzles and casings waiting for him on the next morning train to Indianapolis. Homer goes to the train station and finds them. At the Fair, Homer is awarded the top prize in the category of propulsion.

When Homer returns to Coalwood, he learns that Miss Riley has been sent to the hospital—her cancer has worsened. Jake consoles Homer and tells him that he must accept tragedy and sadness in his life, while also embracing the good.

Afterwards, Homer learns that his request for more rocket parts indirectly played a major role in ending the union strike. Mr. Caton and his friends protested that the strike needed to be broken up so that he could finish Homer's rockets immediately. Pressured by Mr. Dubonnet, Mr. Caton, and others, Homer Sr. agreed to sign the required papers, restoring laid-off miners to their original positions. One consequence of this agreement is that Homer Sr. will be unable to join Elsie in Myrtle Beach: he's agreed to stay on as superintendent for the foreseeable future. Elsie agrees to stay in Coalwood for a little longer with Homer Sr.

Homer and the BCMA decide to hold one last rocket launch. Homer is surprised to see Homer Sr. in attendance—previously, he's been too busy at the mine to make time to see his son's launches. Homer asks his father to launch the final rocket. Homer Sr. does so, and seems impressed with the results.

After their victory at the National Science Fair, the members of the BCMA go their separate ways. None of them get scholarship money as a result of their science fair success, but most of them find ways of paying for college anyway. Three of them, including Homer and Quentin, become engineers, and Homer goes on to work for NASA, designing space shuttles. As an adult, Homer continues to have a distant relationship with his father, and when Homer is a middle-aged man, his father finally dies of lung failure, stoically refusing pain medication up to the day of his death. Ultimately, the town of Coalwood shuts down, and the miners move elsewhere. Homer looks back on Coalwood with a mixture of sadness and respect. Coalwood made him the man he is today, he admits, and as long as its people remember it fondly, it will live forever.



CHARACTERS

MAJOR CHARACTERS

Homer Hickam Jr. – The young narrator and protagonist of *Rocket Boys*, Homer Hickam, Jr. is a curious, adventurous, and ambitious teenager from the town of Coalwood, West Virginia. During the course of the book, Homer, inspired by the onset of the Space Race between the United States and the Soviet Union, endeavors to build **rockets** like his hero, Dr. Wernher von Braun. He founds a group, the BCMA, composed of his high school friends, which builds and launches rockets. Because his projects inspire a huge amount of ridicule and mockery from the townspeople of Coalwood, Homer becomes braver and more passionate with each rocket he designs. At the beginning of *Rocket Boys*, Homer is confused—about his future, his ambitions, and his relationship with his family. By building rockets, Homer strengthens his desire to become a NASA engineer and escape the career that his father, Homer Hickam, Sr., has planned for him—as an engineer in Coalwood's mines. While this desire occasionally causes Homer to despise his hometown, he comes to respect the people of Coalwood and accept their sincere support of his dreams. As an adult—indeed, the narrator of *Rocket Boys*—Homer looks back on his childhood in Coalwood with regret and sadness, but also nostalgia and appreciation.

Homer Hickam Sr. – The father of Homer Hickam Jr., Homer Hickam Sr. is a strong, stoic employee of the mining company, the institution that dominates life in Coalwood. Homer Sr. is devoted to Coalwood's mine: he works long hours there, going far above and beyond the requirements of his job, and even continues working there when the doctors diagnose a deadly “black spot” in his lungs. Like his son, Homer Sr. is an ambitious man, and has managed to attain a position as the mine superintendent, despite having no college degree. One consequence of Homer Sr.'s success is that many of the townspeople dislike him—in part because he's considered “too big for his britches,” and in part because he's usually forced to side with the mining company against the miners, even when doing so means firing employees. During the course of *Rocket Boys*, Homer Sr. shows occasional signs of supporting his son's interests in **rocketry** and engineering, but these signs are nearly always tempered by his sense of disappointment: he's upset that Homer Jr. doesn't want to be a mining engineer.

Elsie Lavender Hickam – The mother of Homer Hickam Jr. and the wife of Homer Hickam Sr., Elsie Lavender Hickam is an intelligent, ambitious, and supportive woman. She frequently quarrels with her husband about life in the mines. Although most of her family is involved in mining, she despises every aspect of the life of a miner. Largely for this reason, she encourages Homer to pursue his dreams of building **rockets**, as she believes that rocketry will help Homer attend college and

escape the mines. Much like Homer himself, Elsie feels a curious distance between herself and Homer Sr. Her distance becomes literal as well as metaphorical at the end of *Rocket Boys*, when she announces that she's moving to Myrtle Beach, far from the Coalwood mine.

Sherman – Homer Hickam Jr.'s friend, and the publicity manager of the BCMA, Sherman is an intelligent young man and a talented math student who calculates many of the complicated sums necessary to launch **rockets**. Sherman suffers from polio, and has a "bad leg." Nevertheless, he plays an invaluable role in building interest and support for the BCMA. Tragically, Sherman dies of a heart attack when he's only 26 years old.

Quentin – The head "scientist" of the BCMA, Quentin is a nerdy, socially inept teenager. Nevertheless, he's a brilliant mathematician and a talented researcher who gives the BCMA some of their most important ideas regarding propulsion. While Homer and his friends initially find Quentin irritating, they eventually develop a grudging respect for his intellect, following by a genuine respect for him as a friend. Quentin is a thoughtful young man—far more so than his peers—and he's the first to point out that victory at a science fair could translate into scholarship money and a career in engineering. Quentin goes on to become a successful engineer.

Roy Lee – Homer Hickam Jr.'s friend, and the publicity manager of the BCMA, Roy Lee is a charismatic, handsome young man who's often seen with a date or a girlfriend. Roy Lee plays an important role in Homer's success with **rocketry**, since he drives the members of the BCMA around in his car. Roy Lee frequently offers Homer advice about girls and dating—some of which Homer accepts, and some of which he ignores. Although he and Homer quarrel over the leadership of the BCMA, and even fight over the matter, they come to respect one another greatly.

Dorothy Plunk – A student at Big Creek High School, and the object of Homer's affections throughout the course of *Rocket Boys*. Dorothy Plunk is, in addition to being beautiful, an intelligent student—ultimately the valedictorian of Big Creek. Although Dorothy frequently expresses her affection for Homer, she never agrees to date him—she's usually too busy dating other, more "serious" people—including, much to Homer's chagrin, Jim Hickam. Ultimately, Homer comes to regard Dorothy as a good friend, if not the love of his life. Dorothy's "epilogue" is arguably the most sobering in *Rocket Boys*: while her talented male peers go on to impressive careers with NASA and the Air Force, Dorothy settles down with a husband and children, reminding us of the narrow options available to women in the 60s and 70s.

Wernher von Braun – The legendary German rocket scientist, and an idol of Homer's. Wernher von Braun played an important role in the military offensive of Hitler's Third Reich,

designing the deadly V-2 rockets, which did tremendous damage to London during the 1940s. Nevertheless, von Braun became a loyal supporter of the United States after the fall of the Third Reich. He used his brilliance to build sophisticated **rockets** for the American military and NASA, and was arguably the single most important figure involved in putting a man on the moon. Despite his legacy as a brilliant scientist, von Braun remains a controversial figure, since his brilliance indisputably aided the Nazi war effort. This controversy shows up at several points in *Rocket Boys*, making Homer question his worshipful feelings for von Braun.

Mr. R.L. Turner – the principal of Big Creek High School, Mr. R.L. Turner plays a key role in the success of Homer and the BCMA's **rocketry**. While he's initially reluctant to allow Homer and his friends endanger their community by experimenting with explosive substances, Turner changes his mind after the federal government announces its intentions to teach more math and science in schools. In the end, Turner celebrates the BCMA for bringing honor to his school.

Reverend "Little" Richard – Reverend "Little" Richard is the charismatic leader of Coalwood's black church. Homer visits him many times during the course of *Rocket Boys*, sometimes for help obtaining supplies for **rocket**-building, but often to seek moral guidance. Reverend Richard is generous with his time, and never ceases to encourage Homer to dream and follow his ambitions.

Reverend Josiah Lanier – Reverend Josiah Lanier is the preacher for Coalwood's main church, which is owned by the same mining company that dominates town life. Lanier is instrumental in convincing the town of Coalwood—and Homer Hickam Sr.—to support Homer and the BCMA in their **rocketing** endeavors— he delivers a sermon in which he encourages families to support their children's dreams. Sadly, Lanier is forced to leave Coalwood in the aftermath of a particularly brutal union strike.

Jim Hickam – Homer Hickam Jr.'s older brother, Jim Hickam is a handsome, well-dressed, athletic high school football player. He argues constantly with Homer, and the two siblings delight in teasing one another—Jim teases Homer for his physical weakness and his nerdy interest in **rocketry**, and Homer responds by teasing Jim for his stupidity and, later, his failure to play football during his senior year. Jim further slights Homer by dating Dorothy Plunk, the girl Homer has a crush on. Ultimately, Jim leaves Coalwood to attend college on a sports scholarship. While Homer is never close with Jim, he acknowledges that he respects Jim and is proud to be his brother.

William Laird – The army commander of George L. Carter's son, William Laird is a charismatic and intelligent figure who oversees mining in Coalwood for years, and wields a huge amount of power over the townspeople. Laird, nicknamed "The

Captain,” ensures that the quality of the miners’ lives is very high—he installs churches, parks, and schools throughout the town. Laird is also instrumental in promoting Homer Hickam Sr. to his position as the superintendent of the mine in Coalwood.

John Dubonnet – The leader of the Coalwood miners’ union, John Dubonnet quarrels with Homer Sr. throughout *Rocket Boys*. At the same time, he enthusiastically supports Homer’s experiments with **rockets**, and even gives him some useful advice about how to prepare rocket fuel and design rocket casings. Dubonnet is a man of great integrity, who has the utmost respect for workers’ rights. Tragically, he becomes a figure of ridicule and mockery after he encourages his workers to continue laboring in the mines instead of going on strike again.

Mr. Isaac Bykovski – A friendly miner who assists Homer with building **rockets** at many points in *Rocket Boys*. Mr. Isaac Bykovski teaches Homer how to weld and design nozzles. Homer Sr. punishes him for encouraging Homer’s experiments by relegating him to an unpopular part of the coal mine, but Bykovski continues to give Homer useful advice. Ultimately, Bykovski dies in a mining accident—a tragedy for which Homer irrationally blames himself.

Miss Riley – The young, beautiful chemistry teacher at Big Creek High School, Miss Riley is enormously important in encouraging Homer and his friends to continue experimenting with **rockets**. Her lessons give Homer and Quentin many ideas for rocket fuel, and with her encouraging, Homer enters the county science fair and wins. Miss Riley is a tragic, almost saintly, figure, since she expresses nothing but love and support for Homer and his friends, but is nonetheless diagnosed with cancer and dies at a young age. Homer has tremendous respect for Miss Riley, and says on more than one occasion that he loves her with all his heart.

Jake Mosby – A young engineer from Ohio, Jake Mosby comes from a wealthy family, and frequently shows off his wealth by driving expensive cars and going on expensive dates. Jake is nonetheless a wise, likeable young man who supports Homer and his friends in their **rocketry**, and gives Homer valuable advice about fate and destiny. Jake also pays off the BCMA’s debts to Mr. Van Dyke.

Orville – A fellow contestant of Homer at the National Science Fair, Orville is instrumental in Homer’s success. After Homer loses his nozzles, Orville takes it upon himself to petition the Fair on Homer’s behalf, the end result being that the judges create a new “propulsion category” and award Homer the top prize (Orville gets second place).

MINOR CHARACTERS

O’Dell – Homer Hickam Jr.’s friend, and the treasurer of the BCMA, O’Dell is an intelligent young man. He’s often responsible for obtaining materials for the BCMA’s **rocket**

designs, and while his schemes often fail, he’s responsible for many important rocket supplies. Ultimately, O’Dell becomes a farmer.

George L. Carter – The founder of Coalwood, and the first man to mine for coal underneath it. His son was in the army with William Laird.

Poppy – Homer Hickam Sr.’s father and Homer Hickam Jr.’s grandfather, Poppy works as a Coalwood miner for many years. After an accident in the mine, he spends the rest of his life in a wheelchair.

Robert Lavender – Elsie Lavender Hickam’s brother, a miner.

Ken Lavender – Elsie Lavender Hickam’s brother, a miner.

Charlie Lavender – Elsie Lavender Hickam’s brother, a miner.

Joe Lavender – Elsie Lavender Hickam’s brother, a miner.

Mary Lavender – Elsie Lavender Hickam’s sister, who’s married to a miner.

Emily Sue Buckberry – A loyal friend to Dorothy Plunk, as well as a close confidant of Homer Hickam Jr.

Teresa Anello – A classmate of Homer Hickam Jr., and, at the beginning of *Rocket Boys*, the only girl he’s ever kissed.

Buck Trant – A loud, obnoxious bully and member of the Big Creek high school football, Buck teases Homer for his interest in **rockets**.

Pooky Suggs – A rude, obnoxious young man who lives in Coalwood and resents the Hickam family because he blames Homer Sr. for his father’s death in the mines. Pooky bullies and teases Homer throughout the novel as Homer experiments with **rockets**.

Tom Tickle – A friendly miner who encourages Homer’s experiments with **rockets**.

Billy – A member of the BCMA who joins later than his peers, Billy is a talented student—ultimately the high school’s salutatorian.

Valentine Carmina – An adventurous, flirtatious Big Creek High School student who often expresses her attraction to Homer. It’s implied that Homer loses his virginity to Valentina. She later marries Buck—a fact that makes Homer very nervous.

Vernon Holbook – A short-term boyfriend of Dorothy Plunk.

Mr. Leon Ferro – A worker at the Coalwood machine store who provides Homer and the BCMA with important advice and help regarding their **rockets**, but insists that the BCMA “pay” him for his efforts.

Mr. McDuff – A lumber worker who lives in Coalwood.

Basil Oglethorpe – A reporter, prone to speechifying, who popularizes the BCMA by writing stories about them in a local paper.

Tag Farmer – The Coalwood town constable.

Mr. Van Dyke – Coalwood’s general mining superintendent, and Homer Hickam Sr.’s immediate superior.

Mrs. Mary Bykovski – The wife of Mr. Isaac Bykovski, Mrs. Mary Bykovski loves and supports Homer, and after her husband’s death, plays the decisive role in convincing Homer to persist with his experiments.

Willy Brightwell – The head of the “tipple shop” where Homer purchases steel tubing.

Mr. Caton – A machinist at the machine shop, Mr. Caton helps Homer build **rockets**, even when Homer has nothing to pay him in return. He teaches Homer how to design technical, engineering drawings, and even builds rockets for the BCMA in the midst of a strike, risking his career.

Carlotta Smith – One of Homer’s high school classmates.

Carl Gustav De Laval – An engineer whose research on nozzles, air pressure, and propulsion plays a major role in the success of the BCMA’s later **rockets**.

Mr. Hartsfield – Mr. Hartsfield is Big Creek High School’s math teacher. He reluctantly agrees to teach calculus when Homer asks him.

Ed Johnson – A Coalwood local, popular with teenagers, who hosts lavish parties and loves to play rock 'n roll music.

John Eye – a local bootlegger who provides the BCMA with the alcohol it needs to make **rocket** fuel.

Mr. Fuller – The new general superintendent of the Coalwood mine, replacing Mr. Van Dyke, Mr. Fuller is a small, pugnacious man, sent by the mining company to oversee the aftermath of a union strike. He leaves shortly after the strike is resolved.

Melba June Monroe – A beautiful classmate of Homer’s, with whom he attends both his high school’s Christmas formal and the senior prom.

Tony – A childhood friend of Homer who’s forced to leave Coalwood after his father dies tragically in the mine.

“Doc” Lassiter – The Coalwood doctor, an employee of the mining company.

Geneva Eggers – A middle-aged woman and, it’s implied, Coalwood’s resident prostitute, whom Homer Sr. saved when she was only a baby. Geneva returns Homer Sr.’s gift by taking care of Homer Jr. when he gets lost in a snowstorm.

John F. Kennedy – The 35th President of the United States of America, and a key supporter of NASA and the space effort.

Mrs. Turner – Mr. Turner’s wife, and a teacher at Big Creek High School.

Emmett Jones – A miner who helps the BCMA find tin.

Calvin Suggs – The son of Pooky Suggs.

Junior –A clerk at the Big Store.



THEMES

In LitCharts literature guides, each theme gets its own color-coded icon. These icons make it easy to track where the themes occur most prominently throughout the work. If you don't have a color printer, you can still use the icons to track themes in black and white.



THE COLD WAR AND THE SPACE RACE

Rocket Boys takes place in the late 1950s and early 1960s, at the height of the Cold War—so to understand *Rocket Boys*, it’s crucial to understand the Cold War and its ramifications for American society.

Following World War II, the United States—a capitalist, democratic state—and the Soviet Union, or U.S.S.R.—a Communist state—became the two global superpowers. While the U.S. and the U.S.S.R. never directly fought with one another, they came close on many occasions—hence the term “Cold War.” One of the most famous of these occasions was the Cuban Missile Crisis of 1962, during which the U.S.S.R. shipped nuclear missiles to Cuba and aimed them at the United States. For nearly two weeks, the United States “stood its ground” against the Soviet Union, threatening to fire nuclear weapons on its territories if the Soviet Union persisted in keeping nuclear weapons in Cuba. Ultimately, both sides agreed to remove some of their weapons.

Science, mathematics, and technology were of the utmost important during the Cold War, particularly in the Space Race, a decade-long competition between Russia and America to build superior rockets and satellites, and send astronauts on increasingly challenging missions. The Space Race began in 1957, when the Soviet Union’s launched Sputnik—a small satellite that was the first to enter into orbit of the Earth, a technological achievement that implicitly proclaimed the Soviet Union’s scientific superiority to the United States. In response, the United States began building satellites and **rockets** of its own. The effects of these efforts trickled down even into American high schools, as the federal government began aggressively funding math and science classes, assigning more tests, and setting higher standards. Science and math were no longer seen as “nerdy,” esoteric activities—they were instead seen as patriotic duties, vital to the Cold War effort.

The influence of the Cold War and the Space Race on American society is apparent on every page of *Rocket Boys*. At the beginning of the book, prior to the launch of Sputnik, Homer and his friends are widely perceived as weak, effeminate, and more or less useless. Gradually, however, Homer and his friends gain respect by building impressive, efficient rockets, because rockets have become “cool”—especially as the American government spends millions of dollars on rockets in Cape Canaveral, offers generous engineering scholarships, and

generally encourages young Americans to embrace physics and chemistry. One illustration of this comes towards the end of the novel, when an obnoxious classmate of Homer's, Calvin, chases after Homer, demanding to talk to him. At first, Homer thinks that Calvin is trying to beat him up, but then he realizes the truth: Calvin wants Homer to help him get a job working with rockets in Cape Canaveral.

The symbolism is clear: rockets, science, and math were “sissy” activities before Sputnik—now, they're a respectable career path, a way for young people to escape their dull lives in Coalwood. In the Cold War era, America changed its mind about what was valuable and what was a waste of time, and Homer and his friends are the beneficiaries of this change.



THE INDIVIDUAL VS. THE GROUP

Over the course of *Rocket Boys*, Homer must balance his own needs and ambitions with the desires—and demands—of a group. Homer's own desires and ambitions are plain from the first chapters of *Rocket Boys*: he wants to study **rockets**, study engineering in college, and work for NASA. At first, it seems that these desires are directly opposed to the interests of his community, however, as the people of Coalwood regard Homer either as arrogant, girlish, or “too big for his britches” when they find out about his lofty plans. His high school peers tease him and threaten to beat him up, and even the adults of Coalwood—his principal, his father, his neighbors—seem to regard rockets as a danger at worst and a waste of time at best.

Homer experiences another kind of disagreement with his team of rocket enthusiasts, composed of high school friends. One of these friends, Roy Lee, contends that Homer is becoming too single-minded in his pursuit of a career at NASA—in other words, he doesn't care enough about his friends' contributions to the rockets, preferring to think about himself and his own ambitions. After a fight, Homer comes to see that Roy Lee is right. This episode marks a turning point in Homer's life, and in his relationship with his friends and peers. Homer learns to be a “team player,” recognizing that his own success depends upon the help of many other people.

Ultimately, Hickam suggests that success must consist of a partnership between the individual and the group. While Homer eventually achieves his dreams (winning a medal at the Science Fair, working for NASA, etc.), he only does so because of the extraordinary generosity and support of the people of Coalwood: the adults who help him find the raw material for his rockets, as well as his friends. Just as the people of Coalwood come to understand and respect Homer's aspirations and interests, so Homer develops considerable respect for the people of Coalwood. Success, *Rocket Boys* shows, is more than just a compromise between the needs of the individual and that of the group—such a partnership also hinges on mutual

understanding and respect.



DREAMS, AMBITION, AND ACCEPTANCE

The most obvious conflict in *Rocket Boys* is that between Homer's dreams and the crushing reality he sees around him. Homer wants to build **rockets**, study engineering at college, and work for NASA, but this career path lies in stark contrast with what his father envisions for him: studying at college and then working in the coalmines of his hometown for the rest of his life. It's also probable that most, if not all, of the miners in Homer's community had lofty goals of their own when they were Homer's age—goals which they've given up on, or failed to achieve.

Because Homer succeeds in his goal of winning a medal at the National Science Fair, it might seem that the message of *Rocket Boys* could be summed up as, “Believe in your dreams.” In actuality, Hickam's message is sadder and much more realistic. While it's true that Homer achieves many of his dreams, he also learns first-hand that achieving one's dreams is difficult and often impossible. While most of the members of his rocket club, the BCMA, go on to study engineering in college, their path to higher education isn't as easy as they'd assumed it would be, even after they win their science fair medal. None of the BCMA members, including Homer, get scholarship money, and Homer is only able to go to college for reasons totally outside of his control (his mother, Elsie, reveals that she's secretly been saving money for years).

The BCMA's success is further marred by the unlucky suffering experienced by a number of its loyal supporters. A friendly miner and BCMA collaborator, Mr. Bykovski, dies in a mining accident. Later, Homer's dedicated teacher, Miss Riley, is diagnosed with cancer. Miss Riley's diagnosis with cancer is particularly traumatic because she's sent to the hospital almost immediately after the BCMA wins the National Science Medal. These tragedies offer a powerful reminder that even the greatest successes aren't perfectly satisfying—there will always be some bad news to weigh down the good.

Homer Hickam Jr. got exactly what he wanted out of life: he excelled at engineering, and ended up working for NASA. Nevertheless, Hickam is intelligent enough to realize that not everyone can do as he did. Ultimately, he argues, people should believe in their dreams—but they should *also* accept that their success, or lack of success, is sometimes influenced by factors outside their control. Hickam ultimately seems to suggest that one must expect and accept some tragedy in one's life, while continuing to believe in one's dreams. The combination of ambition and acceptance is far more powerful than ambition alone—indeed, it's this combination that allows Homer to succeed.



PARENTS AND CHILDREN

As Homer struggles to complete a successful **rocket** and win a medal at the science fair, he also finds himself in a conflicted relationship with his parents: his father, Homer Sr., and his mother, Elsie. During the course of *Rocket Boys*, he learns important lessons about the parent-child relationship, and also learns how to balance his desire for love and attention from his parents with the frustrating reality that he'll never be particularly close with them.

It's clear almost immediately that Homer's parents play an important role in his rocketry, though in different ways and for complicated reasons. Elsie positively encourages Homer to build rockets, though she does so in part because she wants to prove to Homer Sr. that Homer is capable of greatness. In contrast, Homer Sr.'s *disinterest* in his son's experiments ironically drives Homer more than anything else to continue with rocketry. Homer makes it clear that he wants to earn his father's respect by succeeding at rocket design. He's jealous of the attention Homer Sr. pays to his older brother, Jim, a star high school football player, and wants Homer Sr. to give him the same attention.

As *Rocket Boys* proceeds, Hickam seems to be steering us toward a happy reunion between Homer and his father. Homer Sr. grudgingly gives Homer help, using his influential position in the town mine to obtain metal and other useful materials for him. Homer also notices that someone—presumably his father—is anonymously leaving extra materials, such as new sheet metal and mathematics textbooks, for him.

At the end of *Rocket Boys*, one might expect Homer Sr. to reveal that it was he who'd been secretly helping Homer all along. But Hickam doesn't play along with our expectations. In the final chapter, Homer Sr. finally launches one of Homer's rockets—an honor that he'd always declined in the past. Nevertheless, Homer reveals in the Epilogue that he and his father never actually became close, and that Homer Sr. always preferred to maintain a stoic distance from his son.

At the close of *Rocket Boys*, then, Homer reaches the sobering and frustrating conclusion that while his parents have played an important role in his life and his success, there's no rule that guarantees him a close, loving relationship with them. In the end, he thinks of his mother and father in much the same way that he thinks of his hometown. Although they are a huge influence on his life, for which he's eternally grateful, he'll never feel entirely comfortable with them. Instead, he looks to make new friendships and relationships in the world of science and engineering.



HARD WORK, SCARCITY, SCIENCE, AND INNOVATION

A considerable chunk of *Rocket Boys* consists of Hickam's descriptions of how, as a teenager, he went about finding the raw materials he needed to build sophisticated **rockets**. To get the tin needed to weld a rocket casing, for instance, Homer has to negotiate with Reverend "Little" Richard, who has purchased extra tin for repairing his roof. To get it, Homer has to provide the Reverend with shingles for his roof—and Homer has to get these from Emmet Jones, in exchange for a shipment of soil. The entire process is frustrating, and often hilariously painstaking. At many points in *Rocket Boys*, Homer notes that the students in Welch, a wealthier area of West Virginia, wouldn't have so much difficulty designing a rocket—with their extra money, they could simply buy the necessary materials.

Homer and his friends face considerable disadvantages as residents of a small, impoverished mining town. They have to scrimp and save for every piece of metal they find, and whenever they find what they're looking for, it seems like a miracle. Yet Hickam shows how the scarcity of resources in Coalwood actually makes Homer and his friends better scientists, more dedicated innovators, and, ultimately, more successful people. At many points during their experiments, Homer and his friends are tempted to add multiple "features" to a rocket at once—shorter fins, screws on the nozzle, a rounder cone, etc. Quentin, the most bookish and careful-minded "Rocket boy," cautions against this reckless approach, however, because it's not scientific—the only way to know which features work and which don't work, he argues, is to make one change at a time. Homer eventually comes to realize that Quentin is right, and they have to get the most "mileage" from their scrap iron, saltpeter, wood, etc. This involves isolating and testing each resource, very slowly.

The rocket boys' painstaking approach ultimately results in the best rocket imaginable. An agonizingly slow pace forces them to understand the nuances of their materials, and gives them the time to develop some of their most important innovations, such as a curved nozzle and alcohol-cured rocket fuel. A wealthier team of experimenters, by contrast, might be tempted to buy all the necessary materials at once, build a decent rocket, and then never improve it. Indeed, this is exactly the fate of the rockets built by Homer's rivals, the wealthy students at Welch High School.

As Homer prepares for the science fair, he faces the dismissiveness of teachers and students who assume that, because he's from a poor town, he'll never have the resources to win a competition, but Hickam takes great pains to correct this misconception. In the end, Hickam passes on an important message about the value of hard work and a slow pace: while these things may be frustrating, they're the cornerstones of good science.



SYMBOLS

Symbols appear in **teal text** throughout the Summary and Analysis sections of this LitChart.



ROCKETS

Because *Rocket Boys* is a memoir, there aren't many recurring symbols in the book—it's a straightforward, literal story, in which symbols—that is, nonliteral images—don't have much of a place. At the same time, there is one crucial symbol in the book: the **rockets** themselves. In the Epilogue, Hickam makes the rockets' symbolic weight perfectly clear: it was his own enthusiasm and ambition, he argues, along with the support of his friends, his family, his peers, and his teachers, that launched the rockets high into the sky. In this sense, the rockets can be said to symbolize Homer's ambition, and his career path—his "ascent" to fame and glory was only possible with hard work and wild ambition. At the same time, his path to success was a collaborative effort. It took the help of his friends to complete the rocket, just as it took the entire town of Coalwood to send him to college, and later to NASA.



QUOTES

Note: all page numbers for the quotes below refer to the Dell edition of *Rocket Boys* published in 2000.

Chapter 1 Quotes

☞ For all the knowledge and pleasure they gave me, the books I read in childhood did not allow me to see myself past Coalwood. Almost all the grown-up Coalwood boys I knew had either joined the military services or gone to work in the mine. I had no idea what the future held in store for me.

Related Characters: Homer Hickam Jr. (speaker)

Related Themes:

Page Number: 11

Explanation and Analysis

Homer Hickam Jr., the protagonist of *Rocket Boys*, grows up in a town where the vast majority of residents never leave even after they've grown into adults. Furthermore, most of the adults who stay in the town end up working in the mine—the cornerstone of the town's economy.

Homer Jr.'s ambition eventually leads him to build a rocket, earn a scholarship to college, and become a notable rocket

engineer. But as a young boy, he has no idea that he'll take an engineering path later on. All he has is a strong instinct to escape the confines of his town and explore the world—an instinct he describes in this quotation. But Homer makes it very clear that this instinct by itself simply isn't enough to get him out of town: he becomes a rocket scientist because of his natural curiosity, but also because of his hard work, his accidental discovery of rockets, and sheer luck. By showing that his curiosity and adventurousness are necessary but insufficient for escaping from town, Homer makes it clear that he is "one of the lucky ones." Many of his childhood friends were just as curious or ambitious as he was, but didn't have the good fortune to find their passion, go to college, and leave town.

Chapter 2 Quotes

☞ "As I'm sure you know by now," Mr. Turner said in his deliberate manner, "the Russians have launched a satellite into space. There have been many calls for the United States to do something in response. The Big Creek Student Council today has responded to, and I quote, the 'threat of Sputnik' by passing a resolution—I have it in my hand now—that dedicates the remainder of the school year to academic excellence. I approve the council's resolution."

Related Characters: Mr. R.L. Turner (speaker)

Related Themes:

Page Number: 25

Explanation and Analysis

Rocket Boys is set against the backdrop of the Cold War, the long, semi-militaristic confrontation between the United States and the Soviet Union that lasted from 1947 to 1991. Over the course of nearly half a century, the two dominant superpowers of the world, America and Russia, competed with one another for economic and political control of the world. The competition took many forms; the one most relevant to *Rocket Boys* is the Space Race. During the Space Race, inaugurated by the Soviets' launch of the satellite Sputnik into space, the two countries competed to produce the most powerful rockets and vehicles for space exploration. It was believed by both sides that success in space exploration was a way to assert superiority over one's political rivals.

As the quotation shows, one major consequence of the Space Race was a renewed focus on math and science in American schools. Following the launch of Sputnik (the

satellite mentioned in the quote), national educational reform ensured that students would spend more time studying math and science, the two subjects deemed most relevant to building rockets and satellites that could compete with Russia's. Studying hard during the Space Race—not to mention building rockets—was considered an important, even patriotic mission, as every science book supposedly brought the U.S. closer to besting Russia.

☛☛ The men crossed the tracks and I saw the glint of their lunch buckets in the tippie light, and I came slowly back to reality. They weren't explorers on the moon, just Coalwood miners going to work. And I wasn't on von Braun's team. I was a boy in Coalwood, West Virginia. All of a sudden, that wasn't good enough.

Related Characters: Homer Hickam Jr. (speaker), Wernher von Braun

Related Themes:  

Page Number: 33

Explanation and Analysis

Inspired by the launch of Sputnik, Homer Jr. wants to build rockets that can soar high into space, eclipsing Sputnik. But Homer's ambitions go much deeper than the desire to design impressive rockets. Suddenly, Homer sees a new path for himself in life—a path that will take him out of the town of Coalwood to engineer rockets for Dr. Werner von Braun, the most famous rocket scientist in the world. (In real life, von Braun was a former Nazi scientist who, due to his vast intelligence and talent, was recruited by the United States to build American weapons.)

Homer Jr. has always had vague ambitions to explore the world and get out of Coalwood. But it's not until the beginning of the Space Race that he finds a suitable *plan* to focus his ambitions. Rockets represent a way for Homer to escape a life spent mining coal in West Virginia: he thinks that if he builds impressive rockets he'll be able to escape his childhood home forever.

Chapter 3 Quotes

☛☛ I knew Dad thought about Jim all the time, was always telling people what a great football player my brother was, and how he was going to tear up the world in football when he went to college.

Related Characters: Homer Hickam Jr. (speaker), Jim Hickam, Homer Hickam Sr.

Related Themes: 

Page Number: 43

Explanation and Analysis

At home, Homer Jr. competes with his brother, Jim, for the attention of their father, Homer Sr., the chief engineer of the Coalwood coal mine. Jim is as different from Homer Jr. as two brothers can be: as the quotation explains, Jim is a talented football player, and Homer Sr. supports Jim's athleticism, since he thinks Jim will be able to go to college on a scholarship, get an education, and make a better life for himself. Homer Jr. is clearly jealous of Jim's success. More to the point, he's jealous that his father is impressed with Jim's dreams of playing college ball, but pays little attention to Homer's dreams of launching rockets.

The quotation is important because it shows that one of Homer's primary motivations for building rockets is impressing his family, especially his father. While Homer wants to go to college, meet Dr. von Braun, etc., his dreams are also very simple: he wants his father to love and respect him.

☛☛ I didn't know what to say. I just stared at her. She sighed. "To get out of here, you've got to show your dad you're smarter than he thinks. I believe you can build a rocket. He doesn't. I want you to show him I'm right and he's wrong. Is that too much to ask?"

Related Characters: Elsie Lavender Hickam, Homer Hickam Jr. (speaker), Homer Hickam Sr.

Related Themes:  

Related Symbols: 

Page Number: 44

Explanation and Analysis

In this scene, Homer's mother, Elsie, gives her son the encouragement he needs to build rockets. Elsie knows that Homer wants to design rockets, and she also recognizes that he wants to do so partly to impress his father, who's always turned a deaf ear to Homer's accomplishments. Elsie tells her son to build rockets to prove Homer Sr. wrong: to prove that Homer Jr.'s dreams of engineering aren't just dreams at all.

The quotation also sheds light on Elsie's motivations for encouraging Homer. While it's true that Elsie, like any loving mother, wants her son to succeed, there's also a more complicated side to her actions. As Homer Jr. makes clear throughout *Rocket Boys*, Elsie is frustrated with her life in Coalwood: she doesn't have many creative outlets, and she seems unable to discuss her problems with Homer Sr., since he's been living in Coalwood for years, and can't sympathize with her. In part, then, Elsie tells Homer Jr. to build rockets because Homer's success will be an outlet for her own frustrations: she wants her child to succeed and escape town because she can't.

Chapter 4 Quotes

“You gonna build another [rocket]?” asked Tom Tickle, one of the single miners who lived in the Club House. Tom was friendly. “Yes, sir, I am,” I said. “Well, attaboy!” the step group chorused. “Shee-it. All he can do is build a bomb,” Pooky said.

Related Characters: Tom Tickle, Pooky Suggs, Homer Hickam Jr. (speaker)

Related Themes:  

Related Symbols: 

Page Number: 50

Explanation and Analysis

Although Homer Jr. goes through a lot of teasing during his time as a “rocket boy,” he’s also fortunate to come across people who support his science projects whole-heartedly. In this quotation, Homer crosses paths with Tom Tickle, an enthusiastic supporter of rocket-building, but also Pooky Suggs, one of Homer's most frequent detractors.

Pooky's nasty criticism of Homer Jr.'s rockets tells us a lot about the kind of man he is. In part, Pooky bullies Homer because he's been arguing with Homer Sr., Homer's father. But also, Pooky resents Homer for daring to dream of something truly original. Pooky is a frustrated, lonely young man, and he's jealous of Homer for finding a creative outlet that Pooky himself can never understand.

On the other hand, Tom's enthusiasm for Homer's rocket science reminds us that there's nothing particularly “un-Coalwood” about Homer's project. On the contrary, Homer only succeeds in building successful rockets because of the support and mentorship of the townspeople: their ingenuity and encouragement gives Homer the skill and confidence he

needs.

“The first rocket emitted a boil of nasty, stinking, yellowish smoke and then fell over, the glue on its fins melted. “Wonderful,” Roy Lee muttered, holding his nose. Quentin silently wrote the result down on a scrap of notebook paper. Body of knowledge.

Related Characters: Roy Lee, Homer Hickam Jr. (speaker), Quentin

Related Themes: 

Related Symbols: 

Page Number: 72

Explanation and Analysis

This quotation is important because it shows us how much failure and bitterness Homer Jr. has to deal with before he attains any real success with rocket science. Many of Homer's early rockets don't launch at all—they just burn up on the launch pad, or explode, or worse.

In the quote, Hickam shows us two possible reactions to the rocket's failure: Roy Lee's and Quentin's. Roy Lee, an ambitious but somewhat impatient boy, is irritated by the failure of the rocket. Quentin, on the other hand, doesn't think of the rocket as a failure at all. An important part of the scientific method, he understands, is recognizing what *not* to do. Therefore, a rocket that burns up on the launchpad communicates some valuable lessons to the Rocket Boys. Quentin's patience and wisdom about the way science works is invaluable to Homer and his team as they proceed with their work.

Chapter 6 Quotes

“Maybe one day we'll have a trophy in here, Sonny, for our rockets.”
“Are you kidding?”
“Absolutely not. Every spring, science students present their projects for judging at the county science fair. If you win there, you go to the state and then the nationals. Big Creek's never won anything, but I bet we could with our rockets.”

Related Characters: Quentin, Homer Hickam Jr. (speaker)

Related Themes:  

Related Symbols: 

Page Number: 79

Explanation and Analysis

After Homer Jr. and his friends begin designing rockets, they get a taste for rocket building: in other words, at this early stage in the book, they're building rockets for fun. A turning point comes during this scene, when Quentin tells Homer about the annual science fair, and suggests that the BCMA (rocket team) could enter their rockets in the competition. Judging by Homer's behavior in the scene, he's never heard of the science fair before. Homer's surprise, then, is a reminder that he would never have succeeded in becoming a rocket scientist had it not been for friends like Quentin. Homer may be intelligent and ambitious, but he's not always sure *how* to go about translating his enthusiasm into actual success (had it not been for Quentin, after all, he may not have entered the science fair, won a medal, gone to college, or become a scientist).

Chapter 7 Quotes

☝☝ “You want to thank me.” He nodded toward the box. “Make these fly. Show your dad what you and I did together.”

My father had clearly, in no uncertain terms, told me to stop building rockets. The BCMA was now an outlaw organization. I don't know why, but that felt good. I had the urge to hug Mr. Bykovski, but resisted it. Instead, I stood straight and tall, and said firmly, and what I hoped was manfully, “Yes, sir. You can count on me.”

Related Characters: Mr. Isaac Bykovski, Homer Hickam Jr. (speaker), Homer Hickam Sr.

Related Themes:   

Related Symbols: 

Page Number: 97

Explanation and Analysis

Homer Jr. goes to many neighbors and friends for help as he designs his rockets, and one of the most important mentors he comes across is Isaac Bykovski. Isaac teaches Homer valuable information about rocket design, and acts as a supportive father figure in place of Homer Sr.'s criticism. But then Homer Sr. fires Isaac from his job in the metal shop—Homer Sr. doesn't want anyone helping his son building rockets. In this scene, Isaac tells Homer Jr. to keep

building rockets anyway.

The scene is important partly because it shows Homer Jr. accumulating a "debt" to the people in his community. While it's true that Homer Jr. feels a strong ambition to build rockets and go to college, he's helped along this path by dozens of mentors and friends in the town of Coalwood. By the end of the book, Homer isn't just launching rockets for himself; he's launching rockets because he "owes" it to people like Isaac. Furthermore, the scene is important because it shows us how Homer Jr. becomes an adult in the process of designing rockets. Here, Homer comes to learn the concept of honor—he must honor Isaac's help and support by succeeding with his project. Rockets aren't a childish diversion for Homer; they teach him the importance of honor, as well as integrity, loyalty, and maturity.

Chapter 8 Quotes

☝☝ “Love to help ya, I really would,” he said, “but I don't have enough for my roof as it is.”

I looked up. “But your roof is shingled.”

He nodded “If I had shingles, I'd use 'em. But I don't. I've got tin.”

“Emmett Jones has a bunch of shingles stacked up next to his coal box,” O'Dell said. “almost the same color.”

Related Characters: Reverend “Little” Richard, Homer Hickam Jr. (speaker), Emmett Jones

Related Themes: 

Related Symbols: 

Page Number: 116

Explanation and Analysis

In this scene, Homer and the other BCMA members get an impromptu lesson in engineering. They're trying to find materials to design rockets and a rocket launching pad, but find it difficult to track down the necessary metal and shingles. Here, the Reverend Richard gives the boys some advice in obtaining resources, referring them to someone (Emmett) who has what the boys need.

During their days as engineers, the Rocket Boys are often forced to spend large hours tracking down the materials they need to build rockets. Their mission to track down shingles and tin might seem like a waste of time, considering that many other students in the country wouldn't have to go to such an effort—their parents would have the money to just buy them what they needed. But surprisingly, having to

track down resources doesn't necessarily disadvantage the BCMA: on the contrary, it makes them better workers and better scientists. Where wealthier students would buy tin and shingles without batting an eye, the BCMA are forced to think critically and practically about what materials would make for the *best* rockets, as their decisions about design and material need to be well thought-out in a way that their wealthier rivals' decisions don't. Furthermore, tracking down materials trains the boys to be gifted problem-solvers. When launching rockets, they apply the same resourcefulness they've acquired while tracking down what they need.

Chapter 9 Quotes

“We’re making progress.” I put out my hand, palm down. “Come on, put your hand on mine, like the football team does.” One by one, Sherman, O’Dell Roy Lee, and Quentin solemnly placed their hands one on top of the other, all on top of mine. “Rocket boys,” I said. “Rocket boys forever!”

Related Characters: Homer Hickam Jr. (speaker), Quentin, Roy Lee, O’Dell, Sherman

Related Themes:  

Page Number: 132

Explanation and Analysis

In this scene, Homer and his new friends christen themselves the "rocket boys." The scene is full of symbolism; most importantly, the rocket boys take on the behaviors of football players, cheering for their "team." As Homer has already made clear, science and math have eclipsed football as the point of emphasis in Coalwood schools. It's only appropriate, then, that the rocket boys behave like football players—the science students have replaced the jocks.

More generally, though, the scene establishes the importance of groups for Homer and his friends. Homer doesn't always have much in common with his fellow rocket boys, and yet they're all united in their ambitions of building rockets and going to college. By working together, the rocket boys all benefit. There are many times throughout the novel when one of the boys considers leaving the group altogether, and it's only because of the encouragement of the rest of the group that everyone remains involved. Individually, the rocket boys have their own strengths and weaknesses: together, their strengths multiply and their weaknesses disappear.

Chapter 10 Quotes

“Instead of swaggering heroically through the halls in their green and white letter jackets, Jim and the football boys trudged to class sullen and trigger-sensitive to insult.”

Related Characters: Homer Hickam Jr. (speaker), Jim Hickam

Related Themes:  

Page Number: 139

Explanation and Analysis

In his final year of high school, Jim Hickam is dismayed to learn that football has been cancelled in West Virginia schools. Football—a staple of community life in Coalwood—has been cancelled because of the national shifts in the school system. Because of the Space Race, schools have decided to focus their attention on math and science, and suddenly football is seen as a distraction from the subjects that "really matter." In this quotation, we see the results of the changes in the school system: Jim and his football buddies are understandably angry and upset about not having an outlet for their talents and ambitions. The quote also foreshadows the way that Homer Jr. and his friends will become the new heroes of the school: their rocket launches will become a community "event," filling the vacuum created by the banning of football games.

Chapter 12 Quotes

“Machining and materials for gravel. Gravel, like all things in Coalwood, could be supplied by my father. After I completed my engineering drawing of the nozzle, there was nothing to do but to go up to the mine. Dad looked up from his desk when I entered his office. “I heard you’ve been talking to Ike Bykovski,” he said. “And now you’re visiting Leon Ferro. You get around, don’t you?””

Related Characters: Homer Hickam Sr., Homer Hickam Jr. (speaker), Mr. Leon Ferro, Mr. Isaac Bykovski

Related Themes: 

Page Number: 184

Explanation and Analysis

Homer Jr. is under strict instructions from his father, Homer Sr., not to build any more rockets. In part, Homer Sr. doesn't want his son building rockets because he thinks they're a

danger to the mine: indeed, Homer's first rocket blows up, nearly hurting bystanders. Furthermore, Homer Sr. doesn't want Homer Jr. asking anyone in town—Ike and Leon included—about rocket design. In this quotation, Homer Sr. calls out his son for disobeying him on more than one occasion.

Homer Sr.'s gruffness in this scene might suggest that he doesn't want his son building rockets—in other words, just reiterating what he told his son earlier. But the very fact that Homer Sr. knows so much about Homer Jr.'s actions may suggest that he's keeping an eye on Homer Jr. for reasons other than criticizing or punishing him. As the book goes on, Hickam leads us to believe that Homer Sr. is grudgingly impressed with his son's intelligence and determination. So as intimidating as Homer Sr. might seem to be in this scene, there's also faint suggestion that he's secretly impressed with and supportive of his son.

☞ “Mining’s in your blood, little man,” he shrugged. “I guess you’ll figure that out, sooner or later.”
 “I still want to work for Dr. von Braun.”
 He nodded. “We’ll see.”

Related Characters: Homer Hickam Sr., Homer Hickam Jr. (speaker), Wernher von Braun

Related Themes:   

Page Number: 185

Explanation and Analysis

In this confrontation between Homer Sr. and Homer Jr., a lot is revealed about both characters. Homer Jr. makes it very clear that he has lofty ambitions of working for NASA, under the leadership of Werner von Braun. Indeed, von Braun is something of an alternate "father figure" for Homer Jr.—a role model. Homer Jr.'s love for von Braun suggests that he sees something insufficient in his father's personality and career choice: he wants to be something more than a mining engineer, and for this reason he looks beyond Coalwood for his heroes.

Homer Sr.'s behavior in this scene is equally revealing. He's an engineer, meaning that he can't entirely dislike what his son is doing with rockets. Homer Jr.'s rocket launches are a tribute to his father's own talents as an engineer (one could say that engineering, not mining, is in his blood). So it's not that Homer Sr. doesn't want his son to become a NASA engineer; instead, he just doesn't think this is a realistic dream. Homer Sr. wants his son to have a good, steady job

that will enable him to raise a family. It's for this reason that he wants his son to abandon rocket science for the time being and focus on becoming a mining employee.

Chapter 13 Quotes

☞ I suddenly felt proud of [my father], more than for just his long-ago act of heroism, but because of what he had once been back in Gary and all that he had become because of his hard work.

Related Characters: Homer Hickam Jr. (speaker), Homer Hickam Sr.

Related Themes:  

Page Number: 210

Explanation and Analysis

Homer discovers that his father is a hero: years ago, Homer Sr. found a baby in a burning building, and he risked his own life to carry the baby to safety. Years later, Homer meets that "baby," now a grown woman named Geneva Eggers, and learns about his father's bravery.

In spite of the anger he sometimes feels toward his father—mostly when his father forbids him from pursuing his passion of building rockets—Homer also develops a deep respect for the way his father has lived his life. It is important to note that it's *not* Homer Sr.'s bravery that really impresses Homer. Rather, Homer is more impressed with Homer Sr.'s hard work and perseverance while working for the mine in Coalwood. Homer's respect for his father's hard work suggests that it "takes one to know one"; in other words, Homer respects his father because Homer himself has been working very hard on his rockets.

Chapter 16 Quotes

☞ “When you grow up, you’re going to find out there’s a lot of things you’re going to have to do whether you like it or not.”

Related Characters: Homer Hickam Sr. (speaker)

Related Themes:   

Page Number: 228

Explanation and Analysis

When Homer Sr. finds out that Homer Jr. is teaching himself calculus so that he can better calculate the heights attained

by rockets, Homer Sr. is irritated, and criticizes his son for teaching himself mathematics. In this quotation, Homer Sr. gives his son a blunt, simple explanation of why he's wasting his time with rockets. Homer Sr. is trying to convince his son to become a mining engineer in Coalwood. As he says here, being a mining engineer in Coalwood is hardly an ideal position, but being an adult involves doing certain things you don't want to do.

While Homer Sr. has a point, he goes too far in discouraging his son from learning calculus—surely calculus is useful information whether one becomes a rocket or a mining engineer. Homer Sr.'s continued irritation with his son suggests that he doesn't like Homer Jr.'s rocket projects for personal, psychological reasons. As Homer Sr. makes clear in the quotation, his own adulthood has been full of failures and bitter compromises. Homer Jr.'s enthusiasm reminds Homer Sr. of his own youthful ambition—ambition which was sadly thwarted. So Homer Sr. is being both protective of and poisonous to his son: he wants to protect Homer Jr. from the same failures he went through, but in doing so, he's killing his child's dreams.

Chapter 17 Quotes

“I told him about my conversation with the machinist. ‘I think he’s right,’ I said. ‘It’ll take us forever your way.’ ‘And when this rocket blows up and you don’t have a clue what caused it?’ Quentin asked, his face pinched. ‘What will you have learned then?’”

Related Characters: Quentin, Homer Hickam Jr. (speaker)

Related Themes: 

Related Symbols: 

Page Number: 230

Explanation and Analysis

This excerpt shows us one of the most important clashes between Quentin and Homer. The quotation is also important because it underscores the differences between Quentin and Homer's ways of conducting scientific research. After the BCMA proposes a number of major changes to rocket design, Homer wants to add all 5 or 6 changes modifications to the group's rockets at the same time. Quentin, however, believes that the changes should be added one at a time; this will allow the group to identify the results of each change, establishing a more scientific relationship between causes and effects.

The quotation shows that Homer may be a little too enthusiastic about rocket designing: in his haste to build a good rocket, he takes short cuts and neglects the important scientific research needed to maximize results. It's also the case that Quentin is a little too cautious and slow-paced: in his love of the scientific method, he's ignoring the fact that the BCMA only has a finite amount of time before the upcoming science fair.

While Quentin turns out to be right about the need for a careful, slow-paced approach to rocket design, the more important point here is that Homer and Quentin need each other; in other words, they balance each other out. Only as a group can the BCMA succeed—if it were just Quentin or just Homer, the rockets would never win any prizes.

“‘Ike built your rockets,’ Doc said resolutely, ‘because he wanted the best for you, the same as if you were his own son. You and all the children in Coalwood belong to all the people. It’s an unwritten law, but that’s the way everybody feels.’”

Related Characters: “Doc” Lassiter, Homer Hickam Jr. (speaker), Mr. Isaac Bykovski

Related Themes:  

Related Symbols: 

Page Number: 248

Explanation and Analysis

After Isaac helps Homer Jr. with his rockets, Homer Sr. sends him sent to the mines as punishment. During his time in the mines, Isaac dies in a tragic accident, and Homer blames himself for the death: if he hadn't asked about rockets, Isaac would never have been in the mine in the first place. In this scene, Doc Lassiter encourages Homer to continue with his experiments. Doc's main point is that in the tiny town of Coalwood, everyone helps everyone else out, family or not.

Doc's quote is an eloquent summary of small-town American life. In Coalwood, there's an "unwritten law" that compels people like Doc and Isaac help Homer pursue his dreams. (Of course, another reality of small-town life is that there are lots of people whom Homer can't avoid seeing almost every day, and who try to bully him into giving up his dream.) Dozens of people support Homer, lending him their time, money, and resources as if he were their own son. One result of this setup is that Homer owes it not only to himself but to other people to continue with his rockets. It's for this

reason that Doc wants Homer to keep pursuing his dreams.

Chapter 19 Quotes

☞ “Sonny,” [Miss Riley] said, “a lot has happened to you, probably more than you know. But I’m telling you, if you stop working on your rockets now, you’ll regret it maybe for the rest of your life.”

Related Characters: Miss Riley, Homer Hickam Jr. (speaker)

Related Themes:  

Related Symbols: 

Page Number: 254

Explanation and Analysis

With only a short time before the year's science fair, Homer wonders if he should give up building rockets out of guilt for (supposedly) causing the death of Isaac Bykovski. It's only because of the encouragement of mentors like Miss Riley that Homer finds the strength to continue with his project. Here, Miss Riley tells Homer that if he gives up now he'll regret his choice forever.

Miss Riley's advice reminds us that Homer doesn't succeed in life simply because the people of Coalwood give him their time, money, and technical expertise, but because they give him their wisdom as well. Miss Riley is young, but she's seen more of life than Homer has; for this reason, she knows full well that Homer's guilt at causing Isaac's death will transform into regret at having given up so suddenly.

Chapter 20 Quotes

☞ There, with nobody around but Roy Lee, Sherman, and O'Dell, I could be just another boy again. I put Coalwood and even my parents out of my mind and took in all the sounds and sights and smells of God's nature everywhere about me. For the first time in months, I was genuinely happy.

Related Characters: Homer Hickam Jr. (speaker), O'Dell, Sherman, Roy Lee

Related Themes: 

Page Number: 263

Explanation and Analysis

In this scene, Homer and his friends on the BCMA take a camping trip outside of Coalwood. During the course of their trip, Homer begins to get over his sense of guilt for Isaac Bykovski's death. He's been fixated on having caused Isaac's death for weeks and weeks. In part, he's been feeling so guilty because he's been surrounded by the same buildings and people—each one a reminder of some connection between Homer and Isaac, and therefore a reminder of Homer's guilt. Outside of Coalwood and away from most people, Homer finds it easier to move on with his life, focusing on what he's most passionate about—rocketry and his friends. In general, Homer finds here that his friends are one of his most important "resources" in life. On the many occasions when he's at the point of quitting rocketry altogether, his friends encourage him to stick with it.

Chapter 22 Quotes

☞ “You had the calculus class, Quentin. You work them.” “No,” he said adamantly. “Miss Riley gave you the book. You know calculus as well as I do. Quit stalling!”

Related Characters: Quentin, Homer Hickam Jr. (speaker), Miss Riley

Related Themes:  

Page Number: 292

Explanation and Analysis

One of the final steps in Homer's training as a scientist is his mastery of calculus. Because he's not admitted into calculus class in school, he's forced to study the subject on his own time. While many people help Homer learn mathematics, his most important "tutor" is actually Quentin. Quentin teaches Homer the ins and outs of calculus, but even more importantly, he encourages Homer to overcome his "mental block" on the subject. As Quentin says here, Homer is just as good at math as Quentin himself is; the difference is that Quentin *knows* he's good at math, while Homer is so used to thinking of himself as a second-rate student that he finds it hard to work hard at calculus.

Chapter 24 Quotes

☞ Kennedy seemed to be energized by the response. “If I’m elected president,” he said, “I think maybe we will go to the moon.”

Related Characters: John F. Kennedy, Homer Hickam Jr.

(speaker)

Related Themes: 

Page Number: 336

Explanation and Analysis

Homer Jr. goes into a nearby town to buy a suit for the science fair, and while he's there, he witnesses John F. Kennedy, a presidential candidate, making a speech. Homer asks Kennedy if man will use rockets to go to the moon, and Kennedy replies that perhaps America will go to the moon. (In real life, Kennedy's emphasis on space exploration led to the United States sending a team of astronauts to the moon in 1969).

The scene suggests that Homer and Kennedy are somehow kindred spirits—young, curious, idealistic men inspired to use science and technology to explore the world. The scene also implies that the Space Race was about much more than a militaristic competition with the Soviet Union (even if that's how the Space Race began). Homer's question for Kennedy betrays his optimism and curiosity; these qualities, as much as a desire to compete with Russia, brought America to the moon in 1969.

Chapter 25 Quotes

☝☝ Jake jammed his hands in his pockets, sighed, and looked up at the mountains. "I'm not a religious man, Sonny. You want parables and proverbs, go to church. But I believe there's a plan for each of us—you, me, Freida too. It doesn't help to get mad about it or want to whip up on God about it. It's just the way it is. You've got to accept it."

Related Characters: Jake Mosby, Homer Hickam Jr. (speaker), Miss Riley

Related Themes: 

Page Number: 349

Explanation and Analysis

Toward the end of the novel, Homer learns that Miss Riley, his beloved schoolteacher and mentor, has been diagnosed with cancer. Heartbroken, Homer turns to his friend Jake Mosby for help and advice. Jake offers Homer some wisdom: he suggests that there is a "plan" for everybody, meaning that people should accept when bad things happen to them. Although Jake's words might sound religious, or even explicitly Christian, he insists that they aren't. Whether one believes in God or not, it's important to accept

that there are things in life, both good and bad, outside anyone's control.

Jake's advice for Homer is important because it helps Homer understand his own place in the town of Coalwood. Homer has been extremely successful as a rocket designer: in fact, he's won a prestigious medal for his work. While Homer achieved success in part because of his own ingenuity, there were many factors outside his or anyone else's control that led him to success, such as the timing of the Space Race, the establishment of a special "rocketry" category at the science fair, etc. In short, Homer gradually learns to understand that there are many things in life—both bad and good—that are outside our control; accepting this fact is part of growing into a mature adult.

Chapter 26 Quotes

☝☝ "You did really good, Dad," I told him as a spasm of deep, oily coughs racked his body. "Nobody ever launched a better rocket than you."

Related Characters: Homer Hickam Jr. (speaker), Homer Hickam Sr.

Related Themes: 

Related Symbols: 

Page Number: 362

Explanation and Analysis

In this scene, Homer allows his father, who's suffering from a horrible coughing fit brought on by decades of working in a mine, to launch the BCMA's final rocket. When the rocket reaches up to a great height, Homer Jr. tells his father that he (Homer Sr.) did a great job launching the rocket. The quotation foreshadows Homer Sr.'s tragic death from lung complications, but the quote also captures an important step in Homer Jr.'s coming of age. Homer seems unusually mature and civil in the way he treats his father. It would be easy for Homer to taunt Homer Sr.—to remind his father of how he once forbade Homer from building any rockets at all. Instead, Homer compliments and encourages his father, showing that Homer has become a mature young man.

Finally, the quote underscores both a poignant moment of closeness and the continued distance between Homer Junior and Homer Senior. By all rights, it should be Homer Sr. complimenting his son on his superlative rocket designs. And yet Homer Sr. never offers such congratulations. Hickam suggests that Homer Sr. is too proud and too

stubborn to admit that he was wrong to ban his son from rocket design; but in this brief, almost cathartic moment, the two are united and support each other. However, the politeness and sadness of the scene suggest that Homer will never feel completely close with his father—a conclusion that Hickam confirms in the novel's Epilogue.

Epilogue Quotes

☞ Yet I believe for those of us who keep it in our hearts, Coalwood still lives.

Related Characters: Homer Hickam Jr. (speaker)

Related Themes:  

Page Number: 368

Explanation and Analysis

Years later, Homer Jr. looks back on his childhood in Coalwood with a complex mixture of emotions. On one

hand, he resents the fact that so many people bullied him for building rockets. He also dislikes that Coalwood was so anti-intellectual in general; there were many times when Homer's peers teased him for daring to be passionate about something other than football. And yet Homer can't entirely ignore his childhood in Coalwood. For every person who bullied Homer, there was someone else who offered him enthusiastic support and advice in rocket design. Even more importantly, the challenges and adversities that Homer had to work through to build rockets made him a harder worker and a better scientist.

In short, Homer—now a talented NASA engineer—cannot separate his current success from his past experiences in Coalwood. Even if Coalwood wasn't always the most supportive place for a budding scientist, it made him the strong, respectful, hardworking man he is today. As a result, Homer believes that Coalwood lives on—though in reality the town disappeared when the mine folded—in his own character, in his success as a scientist, and in the lives of his friends and peers.



SUMMARY AND ANALYSIS

The color-coded icons under each analysis entry make it easy to track where the themes occur most prominently throughout the work. Each icon corresponds to one of the themes explained in the Themes section of this LitChart.

CHAPTER 1: COALWOOD

The narrator, Homer Hickam, Jr., describes his “coming of age.” By learning to build **rockets**, he explains, he discovered his “own truths.”

Homer describes his hometown of Coalwood, West Virginia. In 1957, the year Homer began building **rockets**, there were only 2,000 people living there. Homer’s father is Homer Hickam Sr., who works as the superintendent of a coal mine. Homer lives in a company-owned house: in other words, a mining company charges his family to live in the house. There is coal dust everywhere—so much that it’s become a town ritual to scrape the coal off the walls of houses every spring.

Homer describes Coalwood in more detail. There is a Main Street (built by the mining company that dominates life in Coalwood), and along it are a church, a post office, a dentist and doctor, and the Big Store (the town grocery and supply store). On the big hill overlooking Coalwood, the company superintendent lives in a large mansion, and oversees mining affairs. There are two main “clusters” of houses where the miners live: Middletown and Frog Level. Homer’s family lives away from the miner houses, at the intersection between the state highway and the path to the mine. Homer recalls his friend the Reverend “Little” Richard, who presides over a small, non-company church. The Reverend would amuse Homer with his Bible stories, and ask Homer if he’d accepted the Lord. Homer would always reply that he wasn’t sure—surprisingly, the Reverend accepted this answer.

The company church is presided over by Reverend Josiah Lanier, a Methodist. Whenever there is a new Reverend, Homer recalls, the religious denomination of the entire town changes. The town has had Pentecostal, Methodist, and Baptist reverends, and changed its faith every time.

In this short opening section, Hickam sketches out the arc of his book: learning rocket science will, in essence, help him come of age.



There’s an implicit contrast in these opening sections between the drudgery of life in a coal town—the dust, the hard work underground, etc.—and the thrilling spectacle of a rocket rising above the ground. It’s important to understand the family and community Homer is coming from, in order to understand where he’s going.



Homer’s uncertainty about God suggests a possible “path” he’s to walk during the course of the novel—perhaps replacing his spiritual uncertainty with religious faith. It’s also important that Hickam establishes the dominance of the mining company over Coalwood. Throughout the book, Homer will struggle with his family’s rules, many of which stem from the rules and unwritten laws of the mining company itself. It’s remarkable to read about a town where a single company has such a dominant role—the economy of mining towns like Coalwood depended totally on their mine, and therefore on the company that owned the mine.



At many points in the novel, Homer will be accused of disrupting the stability of life in Coalwood. It’s important to keep in mind Homer’s observation from this section: life in Coalwood isn’t all that stable to begin with—it’s constantly changing to reflect the mining company’s wishes.



Growing up, Homer's friends at school are Roy Lee, O'Dell, Tony, and Sherman. He invents a fictional Indian tribe, the "Coalhicans," and acts out stories about the tribe with his friends. Sometimes, Homer plays with his brother Jim as well. Once Tony hurt himself playing, and the company doctor, "Doc" Lassiter, put his arm in a cast. Afterwards, Tony's father died in the mine, and Tony's mother was forced to leave Coalwood.

At dinner one night, Homer listens to his parents talk about the history of Coalwood (his brother, Jim, would usually ignore these stories). Coalwood was founded by George L. Carter, who quickly discovered coal beneath the ground. He bought up land and installed stores, houses, and medical services. Under Carter's guidance, Coalwood became an important mining site. Carter hired his son's army commander, William Laird, to take charge of mining operations. Laird was a Stanford graduate and a talented engineer, whom everyone called "The Captain." Laird ensured that the miners' quality of life was high—he installed parks, libraries, and a football field. As a result, Coalwood became one of the safest and most pleasant mining towns in the state.

Homer's father has been working for the mine since he was 22 years old. Laird recognized that Homer Hickam Sr. was an intelligent man, and quickly promoted him to foreman. Hickam wrote to his high school sweetheart—Elsie Lavender—asking her to move to Coalwood and marry him. Elsie refused at first, but later relented when Laird himself wrote her, begging her to come to Coalwood. Shortly thereafter, Elsie married Homer Sr. Homer Jr. often thinks that she regrets this decision.

Homer Sr.'s father, whom Homer calls Poppy, moved to Coalwood along with his son, and worked there until he suffered an accident that left him in continuous pain for the rest of his life. To soothe his pain, he read books. Then, the town doctor prescribed him the painkiller paregoric, and afterwards, he never read another book.

In 1950, Homer Sr. discovered that he had colon cancer. Instead of seeking medical attention, he devoted himself to his work. Eventually he passed out and had to be carried to the hospital. Despite having much of his intestine removed, Homer Sr. returned to the mines in less than a month.

Even as a young child, Homer is imaginative and creative, suggesting the innovation he'll show as a "rocket boy." At the same time, this section reminds us of the harsh realities of life in Coalwood. Because of the dangers of work in the mine, one's parents could die at any time in a freak accident.



Homer is curious and inquisitive, while Jim seems less so. This suggests that Homer is unsure about his place in the world—he wants to understand his town because he's vaguely dissatisfied with it. Homer is intelligent enough to recognize that Coalwood is one of the better towns in West Virginia, at least as far as mining towns go—it has schools, parks, and other "luxuries" that some of the surrounding areas don't have.



Homer Sr. will be an important character in Rocket Boys, and his relationship with Homer will be a crucial part of Homer's decision to build rockets. The tension between Elsie and Homer Sr. will also be important throughout the memoir—it often seems that both Homer and Elsie are working to defy Homer Sr.



From the first chapter, Homer suggests that intelligence, intellectualism, and bookishness are actually drawbacks in the community of Coalwood, and it takes energy and drive to continue with one's studies.



Homer Sr.'s devotion to the mine is apparent long before Homer's interest in rockets arises. Although he'll quarrel frequently with his father, Homer always has a grudging respect for his father's energy, loyalty, and bravery.



Growing up, Homer and Jim saw very little of their father, because he worked long hours. To entertain themselves, they watched movies at the local theater, the “Pocahontas Theater.” In the afternoon, they would see the daily “shift” of workers moving to and from the mines. Sometimes, they would throw Coke bottles at the coal trains passing through town.

One of Homer’s favorite activities is reading. His grade school teachers introduced him to *Uncle Tom’s Cabin* and *The Adventures of Tom Sawyer*. Later, he savored Nancy Drew and Hardy Boys books. Eventually he turned to science fiction writers like Arthur C. Clarke, Isaac Asimov, and Ray Bradbury. His teachers also forced him to read great American authors like Fitzgerald, William Faulkner, and John Steinbeck. Although he enjoys reading, Homer can’t “escape” into fiction—he’s always highly conscious of the fact that the people around him will either join the military or end up working in the coalmines. His mother, Elsie, doesn’t want him to end up in the mines.

Elsie resents Homer Sr. for spending so much time in the mines. Her four brothers, Robert, Ken, Charlie, and Joe, are miners, and her sister, Mary, is married to one. Nevertheless, she has no interest in the lives of miners—her favorite activity is working on a painting, which she never seems to finish, no matter how much time she spends with it. She repeatedly tells Homer that he’s not like the other boys in town—he’s not a miner by nature.

CHAPTER 2: SPUTNIK

When Homer is 11 years old, The Captain retires, and Homer Sr. takes his job. Homer Sr. moves his family into The Captain’s house, which is larger and more comfortable than his previous house. Reflecting on his family, Homer notes that Jim never liked him much. It’s possible that Jim blames him for causing tension between their parents, as Elsie had wanted to have a daughter, but ended up with Homer.

In 1957, Homer begins high school at Big Creek. He likes the new environment, and appreciates that he’s still going to school with his closest friends, Roy Lee, Sherman, and O’Dell. He notes that the key “milestone” in his life happened on October 5, 1957.

Homer shows us the “mindless” diversions available to Coalwood youths. It’s important that we understand these diversions, so that the sheer oddness of Homer’s interest in rockets is apparent to us.



Homer’s interest in books is an early sign of his aspiration to escape his life in Coalwood. His favorite authors—the ones he reads voluntarily, not the ones his teachers assign—tell stories of escape, usually by means of science and technology—an obvious foreshadowing of Homer’s future interests. Although Homer Sr. will often tell Homer that mining is “in his blood,” it seems equally clear that on his mother’s side, so is a desire to escape from the mines.



Many of the characters in Rocket Boys turn to creativity to escape from the drudgery of their lives. Elsie uses art—her painting—much as Homer will go on to use engineering. Yet where Homer will make progress with his rockets, Elsie never seems to make any progress with her painting. This reinforces the fact that art isn’t truly an escape for Elsie—it’s just a temporary diversion from the inescapable fact of her life in Coalwood.



From literally the beginning of his life, Homer is unwanted—Elsie wanted a girl, not a boy, and Homer Sr. prefers Jim because of his talent at sports. This reminds us that life in Coalwood is intensely gendered—men are expected to be interested in football and mining—so Homer will be fighting the status quo if he tries to pursue something different.



Hickam builds some suspense in this section, not telling us what the “milestone” in Homer’s life will be, but setting up the start of the plot.



On Oct 5, Elsie calls Homer to the radio and tells him to listen. The radio announces the launching of Sputnik. Elsie asks Homer what this means. Homer knows exactly what Sputnik is: a Soviet satellite that orbits the planet and measures the weather. Elsie nods and says that this news will infuriate Homer Sr., a loyal Communist-hater. Homer Sr. often argues with Elsie's brother, "Uncle Ken." Ken is a loyal Democrat, and Homer is an equally fierce Republican.

News of Sputnik spreads through Coalwood quickly. Shortly thereafter, Homer takes the bus to school with Jim. Jim, Homer notes, is a well-dressed, popular boy. Homer and Jim fought one another hundreds of times growing up. Recently, they had an especially brutal fight regarding their bicycles, and as a result Homer sustained a purple welt on his leg and his ribs ached for a month. Since that time, Homer and Jim haven't fought or even talked.

It is the first day of school after the launch of Sputnik, and Homer rides the bus. He sits next to Linda DeHaven and Margie Jones, with whom he's gone to school since the first grade. He notices his friend O'Dell, who's sleeping on the bus. He also sees Sherman, an intelligent boy with a shriveled leg as a result of a polio infection. There is also Roy Lee, a good-looking, likable boy who owns a car. Homer is lucky to have these friends, he thinks, because he's the target of much resentment. Because his father oversees the mine, many of the miners resent him. On several occasions, Homer's friends have had to protect him from bullies.

The bus to school drives past neighboring towns. There is Caretta, owned by the same mining company that owns Coalwood. Many of the miners in Caretta hate Homer Sr. for taking The Captain's job. There's also Premier, a "red light" area where prostitutes hang out. The next area is War Warrior, a decaying old town that never recovered from the Great Depression.

When Homer arrives at school, everyone wants to talk about Sputnik. Many of the students think that the Soviets stole the design for Sputnik from U.S. scientists. They gossip about the U.S.S.R. and suggest that Russians eat their own babies. As Homer and Roy Lee talk, they compare homework. Homer notes that he was a poor student, especially at algebra.

Rocket Boys takes places at the height of the Cold War, when the United States was locked in a tense standoff with the Soviet Union. Like the Hickams, there were millions of American families who were raised to despise Communists, "Red" culture, Russians, and socialism—and many still do.



Homer and Jim's relationship is a kind of "Cold War" all its own: they're not actively fighting with each other, but they're far from friends, and delight in irritating each other in various little ways.



Homer is surrounded by girls his own age, but he's evidently too shy to talk to any of them. Homer's close male friends "have his back"—they allow him to pursue his own interests and be himself without having to worry too much about being bullied or attacked—yet Homer is still punished for his father's deeds (even if these only consist of Homer Sr. doing his job). At many points, Homer's mistakes and actions will cause Homer Sr. stress and anxiety—but it goes the other way as well.



Just as Homer is surrounded by adults who failed to escape Coalwood, so Coalwood itself is surrounded by "failed towns"—towns that wore out their mines and were abandoned. There's something grotesque about living in such close proximity to failure, like growing up in a graveyard.



It's something of a surprise to learn that Homer isn't good at math—it seems obvious that being good at algebra is a prerequisite for building a successful rocket. This reminds us that Rocket Boys is a "coming of age" story, and Homer has a long way to go.



Homer's first class is biology. Over the intercom, the school principal, R.L. Turner talks about Sputnik, and suggests that the students concentrate on their studies in order to compete with the Soviet Union. Homer exchanges glances with Dorothy Plunk, who seems frightened by the prospect of a Soviet satellite. Homer whispers to Roy Lee, asking if he thinks Dorothy will go out with him. Dorothy's friend, Emily Sue Buckberry, overhears them, and snaps that Dorothy already has boyfriends. Like nearly everyone in high school, she calls Homer "Sonny." Homer blushes, thinking that he's only kissed one girl in his life—Teresa Anello. He has a big crush on Dorothy Plunk.

A few days later, Homer is spending time at the Big Store. The locals are talking about high school football, which is a huge part of Coalwood town life. Homer's brother, Jim, is a talented football player, and Homer Sr. serves as the president of the Big Creek Football Father's Association. Homer Sr. is exceptionally proud of Jim's athleticism, to the point that Elsie suggests that he isn't proud enough of Homer. Homer, who's nearsighted and physically weak, has no interest in sports whatsoever.

Over the course of the next few weeks, the newspapers are full of stories about Sputnik. Homer is fascinated by these articles—he reads about the great German rocket scientist, Wernher von Braun, who's working for the United States to build American satellites. He also reads that Sputnik will pass over West Virginia soon, low enough that people will be able to see it at night.

The night that Sputnik is said to be passing over West Virginia, Homer goes outside, accompanied by his mother and his friends. Homer Sr. arrives, incredulous that a Soviet satellite is flying over American territory. Suddenly, O'Dell sees a bright object flying through the sky. It is a small, bright ball, which disappears from view in less than a minute. Homer is astounded by the sight. He can barely sleep that night, because Sputnik has excited him so much.

On November 3, the Russians launch Sputnik II, which carries a dog named Laika. Soon after, Homer reads an article in Life Magazine about how Wernher von Braun built **rockets** when he was a child. Inspired, Homer decides to launch a rocket of his own. The principle is simple: put fuel in a vertical shaft, and create a hole so that the fuel can push out. Homer decides to use the powder from cherry bombs as his fuel.

One of the most important legacies of the Cold War for American society was its influence on the educational system. The federal government pumped billions of dollars into math and science classes because it knew that it had to produce the next generation of engineers and physicists to compete with the Soviets. One of the major consequences of this change was that math and science became "cool"—or at least cooler.



There's an obvious conflict between the bookish, physically weak Homer, and the athletic, popular Jim. In part, this is a conflict for love and attention from the stern, stoic Homer Sr. It's interesting that Homer tries to use engineering and science to earn his father's respect at a time when the entire country was beginning to pay more attention to these disciplines: what happens in Homer's house mirrors what's happening in the country.



Von Braun's influence on American rockets is undeniable—somewhat ironically, since he began his career as a head scientist for the Nazis. For an impressionable boy like Homer, however, he's nothing less than a national hero, and a worthy figure to aspire to work beside.



To the seasoned adults of Coalwood, Sputnik seems like a threat. This isn't an unreasonable reaction to the satellite: Sputnik is a Soviet object, and Americans in the 1950s certainly had valid reasons to fear the Soviets. At the same time, Homer interprets Sputnik as an invitation: an invitation to study science and engineering. It's as if he's too young and optimistic to react to Sputnik with fear and paranoia.



Homer's first attempt at a rocket might not sound very sophisticated, but at least it proves that he's following through in his ambition to study rockets. Even as a novice, Homer displays some impressive resourcefulness and willingness to take risky experiments.



Homer gathers his friends, Sherman, O'Dell, and Roy Lee, to help him launch a **rocket** outside his house, near Elsie's prized rose-garden fence. He builds the rocket using an empty flashlight tube, and punches a hole in it using a nail. Together, he and his friends fill the flashlight with cherry bomb powder, connect it to a fuse, and light the fuse. There is a bright flash, and Elsie's rose-garden fence, burning, shoots up into the air.

Elsie's rose-garden fence is the first casualty of Homer's love for rocket science. While this is probably an irritation to Elsie, Hickam presents this scene as comical—with the explosion of the rose-garden fence as the "punch line" of the joke.



CHAPTER 3: MOM

Homer has just ignited his mother's rose-garden fence in a failed attempt to launch a **rocket**. There is a loud "bang," and a fire. Neighbors run out of their houses to see what's the matter. To Homer's relief, no one is hurt—the only "victim" is the fence itself. Elsie runs outside and yells at Homer. Before she can get far, Homer Sr. rushes outside, and Elsie begins yelling at him. They begin arguing about Homer Sr.'s life as a miner, and Homer quietly sneaks into the house.

It's very telling that Homer Sr. and Elsie begin to argue about Homer's future only a few seconds after they've been yelling at Homer. Even when they're angry with Homer, they're thinking about his future and, in Elsie's case, praying that he finds a way to leave Coalwood and start a better life somewhere else.



A little later, Elsie walks inside, glaring at Homer. She calls his actions "stupid," and tells him that he'll be punished soon. Homer dreads his mother's punishments—she has a creatively sadistic streak.

Homer's mother is responsible for much of the hands-on parenting, it seems, as Homer Sr. is always away working in the mine.



Elsie asks Homer if he thinks he can build a real **rocket**. Homer, confused, admits that he thinks he can, with the right research. Elsie tells Homer that she doesn't know what he'll do with his life—Homer Sr. thinks that he's going to end up working as a clerk or a typist. Homer is hurt by this information, and he asks Elsie why his father doesn't like him. Elsie replies that Homer Sr. doesn't dislike him—he's just more interested in mining than his children. Homer knows that this isn't exactly true, as Homer Sr. has always made time for Jim. Elsie insists that Homer has to "get out of Coalwood" by going to college. There's no guarantee that Coalwood will still exist in twenty years, since mining towns shut down all the time. She wants to prove Homer Sr. wrong—in other words, she wants Homer to build a successful **rocket**.

In this crucial section, Elsie sketches out Homer's life as she sees it—unless he throws himself into science and engineering now, he'll spend the rest of his life doing dull work in the Coalwood mines. It's interesting that it's Elsie, not Homer Sr., who recognizes Coalwood's finite future. In a sense, this is an obvious conclusion, as Coalwood only has a finite amount of coal under it, and it's surrounded by the "skeletons" of earlier towns that failed. Yet Homer Sr. is too involved in the day-to-day actions of the mine to see the big picture, and also perhaps refuses to try.



After talking with his mother, Homer thinks about Coalwood. He stays up late, and at midnight, hears his father come home from work. It's difficult for Homer to imagine that Coalwood could ever disappear. At the same time, he's eager to build a successful **rocket** and go to college.

Homer isn't a genius by any means, but he shows a spark of creativity, as well as an ability to think about the future critically and realistically—at least for a boy his age.



CHAPTER 4: THE FOOTBALL FATHERS

For weeks after Homer blows up the rose-garden fence, Coalwood can talk about little else. Adults and children tease Homer about the incident. On the bus to school, Buck Trant, an obnoxious football player, makes fun of Homer and his friends. Homer fires back at Buck, and an argument breaks out. The bus driver kicks both Homer and Buck off the bus. Outside, Buck doesn't fight Homer—probably because, Homer guesses, he's wearing blue suede shoes and doesn't want to dirty them. Buck and Homer hitchhike to school. At school, Homer tells his friends that he's determined to build a successful **rocket**.

At home later in the day, Jim confronts Homer about his argument with Buck, and mocks him for his girlishness and stupidity. This further encourages Homer to make a successful **rocket**.

The next day, Homer encounters Pooky Suggs, a rude young man who blames Homer Sr. for his own father's death in the mines. Tom Tickle, a friendly miner, tries to prevent a fight from breaking out between Homer and Pooky, but Pooky shouts insults at Homer. Pooky calls Homer a "**Rocket** boy"—a nickname that sticks, to the point where almost everyone in town soon calls Homer this.

A few days later, it's the final football game of the regular season. Jim wins the game for Big Creek high school, meaning that his team has gone undefeated all year. Despite this fact, the state football board has already ruled that Big Creek is ineligible to compete in the state championship game—Big Creek has played too many games with Virginia schools. Homer Sr. is so outraged by this news that he resolves to see a lawyer in the neighboring town of Welch. Although Elsie doesn't think this is useful, Homer Sr. insists that he'll go.

One week later, Homer Sr. has visited a lawyer and put together a case for Big Creek's competing in the state championship. A state judge denies his motion, and the state championship proceeds without Big Creek high school. Homer Sr. is undeterred, saying that he'll appeal the motion. Elsie finds this absurd, especially since the game has already been played.

It's almost disturbing to see how quickly the news of Homer's actions spreads throughout Coalwood, and how quickly the people of Coalwood resort to teasing him. It's almost as if they can sense that Homer is trying to "break away" from Coalwood, and want to pressure him into staying. The bullies in Rocket Boys are intimidating but a little ridiculous: Buck may be bigger than Homer, but with his blue suede shoes (straight out of an Elvis song), he's more laughable than anything.



Homer's positive motivations include his desire to go to college and work with von Braun, while his negative motivations include his desire to "shut everyone up" and prove them wrong about him.



Coalwood has cruel bullies like Pooky and Buck, but there are also kind, supportive people like Elsie and Tom Tickle. Here we first hear Homer called a "Rocket boy"—a nickname intended as an insult, but one that will come to define him in a positive way.



Each of Homer's parents seems to have a "favorite child." Homer Sr. supports Jim, admiring his athletic achievements, and spending far more time with him than with Homer. Elsie, by contrast, is quieter and more thoughtful, and gravitates toward Homer, supporting his engineering experiments even after they become the mockery of the entire town.



Homer Sr.'s devotion to Jim causes Homer great jealousy and sadness. At the same time, Homer Sr.'s undeterred attempts to achieve his goals will serve as a benchmark for Homer's own attempts to build rockets. Homer is more like his father than he'd like to admit.



Winter comes to Coalwood, and union tension arises. The leader of the miners' union, John Dubonnet, knows Homer Sr. from high school. In the last ten years, Coalwood has experienced disruptions in its peaceful history—union leaders have gone on strike repeatedly. Although John and Homer Sr. know one another, Elsie has long predicted that they'll experience conflicts. The first such conflict begins when Homer Sr. lays off several miners as a result of the national recession. Homer notices some of his classmates going hungry as a result of these layoffs.

One night, John Dubonnet visits Homer Sr.'s house. Homer Sr. angrily tells John that he can come to his office, but John insists that they speak now. Outside the house, Homer overhears John and his father arguing about the recent layoffs. Homer Sr. contends that the layoffs were necessary, and accuses John of being a Communist. John laughs and says that Homer Sr. doesn't know who his true friends are—Homer is just as disposable to the mining company as any of the workers. John tells Homer Sr. that he's come to talk about the coal dust, which is destroying the workers' health, and Homer Sr.'s health, too. Homer Sr. doesn't respond, telling John to leave his house. After John leaves, Homer Sr. and Elsie talk. Homer learns that when she was a younger woman, Elsie "could have had her pick" between Homer Sr. and John.

Shortly before Thanksgiving, Homer Sr. gets orders from Mr. Van Dyke, the general mining superintendent, to visit the doctor for his annual checkup. At the doctor's office, he learns that he has a "spot" on his lungs, probably a symptom of cancer. He tells Elsie that he won't do anything about this. This worries Homer, since it's traditional for workers with bad lungs to quit the mine immediately.

In December 1957, the U.S. launches a satellite called Vanguard, which blows up on the launchpad. Homer, still interested in launching a **rocket** of his own, decides to talk to a classmate of his named Quentin.

CHAPTER 5: QUENTIN

Homer explains who Quentin is: a pretentious high school classmate of his, who carries a briefcase and reads books constantly. Quentin has no friends, but Homer senses that he's a genius—he gets perfect scores on every test he takes.

Elsie maintains a laconic distance from the politics of Coalwood, allowing her to see the bigger picture and predict what will happen—for instance, she predicts that Homer Sr. and Mr. Dubonnet will quarrel even when Homer Sr. finds this unlikely. Homer is observant enough to realize that his father (and the mining company) is responsible for impoverishing some of his friends and classmates.



The influence of the Cold War on life in Coalwood is obvious here, as Homer Sr. suspects that all those who oppose the decisions of big business must be Communists. Homer Sr.'s cough doesn't bode well for his health later in the book, and even here, one senses that Hickam is foreshadowing tragedy. It comes as a poignant surprise to learn that Elsie knew both Homer Sr. and John Dubonnet when she was younger, and could have married either one of them. The scene reinforces Elsie's loyalty and devotion to Homer Sr., in spite of her disdain for mining in Coalwood.



Homer Sr. has already proven that he can be stubbornly devoted to whatever goal he sets himself (suing the state over football, for example). Here, we see the dark side of this stubbornness, however. Even when it's clear that Homer Sr. should retire from mining and preserve his health, he continues to work.



Hickam ends the chapter by introducing a new character, one who will be very important to Homer's study of rockets.



Quentin may be pretentious or obnoxious, but he's like Homer in that he doesn't fit in with life in Coalwood. In a sense, Quentin is like a caricature of Homer: very bookish, very isolated, very "wimpy."



One day, Homer approaches Quentin in class, and asks him if he knows anything about **rockets**. Quentin smirks, and replies that he knows everything about rockets. He promises to help Homer, on the condition that he can join Homer's team. He explains that he can't build a rocket on his own, since he lacks both the necessary supplies (supplies which Homer can obtain easily, since his father is a superintendent), and the proper leadership qualities. Homer and Quentin agree to build rockets together.

Quentin tells Homer about the history of **rockets**: the Chinese invented them, and they were used in various 19th century wars. Noted rocket scientists include Wernher von Braun and Robert Goddard. The fundamental principle of the rocket is Newton's Third Law: for every action, there is an equal and opposite reaction. Potential rocket fuels include saltpeter and gunpowder. One way to make rocket fuel is to mix saltpeter, sulfur, and charcoal.

Homer leaves Quentin and joins his friends, who demand to know why he was talking with Quentin. Roy Lee insists that Homer will never have a chance with Dorothy if he's seen with Quentin, and threatens to ask Dorothy out if Homer doesn't soon. Inspired by this threat, Homer chases after Dorothy, and asks her, point blank, to accompany him to a dance. Dorothy explains that she has plans, but that she'd like to study biology with him. Homer is happy with this news, although it occurs to him that Dorothy's "plans" on Saturday are probably with another boy.

Homer describes the Big Store: there are groceries, radios, musical instruments, candy, and hundreds of other supplies. Homer goes to the Big Store in search of rocket fuel. He asks the clerk at the Big Store, Junior, about saltpeter—Junior is surprised, but he gives Homer what he wants: sulfur, charcoal, and saltpeter. He warns Homer about the dangers of saltpeter.

As Homer leaves the Big Store, he sees John Dubonnet. John knows that Homer has plans to build another **rocket**, and seems proud of Homer for being ambitious and trying to leave Coalwood. John explains to Homer that in a few years, Coalwood will be no more—Homer Sr. seems to be the only one in Coalwood who doesn't know this. With this, he says goodbye and walks away.

Quentin is intelligent enough to research rockets on his own, but he's also intelligent enough to recognize that it would be better to partner with Homer. He praises Homer for his leadership qualities—which comes as a surprise, since Homer hasn't displayed much in the way of leadership so far. Perhaps Quentin sees something in Homer that even Homer isn't aware of yet.



In this expository section, Hickam introduces readers to the basics of rocket propulsion. Quentin's knowledge of rockets is impressive—indeed, it's a little daunting, since it reminds Homer of how much work he has to do before he masters the sciences relevant to rocketry.



Here Hickam establishes the tension between Homer's scientific pursuits—which necessitate a friendship with Quentin—and his romantic pursuits, which seemingly hinge on Homer being "cool" and not associating with nerdy students like Quentin. Roy Lee, the "ladies' man" of Homer's friends, acts as if he's experienced with girls, but we sense this is mostly an act.



Junior is more accommodating of Homer's needs and interests than the other people of Coalwood. He doesn't mock Homer for trying to build another rocket, but he does give Homer some good, sensible advice about how to use saltpeter.



John, like Elsie, seems to understand that Coalwood is doomed to be shut down in Homer's lifetime. Now we see that Homer Sr. isn't ignorant of this fact, he simply refuses to recognize that Coalwood will shut down, because he's stubborn.



On Saturday, Quentin goes to Homer's house. Outside, by the coal furnace, they experiment with different proportions of **rocket** fuel. After they've "cooked" each batch of fuel, they test it by throwing it into water. They test the two fuels that produce the most bubbles. To do so, they saw off lengths of an old broom handle and glue small fins to these pieces.

Quentin and Homer join Roy Lee to test their new **rockets**. They go to the creek near Homer's house where they know they won't be seen. The first rocket fizzes up and melts when Homer ignites it. The second blows up, throwing shrapnel everywhere. Homer Sr. notices this, and yells at Homer for pursuing his rockets. Elsie jumps in and, with a small smile, tells Homer to find a better place for his experiments. Quentin and Roy leave the house. Before he goes, Quentin notes that this was an important day: the first rocket had too little fuel, and the second had too much. Now they'll have a better idea of how much fuel to use.

It is Sunday, and Homer has gone to Dorothy's house to study with her. Dorothy is eager to hear about Homer's **rockets**. She believes him when he says he'll work with Wernher von Braun one day, and she explains that she wants to be a teacher when she grows up. She adds that she finds Homer much more interesting than Jim—an observation that brightens up Homer immediately. The rest of the "study session" passes uneventfully, with Homer and Dorothy talking about their families.

The next day at school, Homer resolves to ask Dorothy out. When he approaches her, however, he's horrified to see her making weekend plans with another boy.

CHAPTER 6: MR. BYKOVSKI

It's January 31, 1958, and Wernher von Braun is launching the Explorer-1 satellite. The launch is a great success—a fact that invigorates Homer, but leaves Homer Sr. unimpressed. Homer's friends come by, and Homer takes the opportunity to talk to Roy Lee about Homer Sr.'s lungs. (Roy Lee's brother, Billy, is medically trained.) Roy Lee is unsure how to react to this information.

Homer and Quentin need to perform a huge number of tests to build a successful rocket, and trial and error—though it's systematic, slow-paced, and often frustrating—is their best friend in these endeavors. It's the only way they can guarantee that their rocket reaches maximum efficiency, and thus, maximum height.



Quentin seems to have a much better grasp of the scientific process than either Homer or Roy Lee. Where Roy Lee thinks that a failure is just that—a failure—Quentin recognizes that the rockets that burn up on the launchpad teach him as much about rocket science as the rockets that shoot into the sky. Quentin's slow, methodical pace of working will be an important ingredient in Homer's success with rocketry later in the memoir.



Homer and Dorothy are both intelligent, forward-thinking, and ambitious. That they envision different career paths for themselves is perhaps indicative of the gender stereotypes in American culture in the 1950s and 60s: Dorothy chooses a stereotypically feminine profession—school teaching—while Homer chooses a job that was, and still is, dominated by men.



As in most coming-of-age stories, Homer's teenage romances and heartbreaks are just as important to him as his scientific breakthroughs.



Hickam begins this chapter with a kind of recap of the previous chapters: we're reminded that Homer Sr. is sick and unsupportive of Homer's dreams, and Homer is still eager to build a rocket and emulate von Braun.



Homer tells his friends that he's forming a rocket club, the Big Creek Missile Agency, or BCMA. To his surprise, his friends want to join the BCMA, even though Quentin is a part of it. Homer announces himself the president, and Quentin the scientist. Roy Lee covers transportation, O'Dell is treasurer, and Sherman handles publicity and sets up the rocket range.

While it had seemed that Roy Lee and his friends were too “cool” to volunteer to work alongside Quentin, the nerd, it now seems that they're more interested in science, success, and space than they'd first appeared. The BCMA will become a very close-knit group.



Quentin and Homer go to the McDowell County Library in search of books about **rockets**, but they don't find anything useful. At school, Quentin notices a display case, and mentions that one day they may have a trophy in honor of their rockets in that case. Homer explains that every year there's a county science fair, and after that a state and national fair.

In this section, Hickam foreshadows Homer's success later in the book—we can sense, even now, an upcoming quest to win a science fair medal. Quentin, like Elsie, seems forward-thinking, always contemplating the group's next move.



As Quentin and Homer talk, Miss Riley, a teacher, and Mr. Turner, the principal notice them. When Quentin tells Mr. Turner about the BCMA, Turner tries to impress upon Quentin and Homer that their club must not cause any more explosions (he's heard about the rose-garden fence). Miss Riley is more supportive, suggesting that it would be wonderful if the school focused on things other than football. Because she's in charge of science fairs, Miss Riley asks Quentin and Homer to stop by her classroom.

One of Hickam's projects in Rocket Boys is proving that West Virginia towns aren't as anti-intellectual as they're stereotyped to be. Coalwood isn't monolithic, and figures like Miss Riley seem to embody the spirit of the decade: moving away from an emphasis on physical force and concentrating instead on science and math (although for the government, usually in the service of physical force).



As they walk away from Mr. Turner and Miss Riley, Homer and Quentin argue about the science fair. Homer is reluctant to join a stereotypically “nerdy” activity, but Quentin is more optimistic—he argues that winning this competition is the ideal way to “get on down” to Wernher von Braun. Homer points out that he and Quentin would be competing against Welch High School—a rigorous, academically excellent school.

Quentin appears to be the optimist of the group, while Homer is the harsh realist. Welch, a wealthy, pampered high school, becomes a new sort of antagonist. We've already seen the poverty in Coalwood, and how thoroughly it disadvantages Homer in his pursuit of rocketry. The knowledge that there's another, wealthier town competing for the same things only reinforces how difficult it will be for Homer to succeed.



Homer leaves Quentin to go to his class. Inside, Emily Sue asks Homer about Dorothy. Homer notes that he thinks of Emily Sue as a “forever friend”—someone he can be totally open and honest with. Emily Sue informs Homer that Dorothy likes him, but isn't romantically interested. Emily Sue explains that Homer is nice and likeable, but not attractive to girls. Jim, by contrast, is attractive and well-dressed, but he has no real friends. Homer is hurt by this news, and he tries to think of ways to make Dorothy love him.

Homer is lucky to be close friends with one of Dorothy's close friends, as this allows him to get some inside information on her feelings. For the time being, Homer tries—and fails—to be satisfied with the news that he's more likeable than his brother, Jim. Even if Emily Sue's news is disappointing, it's refreshing to hear that being a handsome football star isn't everything.



For the next few weeks, Quentin and Homer research more rocket fuels. Quentin proposes using a combustible glue to make the fuel burn more evenly. Homer succeeds in getting combustible glue from the Big Store—to this day, he notes, he has no idea why the Store sold it. At the store, Junior brings up Cape Canaveral, the area where Wernher von Braun researches **rockets**. Junior, who is black, mentions that the beaches are segregated in Florida. Homer is surprised to hear this, even though he knows that blacks have their own separate schools in Coalwood.

Back at home, Homer mixes the right proportions of saltpeter and charcoal with powdered glue, creating a thick, pasty substance. Quentin is impressed with this fuel. Together, he and Homer plan to weld a nozzle to the bottom of their **rocket**. Homer decides to approach Mr. Isaac Bykovski about this. He is the father of Esther, a former classmate of Homer's who was diagnosed with cerebral palsy. Homer remembers Mr. Bykovski being friendly and likable.

Homer goes to Mr. Bykovski's house. There, he tells Bykovski that he wants help building a **rocket** by welding a washer to a metal tube. Bykovski suggests soldering instead of welding, and Homer agrees, though he has no idea what soldering is. Bykovski decides to teach Homer, and he shows him how to melt solder—soft, coiled metal—and shape it properly. Afterwards, he promises Homer he'll finish the soldering work for the rocket tomorrow. The next night, Homer meets Mr. Bykovski again, and finds a soldered tube with a wooden cone at its head. Homer finds his rocket beautiful, and he decides to name it "Auk I," after the extinct, flightless bird. He chooses this obscure name to prove that he's intelligent, and that he is learning something from his research.

Homer becomes annoyed with Quentin because Quentin has been unable to find the right books about **rocket** flight. O'Dell impatiently asks to launch the rocket, and the group agrees to do so, despite Quentin's protests. They launch the rocket near the edges of the mine, and find that it lifts about six feet into the air and then falls to the earth. Quentin explains: the rocket was flying, but the soldering melted.

The next day, Homer brings another tube to Mr. Bykovski, asking him to weld a washer to it. Bykovski obliges, saying that steel will be better than aluminum. Over the next three weeks, Homer makes three more **rockets**: Auk II, III and IV. Accompanied by his friends, Sherman lights the fuse for Auk II and the group watches the rocket's progress. Auk II flies ten feet into the air, then turns and shoots toward a tree. Quentin points out that the rocket needs a better guidance system.

Hickam freely acknowledges that for all his hard work and resourcefulness, much of his success depended on luck. There's no reason why the Big Store should sell combustible glue, and if it hadn't, it's quite likely that Homer would have been halted in his tracks early on. Junior brings up another kind of luck as well here—Homer might be poor, but he still has the white privilege of not having to face segregation and systemic racism as another obstacle to success.



Here we meet another potential ally for Homer and his rocket-building friends: Mr. Bykovski. As Hickam progresses with his story, it becomes clearer and clearer that Coalwood is, in fact, highly supportive of Homer's attempts to build rockets, even if it's also full of bullies and close-minded miners.



Although Homer gets little love and attention from Homer Sr. in this section of the book, he finds "father figures" elsewhere. Here, Mr. Bykovski teaches Homer lessons about rocket science in a friendly, unmistakably fatherly way. It's also in this section that Homer coins the name "Auk." Much like the nickname "Rocket Boys," "Auk" is meant to be ironic—it's a way of throwing insults back in the offending party's face. The name "Auk" is also, as Homer admits, a rather pretentious attempt to prove that he's getting smarter by building rockets.



Quentin is calmer and more patient than his friends, and this is one of his greatest assets as a scientist. When the other boys want to launch the rockets as soon as possible, their impatience results in a total, meaningless failure. As Homer grows up, he learns to work as Quentin's pace—the pace of a scientist.



Hickam here begins to establish the "rhythm" of the rocket launches, and the rhythm of the book itself: Homer and his team build a rocket, relying on adults like Mr. Bykovski for help; Homer and his team launch the rocket; and Quentin makes critiques and writes down ways to improve the rockets next time.



In response to Quentin's point, O'Dell insists that the group should launch Auk III and IV immediately. He lights the fuse on Auk IV, and watches as the rocket flies toward the mine, eventually hitting Homer Sr.'s office. Homer Sr. rushes out of his office toward Homer. He yells at Homer for continuing to research **rockets**, insisting that the rocket could have killed someone. He then notices that the rocket is made from company property—metal and casing. He accuses Homer—and the company worker who helped him—of being a thief.

Just as the BCMA seems to have “gotten of the ground,” Hickam brings us back to earth. Homer Sr. isn't wrong to accuse Homer of stealing company property, but his reaction seems a little excessive—a reflection of his own irrational devotion to the mining company, not of his son's misdeeds. It's also concerning that Homer Sr. threatens to punish Mr. Bykovski as well as Homer.



CHAPTER 7: CAPE COALWOOD

After Homer's rocket fails, Homer Sr. and Homer walk home. Homer Sr. orders Homer to stop “fooling around” with **rockets**. He collects Homer's saltpeter and powdered glue. Guessing correctly that it was Bykovski who helped Homer, Homer Sr. says that he'll “take care” of Bykovski.

Homer Sr. seems almost relentlessly opposed to Homer's goals. One gets the sense that Homer Sr. isn't just criticizing Homer for stealing company property, but because he doesn't approve of studying rockets at all.



Elsie speaks with Homer privately. She explains that Homer Sr. is under pressure from his bosses because of Homer's **rocket**. She subtly encourages Homer not to give up, and to continue making rockets—but in a more isolated place.

Elsie has to do her job as a mother, disciplining Homer when he misbehaves, but she also wants to encourage Homer to continue with his plans—in this way, subtly undermining her husband's wishes.



The next day, Homer goes to visit Mr. Bykovski. Bykovski explains that Homer Sr. fired him from the machine shop and sent him to work in the mines once again. Homer finds this despicable, but Bykovski insists that Homer mustn't say these things. Before Homer leaves, Bykovski gives him four wooden nose cones for future **rockets**. He encourages Homer to impress his father by making a flying rocket.

Homer has to struggle with Homer Sr.'s discouragement, and also with his own guilt—when he implicates Mr. Bykovski in his rocketry, Homer Sr. punishes Mr. Bykovski by sending him into the mines. It's inspiring to see Mr. Bykovski encouraging Homer to continue with his rocket science, especially since Mr. Bykovski must understand that he's risking his own job for the second time.



Homer finds the thought that his father doesn't want him making **rockets** exhilarating. He proposes to his friends that they test rockets in the Pine Knob area, far from the mines. He also asks Quentin to find a more efficient way to test the rocket fuel, and Quentin promises that he'll do so. In the end, Homer recalls, Quentin's testing mechanism is too complicated to be practical.

Here, we begin to see the limitations of Quentin's approach to science. While Quentin is precise and insightful with his analysis, he's often too slow for Homer's taste—and sometimes too slow to be practical.



One afternoon, when the BCMA is visiting Homer's house, Roy Lee proposes that the group focus less on **rockets** and more on girls. He brings out a bra he claims to have gotten from one of his girlfriends, and brags about his conquests. He teaches his friends to remove a bra with one hand—a trick that Homer finds surprisingly difficult. Elsie asks Quentin to stay for dinner, and Quentin says he'd be delighted. Elsie seems to find his overly formal manner charming.

The BCMA's rocket-building is a constant struggle between Quentin's exactness and perfectionism, Homer's eagerness, and Roy Lee's teenage desire to forget rocketry and go on dates. Somehow, this struggle results in a kind of equilibrium where the three balance each other out. Quentin's relationship with Elsie is humorous, but it also confirms that Quentin and Elsie are kindred spirits—outsiders in Coalwood.



In the coming weeks, the BCMA uses a simpler method for testing **rocket** fuels than the one Quentin developed—detonating small quantities of fuel in soda bottles. The group discovers an important rule: the finer the powder they use, the bigger the explosion. Homer notices that locals hear the soda cans exploding, but surprisingly, his father never brings this up to him. Homer decides that his team needs a place where it can launch rockets in peace.

Again, it's only through careful trial and error that the group discovers they can get maximum efficiency by grinding their powders more finely. It's also hinted that Homer Sr. isn't as distant from his son's life as it seems: he might be helping Homer by purposefully looking the other way.



Shortly after detonating soda cans for the first time, Elsie brings Homer to talk with Homer Sr. Elsie explains that Homer needs a place where he can experiment with **rockets** without causing a problem. She adds that "some people"—the teachers in Coalwood—think that Homer's experiments are of great importance. Homer Sr. insists that there's no way for Homer to use rockets—the mining company is pressuring him to clamp down on such disturbances. Out of the blue, Homer asks his father if Coalwood will close down soon. Homer Sr. replies, after some thought, that there is at least fifty more years of coal in the mine. Homer objects that Mr. Dubonnet has said differently, and Homer Sr. angrily insists that Homer never talk to Mr. Dubonnet again.

At the beginning, Homer seemed like the "loner" of the memoir, but in this scene, it's Homer Sr. who seems like the isolated, foolish person. While everyone around him—his wife, his son, Mr. Dubonnet—recognizes the truth (that Coalwood will inevitably fold up), Homer Sr. distances himself from the popular opinion. It's maddening, but also poignant, that Homer Sr. refuses to see the naked truth: he's devoted his entire life to mining, and can't stand to think that his children won't be able to do the same.



Homer's family attends Sunday church service. Homer sits with O'Dell and Sherman. The preacher, Reverend Lanier, gives a sermon about a disobedient child who caused his father great pain. Lanier looks directly at Homer as he gives this speech, and Homer feels exceptionally guilty. Suddenly, Lanier changes the meaning of his speech. He suggests that the father in the story is just as petty and narrow-minded as the child. It's a great thing, he concludes, to have an intelligent, curious child. This conclusion draws "Amen's" from the congregation. Lanier specifically mentions the "Rocket Boys" as examples of curiosity and intelligence—qualities which he says should be encouraged, not repressed.

Coalwood initially seemed to be opposed to Homer's rocket science experiments, but now support for him is growing. Inspired by the Reverend Lanier, people now encourage Homer's curiosity instead of repressing it. Lanier's sermon seems particularly bold when one considers that he's essentially criticizing Homer Sr. in front of the entire town: if Homer represents the "disobedient child," then Homer Sr. represents the petty, narrow-minded father in the Bible story.



Outside the church, Homer Sr. tells Homer that it's time for him to learn to drive a car. Homer thinks that his father looks vaguely disgusted with him, but he wonders if he's taken Reverend Lanier's sermon to heart. In the car, Homer does fairly well with his driving lessons. Eventually, he and his father reach Cape Coalwood, a steep range of hills covered in nothing but coal and dirt. Homer Sr. explains that Homer can use this area to test **rockets**—he'll be alone for miles in all directions, and thus won't cause any problems. Homer works up the courage to ask his father for scrap metal and lumber. Homer Sr. agrees, on the condition that Homer keep his rockets "out of sight."

Homer Sr. seems to have taken Reverend Lanier's advice to heart. Cape Coalwood isn't a particularly inviting place, but it suits Homer's purpose for the time being. The name also draws a telling parallel with Cape Canaveral, the part of Florida where NASA launches its rockets. Although Rocket Boys is ostensibly about Homer's coming of age, it's also about Homer Sr.'s changing relationship with his child, and his town. This scene is a major milestone for Homer Sr. as well as Homer himself.



CHAPTER 8: CONSTRUCTION OF THE CAPE

In Cape Canaveral, Homer says, von Braun has launched a series of successful satellites. The Americans and Soviets are competing to launch bigger and more impressive objects into space. Von Braun hints that he might leave the military and work for an organization called NASA. When he learns this, Homer decides that he wants to work for NASA too.

While growing up, it's important to something to aspire to, and Homer's hero is Dr. von Braun. Von Braun serves as another kind of father-figure to Homer—in the absence of Homer Sr.'s support, Homer tries to imitate the greatest scientists and engineers of his age.



As his 10th grade school year draws to a close, Homer attends an auditorium meeting. There, he encounters Valentine Carmina, a girl in the year ahead of his. Valentine is beautiful and sexually adventurous—two qualities that endear her to the boys at school, but not to Mr. Turner. She's always liked Homer, for reasons that have never been clear to him. As Homer and Valentine talk, Mr. Turner announces that the school's football team has been placed on suspension—as punishment for Homer Sr.'s attempts at legal maneuvering, there will be no games played next year. Turner adds that Big Creek will be teaching more math and science classes in an effort to compete with the U.S.S.R. He stresses that West Virginia's students are more than a match for the students of Russia. Turner's speech elicits groans and "boos" from the students.

This is one the key moments in Rocket Boys, and a metaphor for the changes occurring in the United States at this time. Just as the United States was now concentrating on math, science, and engineering as a way to get ahead of the Soviet Union, so Big Creek High School now turns away from physical competition (football) and focuses on academia. Mr. Turner seems perfectly aware of the full significance of the decision to cancel football, and he understands that Big Creek is only a tiny part of the Cold War, but of course, the students of Big Creek can't think in these broad terms, so they boo Mr. Turner.



As the students leave the auditorium, Homer notices that Dorothy is crying, and the footballer players look furious. Buck yells that he'll never be able to get a football scholarship, meaning that he'll probably spend the rest of his life working in a coal mine. Mr. Turner overhears him, and agrees, saying that there's nothing fair about what has happened. Homer sees Dorothy embracing Vernon Holbrook, a senior football player.

While Homer seems to find Buck's consternation comical (Buck has beaten him up, after all), there is something undeniably tragic about Buck's situation: in all probability, he will spend the rest of his life in the coal mines, gradually losing his strength and succumbing to illness. This tragedy is so ubiquitous in Coalwood that it's difficult to see, like water to a fish.



When Homer and Jim come home from school, Homer can tell that Jim is very angry. Jim complains that Homer Sr. has ruined his chances at a football scholarship. Homer Sr. insists that he'll pay Jim's way through college. Jim doesn't accept this consolation—he insists that he wanted to play college football. Homer jokes that Jim can join the band now. Jim is furious, but doesn't fight Homer. In the coming weeks, the people of Coalwood agree that Homer Sr. has acted foolishly by trying to sue the state over football—he's become more unpopular than ever.

A week after Mr. Turner announcement, Homer goes to the lumber shop at the mine. At the mine, he finds Mr. McDuff, a lumber worker. Homer tells McDuff that Homer Sr. has promised Homer building materials: scrap lumber and tin. Another worker, Mr. Leon Ferro, reports that there is no leftover tin—Reverend Richard took all of the tin to repair his roof.

Homer and his friends go to visit Reverend Richard. They talk to him and find a way to get the tin he has: they can go to Emmett Jones, a miner, to get shingles, use the shingles to repair Richard's roof, and keep all of the tin Richard has gotten from McDuff. The boys trade Emmett Jones a load of "plantin' dirt"—fertile soil for growing flowers—for his shingles, and trade Richard the shingles for his tin.

The BCMA goes about using its newfound tin to build a launchpad, nozzles, and **rocket** shafts. As they work, Elsie pays special attention to Quentin, feeding him extra food. After an especially long day, Homer runs into his father, who warns him to keep the rockets out of sight. When Homer asks his father to inspect his launchpad, he declines. Homer thinks that if Jim had been on the BCMA, Homer Sr. would be supporting him wholeheartedly. Homer Sr. mentions that Mr. Bykovski wants to teach Homer more about welding—Homer is excited with this news. As his father goes to bed upstairs, Homer hears his mother and father moving into their separate bedrooms, and he feels immensely lonely.

Once again, Homer seems childish and immature in his mockery of Jim. In part, this is because Homer is upset that Jim is basically guaranteed college tuition, and there's no indication that Homer Sr. has any plans to pay for Homer's college. In the aftermath of the incident, Homer Sr. adds to his reputation for being foolish and obsessive. Homer may be an outsider in Coalwood, but Homer Sr. is, too.



Here, Hickam establishes the first of many serious logistical challenges that the BCMA faces. While the students at a wealthier school—Welch, for example—could obtain rocket materials more easily, Homer and his friends have to hunt and trade for them.



There is something frustrating but also amusing about this brief section, as Homer and the BCMA have to go through at least four different people just to get some tin. One effect of the BCMA members' difficulty obtaining materials is that they come to value these materials very highly, and so every rocket really matters.



The contrast between Homer's father and his "father-figure" couldn't be clearer here. Homer Sr. is cold and seemingly uninterested in Homer's rocket designs, even as they become increasingly elaborate and impressive. Mr. Bykovski, on the other hand, is enthusiastic about Homer's rockets—as a "father figure," he provides Homer with the love and support he needs to continue with his projects. It's also in this section that Hickam reveals that his parents didn't sleep together—it seems like they have a sad, lonely marriage.



CHAPTER 9: JAKE MOSBY (AUKS V-VIII)

As the mine superintendent, Homer Sr. brings new mining engineers in from Ohio and shows them how to work in Coalwood. One such engineer is Jake Mosby, who, Homer notes, would come to be very important to the BCMA. Homer knows Jake Mosby because Homer used to run a paper route to make money, and he would talk to Jake on his route. Jake lives in a boardinghouse, and is a heavy drinker, and Homer was surprised to learn from Elsie that Jake's father is a wealthy man. Homer later sees Jake drunkenly dancing with a secretary at the mining company. He admires Jake for his "ease" with women. Slowly, over the course of his paper deliveries, Homer and Jake become friends, and Homer listens to Jake's stories about being a fighter pilot in Korea.

In the summer of 1958, the mining company opens a bigger mine in Caretta, meaning that Coalwood no longer mines as much coal. Meanwhile, the BCMA proceeds with its experiments. O'Dell fails to find concrete—a necessity for building a stable launchpad for the **rockets**. As a result, Homer asks his father for help, and ends up visiting the mine to talk in person.

While he is at the mine, Homer sees Mr. Dubonnet, who continues to encourage him with his **rockets**. Homer has the idea of putting up a notice about his rocket launches at the Big Store. Afterwards, Homer meets with his father and asks about concrete. Homer Sr. replies that the mining company has no extra cement, but mentions that he knows an engineer who left ruined cement at an abandoned section of the mine—Homer can have this cement, he concludes.

Homer and the BCMA go to the abandoned corner of the mine and find mint-condition cement. Homer wonders what this could mean—it's as if Homer Sr. is giving him excellent supplies while saying that he's giving him poor supplies.

The BCMA digs a hole by Cape Coalwood and pours cement into it. Nearby is the group's "blockhouse," which has sturdy walls and a tin roof to protect from shrapnel. With the launchpad and the blockhouse established, the BCMA concludes that it's ready to fire **rockets** once again. Sherman posts a notice at the post office and Big Store.

In many coming of age stories, there's a "fairy godmother"—a character who is whimsical, friendly, and blessed with boundless sums of money. Jake Mosby is Homer's fairy godmother: over the course of Rocket Boys, Jake will often help Homer and his friends with money or gifts. For the time being, however, Jake seems more like another father figure for the lonely, isolated Homer, and also someone to aspire to in terms of interacting with women.



The first signs that Coalwood is shutting down (the "canary in the coalmine," as it were), arrive in 1958, when Coalwood loses a significant chunk of its business to a neighboring mine. Homer Sr. still gives no sign that he recognizes what's happening.



The contrast between Mr. Dubonnet, who cheerfully encourages Homer to make more rockets, and Homer Sr., who gruffly gives Homer some used cement, seems perfectly clear. Yet Homer Sr. now at least seems willing to help Homer with his rockets, even if grudgingly so.



Homer Sr. has been cold and unsupportive of Homer in the past, but now he seems more invested in his son's success—he just doesn't want to admit it.



In this short expository section, Hickam details the BCMA's progress with building the blockhouse and launchpad. After a series of setbacks, they seem to be moving ahead with their plans.



The rocket launch takes place on a Saturday, and Mr. Dubonnet is in attendance, along with Jake Mosby. Homer notices that Jake has brought a strangely dressed man with him, who introduces himself as Basil Oglethorpe. Jake explains that Basil is the editor of a local paper.

Jake is already proving himself valuable to the BCMA. Although Sherman is ostensibly in charge of publicity, Jake gives the BCMA considerably more publicity than it had planned on with the introduction of Basil.



The rocket launching begins, and Roy Lee lights the fuse for Auk V. It climbs about fifty feet into the air before swerving suddenly and moving toward the crowd. Everyone runs away, terrified. Basil finds the spectacle hilarious and exciting, and scribbles notes. Jake, however, is a little traumatized by the sight—he tells Homer that it reminds him of Korea. Mr. Dubonnet suggests to Homer that the BCMA let the rocket fuel “cure” for two weeks. Because he’s worked with saltpeter before, he knows that it has to be very dry before it can be mixed. Quentin notes that the group needs to find a better steering system. In general, everyone seems satisfied with the BCMA’s progress.

Even in this moment of success for the BCMA, Hickam casts a shadow over the story, as the rockets remind Jake of Korea. This is an understandable reaction: millions of soldiers suffer from post-traumatic stress disorder, whereby they can experience severe panic and anxiety at even the slightest reminder of their war experiences. This is also a reminder that America’s new focus on math and science isn’t some pure-minded endeavor—even encouraging children to build rockets is, in essence, a way of supporting its wars.



In July, all the miners go on vacation. Homer remembers past vacations he’s taken with his family—on one, Homer Sr. and Elsie were affectionate, and even slept in the same bed. When the time came for them to return to Coalwood, Elsie wept. Homer prepares three **rockets**—Auks VI, VII, and VIII—for launching by curing them in the basement. The BCMA decides to launch them when they’re back from vacation. Homer is excited about this, since he’s been experimenting with new ways to attach fins to his rockets, thereby making their steering more even. Homer confesses to O’Dell that he wants Dorothy to come to the next launching. O’Dell advises Homer to get over his infatuation—Dorothy is dating other people.

Homer Sr.’s time away from Coalwood is good for his health and his happiness. We get the sense that he doesn’t like Coalwood much more than Elsie does, even if he’s too proud and stubborn to admit it. On vacations, Homer Sr. can be himself and be affectionate with his wife, while in Coalwood, he’s stern, stoic, and unreachable. Meanwhile, Hickam reminds us of Homer’s romantic feelings for Dorothy. O’Dell may be a realist, but his advice does little to discourage Homer, who’s still in the throes of young, idealistic love.



After vacation, the BCMA proceeds with another launching. Jake is present, along with Basil. This time, Auk VI “steers” straight, thanks to Homer’s fin designs, and fires considerably higher, thanks to the longer-cured saltpeter. Auks VII and VIII aren’t as successful, though they’re thrilling enough for Basil. Jake repeats his remarks about Korea.

It’s not clear exactly why Jake keeps attending the launches, considering that they clearly remind him of wartime trauma. The only plausible answer is that he’s a great friend and supporter to Homer and the other Rocket Boys.



The next weekend, Homer gets a visit from Mr. Bykovski, who offers to teach Homer more welding. Homer senses that Homer Sr. sent Bykovski, perhaps because he felt guilty about sending Bykovski to the mines. After a few lessons, Homer feels fairly competent with welding. Homer Sr. asks him if he's an "expert," and Homer replies, modestly, that he has a lot of work to do before he's an expert. This reply surprises Homer Sr. Homer asks his father about the hardest thing he's ever learned, and Homer Sr. replies that entropy—the principle that matter naturally progress to a higher state of disorder—is the hardest thing he's ever learned. He adds that he finds it difficult to believe in entropy—he can't image "what God was thinking."

At the end of the summer, Jake calls Homer and summons the BCMA to the Coalwood Club House. Homer, accompanied only by Sherman (the only one available), goes to the Club House, and finds Jake carrying a long telescope and a trigonometry textbook. Jake explains that the boys can use math to calculate the height their **rockets** attain. It's getting late, but for the next few hours, Jake shows Homer and Sherman how to use the telescope, and they see Jupiter, the other planets, and the stars. Homer and Sherman find the telescope so fascinating that after Jake dozes off, they continue looking through it. They see a meteor shower, so beautiful that they can only say, "Wow."

CHAPTER 10: MISS RILEY (AUKS IX-XI)

The chapter begins with the words, "I have seen the future, and it works!" Basil has written a blurb for his paper about the "Rocket Boys," in which he praises their ingenuity and courage.

Homer begins the 11th grade in the fall of 1958. Right away, he notices that school feels different: the football players seem sullen and annoyed, without any of the magnetism that made them popular with the girls last year. Another major change is that classes have become much more difficult: teachers write more on the blackboards, assign more homework, and require more books for their classes.

Between classes, an attractive girl asks Quentin and Homer if they're going to the school dance over the weekend. She doesn't pay any attention to the football boys. Shortly afterwards, Homer sees Valentine. She asks him to walk her to class, and he obliges. As they walk, she tells Homer that she read about him in the newspapers, and that a group of girls is eager to watch the BCMA build **rockets**. Homer is excited and aroused by Valentine's flirtations.

Hickam gives us another hint that Homer Sr. isn't as unkind and unfeeling as he sometimes seems—he's capable of love and sympathy for his son and his employees, too. It's also psychologically appropriate that Homer Sr. can't stand the concept of entropy, as entropy dictates that everything comes to an end—even the town of Coalwood will eventually become too decayed and disorderly to be worth living in. Just as Homer Sr. refuses to believe that the future is coming, so he refuses to accept the abstract concept of entropy.



Jake again proves his worth to the BCMA by inspiring them to continue with their rocket building. Looking through Jake's telescope, Homer remembers the feeling of wonder he felt when watching Sputnik fly above Coalwood. It's important that Homer remember this feeling as he proceeds with his experiments. Hickam ends the chapter with a reminder of the progress Homer still has to make. He'll have to master trigonometry to be a successful rocket scientist.



Basil is praising the Rocket Boys for their all-American ingenuity during the Cold War, so it's ironic that the phrase he quotes is usually attributed to Walter Duranty, the journalist who visited the Soviet Union in the 1920s and came back singing its praises.



The influence of the Cold War on life in Coalwood is apparent here again. The federal government's efforts to increase funding for education have resulted in more homework and more difficult classes for Homer and his friends.



One unexpected consequence of Coalwood's new emphasis on math and science is that Homer and his friends start to seem more attractive to girls at school. Homer's experiments with rockets have gotten him a lot of unwanted attention, but his impressive rocket launches (and, perhaps, Basil's fawning articles), have now made him something of a town celebrity.



At the end of the school day, Homer sees Dorothy outside. She asks him to come over on Sunday for studying, and adds that she's missed him all summer. As they talk, Roy Lee comes up to Homer, looking at Dorothy with distaste, and tells Homer to get on the bus.

Although Homer has never been an outstanding student, he finds that he's excelling at plane geometry, in part because it's highly relevant to **rocket** science. Mr. Hartsfield is the plane geometry teacher, and he seems impressed with Homer because Homer asks difficult questions. He reminds Homer that he needs to learn about mathematics one step at a time—he needs to master basic algebra and geometry before he can be a rocket scientist. Homer is pleased to learn that, when he has a genuine interest in the subject matter, he's an excellent student.

On Sunday, Homer goes to Dorothy's house to study, and she embraces him warmly for helping her study. Homer tries to "make a move" by putting his hand on her shoulder, but she wriggles free. This starts a pattern over the next few weeks: Homer comes over to help Dorothy study, tries to get her to kiss him, and never quite succeeds. Homer notices that Dorothy is far better at math than he is.

Homer becomes so fascinated by plane geometry that he comes to believe that math is a "message from God." He goes to Reverend Lanier, hoping to tease out his complicated thoughts. When he explains himself to Lanier, Lanier is skeptical—all of God's message, he insists, can be found in the Bible. Dissatisfied, Homer goes to talk to Reverend Richard. Richard is similarly reluctant to include mathematics in "God's plan." Nevertheless, he acknowledges that the "Number" is also a part of God's plan, along with the "Word." Unexpectedly, he gives Homer some advice. If Homer succeeds in launching a **rocket**, he insists that Homer mustn't let the prestige go to his head. Rather, Homer needs to remember that God is his master.

The BCMA develops a new method for launching **rockets** from a distance. O'Dell borrows a car battery from his father, and uses it to heat rocket fuel. Because O'Dell doesn't return the battery, word gets out that the "Rocket Boys" steal everything—and soon Homer finds himself blamed for every theft in town. One weekend, the BCMA finds an abandoned barn in Cape Coalwood, which is filled with old telephone wires that were used in mines. Thinking that the wire and metal could come in handy, the boys decide to take them.

Homer's love for Dorothy seems guaranteed to disappoint. Dorothy clearly likes Homer as a friend, but doesn't show much interest in him romantically. Roy Lee's advice for Homer is harsh but realistic.



Homer's instinct, here as before, is to rush forward with his pursuits. It's the job of calmer people—like Quentin and Mr. Hartsfield—to slow Homer down and encourage him to proceed "scientifically." It's inspiring to see Homer succeeding at school, now that his love for rocket science has given him a reason to study hard.



Homer keeps getting mixed signals from Dorothy. He also realizes that she's better at math than he is, and yet she is never considered as a possible member of the BCMA. The BCMA is a "boys' club"—sexist on a relatively innocent level for now, but also representative of the gender inequality especially prevalent in the sciences.



Throughout Rocket Boys, Hickam reminds us that Homer lives in an intensely religious community. At the beginning of the book, Homer is uncertain about his relationship with God, but here he begins to "feel God" in mathematics and science. Although few people in Coalwood understand this process, Homer begins to embrace God and faith through science, rather than in opposition to it. Reverend Richard's advice foreshadows Homer's conflicts with his friends and family in the coming chapters.



Although the people of Coalwood are gradually growing more supportive of the Rocket Boys, they sometimes regress to their old suspicions—here accusing them of stealing everything in town, due to a simple misunderstanding. Hickam continues to enjoy showing the reader how Homer and his friends obtain the raw materials for their rockets—there's something adventurous and mischievous about these descriptions.



One day, Tag Farmer, the town constable, calls Homer and tells him that he needs to come to Mr. Van Dyke's office immediately. Homer goes to see Van Dyke, who's sitting with O'Dell and Roy Lee. Van Dyke explains that the BCMA has been stealing from his mining company, breaking and entering, etc. He suggests that the boys could do jail time for stealing his telephones—a suggestion that naturally terrifies the boys. Van Dyke calmly offers to sell the BCMA his telephones for 35 dollars. The BCMA agrees to pay off their debt, keeping the news hidden from their families. After leaving Van Dyke's office, Roy Lee says that he's finished with building **rockets**—it's more trouble than it's worth.

Meanwhile, Homer continues with his studies. He has long hours of homework, during which his only companion is his cat, Daisy Mae. Miss Riley's chemistry class is particularly challenging to him. One day, Miss Riley shows her class what happens when potassium chlorate and sugar combine: there's a bright green flame. Homer and the other members of the BCMA realize that they could use these chemicals as **rocket** fuel. Afterwards, Miss Riley, who's noticed Homer's interest, asks him if he's thought more about joining the science fair. Homer replies that he doesn't think the BCMA is ready for competition yet, but he asks her for help with designing rocket fuel. Miss Riley suggests that potassium chlorate is too unstable to use for fuel, but she promises to research rocket science for Homer. She asks Homer, sincerely, why he's interested in building rockets. Homer, surprised to be having such a frank conversation, admits that he can't explain his love for rockets. Miss Riley nods, saying that she gets the same indescribable thrill from writing poetry.

Later, Quentin suggests that for fuel, the BCMA use a combination of saltpeter—a more stable molecule than potassium chlorate—and sugar. Homer tests the mixture, and finds that it yields flame, gas, and heat—the three vital ingredients for **rocket** propulsion. Homer Sr. notices Homer's experiments, and, much to Homer's surprise, compliments him for his studiousness.

Although Roy Lee has been irritated with the BCMA after the telephone incident, he decides to stay in the group. Meanwhile, a boy named Billy, another high school student, joins the club. Billy is the son of an unemployed former miner, and when Elsie sees him, she provides him with Homer's old clothing.

Even though the BCMA is terrified by its meeting with Mr. Van Dyke, it's hard to tell how seriously we should take Mr. Van Dyke's accusations. He seems to be enjoying torturing the boys, deliberately drawing out his words as he describes their punishment. (The fact that he tells the boys not to talk about the theft with their families seems doubly suspicious.) It's entirely possible that Van Dyke dislikes the BCMA and wants to discourage any further rocketing, or at least wants to make a little free money.



Miss Riley is an important ally and friend to Homer—like Jake, Elsie, and Mr. Bykovski, she believes that he can succeed if he puts his mind to it. Miss Riley's science experiments inspire Quentin and Homer to pursue new kinds of rocket fuel, in order to build the most fuel-efficient rockets possible. Many of the characters in Rocket Boys turn to creative pursuits for peace and happiness, like Elsie with her painting, and Miss Riley with her poetry. These “creative pursuits” seem highly gendered, however: Homer, as a boy, turns to a public, scientific, and even violent activity, while Miss Riley and Elsie express their creativity privately and quietly—in essence, keeping it to themselves.



Homer is showing progress with his studies and his rocket building, and here he surprises himself by thinking of a new, powerful fuel source. The confirmation of Homer's progress comes through the lips of Homer Sr., who, for once, compliments Homer for his work.



Many of the characters in Rocket Boys criticize Homer for being the spoiled son of a mining superintendent—he has the money to spend on rockets because he comes from a wealthier family than most of his peers. Yet everything is relative, and Homer is still much poorer than any of his rivals in the science fair, as we will see.



The BCMA proceeds with its Auks. Auk X uses the new fuel—saltpeter and sugar—but it doesn't launch because the fuel, which the group dubs "rock candy," is packed in too tightly. Auk XI fairs better, but the fuel gets "clogged" at the nozzle, meaning that there's no net propulsion. Sherman proposes a dangerous tactic: melt the rock candy slightly before packing it into the **rocket** shaft. Homer is reluctant to do so, since this could mean blowing himself up. Eventually he relents and decides to try it, in the hope that it will yield a more efficient fuel.

As Homer proceeds with his rockets, he's inevitably forced to face some danger. Hickam ends this chapter with a description of some upcoming peril, adding suspense to the narrative. Given that Homer has already blown up a fence with his fuel sources, there's no telling what he'll do with his rock candy.



CHAPTER 11: ROCKET CANDY: AUKS XII-XIII

It is Saturday, and Homer is preparing to melt the rock candy to try and create an efficient **rocket** fuel. He has borrowed a hot plate from his mother, and is standing in an alley near his garage. Using a wooden spoon, he places a small amount of saltpeter in a pot on the hotplate and heats it slowly. Then, he adds some sugar, which slowly melts, until the mixture is thick and milky white.

Homer is young and reckless, but his interest in rocket science also is so great that he's willing to endanger his life. His behavior parallels that of Homer Sr., who loves mining so much that he ruins his lungs staying at work long after the doctors recommend that he retire.



Elsie asks the boys if they need help—when she sees that they're melting rocket fuel, she helps them scrape it into a rocket tube, seemingly unaware of how much danger she's in. Homer turns to draw more of the fuel from the pot, which is a mistake—when he jerks the pot suddenly, it explodes high into the air, luckily leaving no one hurt. Elsie tells Homer to buy her a new pot, but surprisingly, she doesn't seem particularly angry or frightened.

It's strange that both Elsie and Homer seem nonplussed by their close shave. Perhaps Elsie has come to trust Homer with his experiments, or perhaps she's just glad to see him hard at work with his rockets, as she had encouraged him to be.



Later in the day, Homer comes home to find his father sitting in his easy chair. Homer Sr. asks Homer if he's thinking of becoming an engineer, and Homer isn't sure how to respond. Homer Sr. advises that Homer will need to learn about far more than **rockets** if he's to become an engineer. He mutters that rocket scientists are "burning up" government money with their wild experiments in Cape Canaveral. Homer Sr. then tells Homer his "plan" (but for the time being, Homer doesn't reveal to the reader what this plan is).

Homer Sr.'s myopia about rocket science and Cape Canaveral is infuriating: we, reading Rocket Boys half a century after a man walked on the moon, recognize that NASA was tremendously useful and accomplished a great deal. Homer Sr., on the other hand, doesn't approve of the government investing large sums of money in projects like the Space Race.



The narrative jumps ahead to the next **rocket** launch. At the launchpad, Basil is scribbling, and there at least fifty other spectators watching as the BCMA prepares for its latest launch. Homer notices that the crowd is shouting "Go Big Creek!" as if the BCMA is the football team.

The symbolism of this scene is clear: Homer and his "team" of Rocket Boys has replaced the football team in the hearts of the Big Creek High School students. They are clearly looking for some kind of distraction, and something to cheer for and support.



The BCMA launches Auk XII, which features the half-melted rocket fuel. The launch is a success at first, but while Auk XII is still in the air, it loses its nozzle. However, the launch is a useful step forward, because Quentin uses trigonometry to calculate the height the rocket attains—over 750 feet. Auk XIII doesn't go as high as its predecessor, but while it's in the air, Homer has an important insight: the nozzles aren't working efficiently because of oxidation. Quentin excitedly confirms that Homer is right—they'll need to find a fuel that is rust-resistant.

Suddenly, a group of football players, led by Buck, drives toward the BCMA's blockhouse and begins tearing it apart with fire irons. The BCMA yells and tries to defend its building. Then there's the sound of a car horn, and Tag Farmer appears, driving his usual vehicle. He asks Homer what's going on—but rather than turn Buck in, Homer lies and says that he was "cleaning." Buck lies as well, saying that he was rebuilding the blockhouse. Tag chuckles and advises Buck to try harder. He watches as Buck and the rest of his football gang repairs the blockhouse.

It is Sunday, and Homer Sr. is about to execute his "plan." Homer stays home from Sunday school, and walks to the "tipple" (hill) where Homer Sr. is waiting to take him into the mine. Homer is excited about this trip, since 1) he's never been before and 2) Homer Sr. has never shown much interest in showing him before. Homer Sr. reminds Homer not to mention the trip to the mine to Elsie, and Homer nods.

Homer Sr. shows Homer around the coalmine. He explains that engineers are a vital part of the mine—they're needed to test the rock for fortitude, and measure whether or not it's feasible to drill deeper into the ground. Homer Sr. explains that he's not an engineer because he has no degree—nevertheless, he's designed some important aspects of the mine, such as the ventilation shafts. He advises Homer to go to college and obtain an engineering degree. As Homer Sr. and his son talk, Mr. Dubonnet passes by. Homer Sr. informs Dubonnet that Homer is thinking of becoming an engineer, information which Dubonnet clearly finds disappointing.

Homer Sr. tells Homer to stay for the mine's latest "operation." He leads him deep into the mine, where there is an enormous "mining machine." The machine is constantly drilling into the ground, Homer Sr. explains, and the operator always has to be thinking about where to drill next. This, Homer Sr. concludes, is "real engineering." He loves the mine, he continues, because he enjoys the sense of excitement and admires miners above all other kinds of people. Homer is thrilled to see his father opening up to him.

Homer continues to prove himself worthy of being a rocket scientist—he recognizes, before even Quentin does so, that oxidation is reducing the rockets' effectiveness. It's also noteworthy that Quentin begins to use trigonometry to calculate the rockets' height—he's using "pure" mathematics to calculate practical things.



Here, more than ever, it's becoming clear that the town is turning against the football crowd and throwing its support instead to the young, bookish scientists of the BCMA. At the same time, we see that Homer and his friends have an old-fashioned kind of honor, as they refuse to rat out Buck and his gang to Tag. In the end, this doesn't matter at all, as Tag sees what's going on and punishes Buck in kind.



As Homer immerses himself in rocket science, he seems to be slowly gaining more love and respect from his father. It's as if Homer Sr. is impressed with Homer simply for studying anything with such devotion—what he studies in particular isn't as important—unless it's mining.



Homer gets a better sense of his father's life and career. Homer Sr. has accomplished impressive things: he's ascended to an engineer's job without ever holding an engineering degree, and has maintained this job for many years. Nevertheless, Homer's admiration for his father doesn't translate into a desire to emulate his father's career path. Mr. Dubonnet's presence reminds us that there's still a tremendous distance between Homer and Homer Sr., as Homer continues to rely on "father-figures" instead.



In much the same way that Homer Sr. likes to see Homer studying something, Homer enjoys seeing his father opening up to him about any subject—it doesn't matter which one. Homer doesn't particularly care for the mines of Coalwood themselves, but he likes listening to Homer Sr. talk about them—simply because Homer Sr. does care about the mines.



Homer Sr. asks Homer, point blank, if he's interested in being a mining engineer, hinting that he'll pay Homer's way through school if the answer is yes. Homer has no choice but to tell the truth: he wants to be an engineer for von Braun instead. Homer Sr. is visibly disappointed, and he adds that Mr. Bykovski would be disappointed too. When Homer asks his father what he means, Homer Sr. explains that von Braun worked for the Nazis, and so presumably despises the Jews.

Here, Homer tells his father, point-blank, what he wants out of life, and Homer Sr. isn't the least bit supportive (even though most fathers would presumably be thrilled to hear that their sons aspired to work for NASA!). Hickam also introduces a new complication here: von Braun isn't the saint Homer thought he was. During the Third Reich in Germany, von Braun went on record saying that he despised the Jews, and his scientific work undoubtedly helped Hitler greatly. At the same time, he also worked alongside scientists whom he knew to be Jewish, and concealed their Judaism from the authorities—probably saving their lives. Either way, this revelation is an important reminder that science doesn't exist in a vacuum—it is nearly always put to use for political purposes, some of them deeply immoral.



Homer and his father climb back to the surface. There, Homer is surprised to find his mother, wearing her church clothes. When Elsie sees Homer covered in coal dust, she bursts into tears. Homer Sr. tries to comfort Elsie, telling her that Homer is thinking of becoming a mining engineer. Elsie replies that Homer will only do so “over her dead body.” She says that mine is already killing Homer Sr.—she points to his chest—and that it won't kill her children too.

In many ways, Elsie is saying all the things that Homer isn't brave enough to say: he knows that the mines are slowly killing Homer Sr., and he knows that he would hate his life if he ended up in the mines. Elsie is a brave woman, who tells Homer Sr. exactly what she's thinking, and refuses to “play along” with his devotion to the mine.



CHAPTER 12: THE MACHINISTS: AUKS XIV-XV

Elsie has just discovered Homer exploring the mine with his father. Back at their house, she furiously tells Homer that he's a liar. To punish him, she orders him to cook dinner: kidneys and beans. She also threatens to shoot Homer if he ever goes down into the mine again.

Elsie's threats are so hyperbolic that they're almost funny, especially as we know how directly they contradict her husband's wishes.



Homer notes that things are very tense in his house. Jim is still depressed about not being able to play football, and Homer Sr. and Elsie are constantly fighting. Homer decides to devote himself to **rocket** science again. Nevertheless, he can't shake the comment Homer Sr. made about von Braun, Mr. Bykovski, and the Jews.

Everyone in the Hickam family is unhappy to some degree at this point. Mr. Bykovski's support of Homer's project seems even more selfless now that we realize he is Jewish, and is still helping Homer follow in the footsteps of a former Nazi.



Homer goes to visit Mr. Bykovski at his home, but finds that he's at work. Instead, he talks to Mrs. Mary Bykovski. After a short time, Mr. Bykovski comes home, and he greets Homer cheerfully. Homer reluctantly brings up why he's come, and asks about von Braun and the Jews. Mr. Bykovski takes his time responding to this, choosing his words carefully. Finally he explains that von Braun helped "monsters" like Hitler, and has never been punished for his complicity. Mrs. Bykovski offers a simpler explanation for Homer Sr.'s accusation—he's jealous of von Braun's success. Mr. Bykovski yells at his wife for daring to suggest this, and quickly changes the subject. He asks Homer how the **rockets** are coming, and Homer eagerly replies that the next one will reach 1000 feet. When Homer mentions the problem with the rocket nozzles, Bykovski sends Homer to Leon Ferro.

The week after Homer's visit, Quentin and Homer visit Mr. Ferro at the machine shop. After listening to Homer's explanation of the nozzle problem, Ferro recommends a steel-tubed **rocket**, and a thicker, sturdier nozzle with a higher melting point. Homer tries to draw a diagram of what he wants: a rocket shaft with a wide nozzle at the bottom. Ferro nods, but insists that Homer will need to draw more technical blueprints if he wants Ferro's help. Homer agrees to draw the proper diagrams. Ferro also asks Homer to provide him with gravel for his mudhole, as a method of payment.

Homer goes to his father and asks for help obtaining gravel. Homer Sr. says that this is impossible. He also inspects Homer's rocket drawings, and helps him to make them more professional. Homer insists that he still wants to work for von Braun in Cape Canaveral—Homer Sr. replies, "we'll see," but seems pleasantly amused by his son's enthusiasm.

Homer returns to Mr. Ferro's shop, where Mr. Ferro asks for lumber for his front porch in return for help designing Homer's new **rockets**. Homer, not knowing how to obtain lumber, goes to the tippleshop, which is headed by Willy Brightwell, and asks for steel tubing for designing rockets. Brightwell refers Homer to Homer Sr., who again refuses to help Homer. Nevertheless, Homer finds steel tubing on the back porch of his house only a few days later. He's puzzled—it seems as if Homer Sr. is secretly helping him.

Homer takes his steel tubing to Mr. Ferro's shop. Ferro agrees to use the tubing to building the latest **rocket**, Auk XIV. When Quentin sees the final product, he insists that it is too heavy, and that the nozzle's mouth is too narrow—the rocket needs to be longer. A machinist at the store, Mr. Caton, agrees to make these modifications. The BCMA pours rock candy into their new rocket, confident that it will be a success.

This section is the last time in Rocket Boys that Hickam brings up von Braun's complicity in Nazi war crimes. Perhaps there's nothing more to say about it: Homer grew up idolizing the man, and later learned that his idol was responsible for countless deaths, but could never entirely give up his devotion. In essence, Homer is posing a profound moral dilemma here: it is morally defensible to admire one aspect of a man's career while also recognizing that the man did some immoral (or even evil) things? While he never says so explicitly, Hickam implies that for him, the answer to this question is yes. As we'll see, Homer never stops admiring von Braun.



With every step forward that Homer makes with his rockets, he's forced to solve another problem. While this can occasionally be frustrating to him, he often finds it exhilarating. Here, Homer goes through another extended trade to obtain the materials he needs to build a more successful rocket.



Homer Sr. doesn't openly approve of his son's ambitions to work with von Braun, but at least he doesn't try to discourage Homer anymore.



Once again, it seems that Homer Sr. is secretly helping his son. It's not clear why it would be necessary for Homer Sr. to do this while also pretending to oppose Homer's goals, but it might just be that Homer Sr. is a stubborn man, and can't admit that he was wrong at first about Homer's rocketry. As a result, Homer Sr. has to leave materials and books around the house, never vocally admitting his mistake.



Quentin continues to be an insightful critic of the BCMA's rockets. He's never entirely satisfied with what he's given, and this is one of his greatest assets as a scientist.



The next weekend, the BCMA has set up another rocket launch. In attendance is Mr. Dubonnet. He asks Homer about the “rounds” he’s making, just to build **rockets**, and enthusiastically encourages him to keep at it. The rocket launch commences, and Auk XIV goes far higher than any rocket the BCMA has launched previously. It takes nearly an hour to recover the rocket when it falls to Earth—here, Billy proves himself useful, since he’s a fast runner. Quentin calculates that Auk XIV has reached a height of 3,000 feet.

A week later, Mr. Ferro calls Homer to his shop, where he shows Homer a new **rocket** he’s built on his own for the BCMA. The rocket is longer, as Quentin has specified, and the nozzle is fastened with screws instead of welding, meaning that it’ll be more secure. When the BCMA launches this rocket, it only reaches a height of about 1,500 feet. Quentin suggests that the BCMA has reached the limits of rock candy, and needs to find a better fuel source. He proposes that they join the year’s science fair, but Homer shakes his head—the group still isn’t ready.

In late November, Homer asks Dorothy to the Christmas formal. Dorothy sadly shakes her head—she’s already agreed to go with the boy she went out with over the summer, a college student. Homer is surprised to hear this, since Dorothy has previously told him that this boy was unkind to her. Dorothy explains that she agreed to go with him before she knew “what kind of boy he was.” Homer finds himself feeling sorry for Dorothy. Shortly after the dance, from which he’s stayed home, Homer asks Roy Lee if it looked like Dorothy was having a good time with her date. Roy Lee sadly replies, “She was all over that guy.”

It is Christmas, 1958. Elsie gives Homer a present: an autographed photograph of his hero, Dr. von Braun. In his brief note, von Braun congratulates Homer for his success with **rockets**, encourages him to continue, and suggests that one day, he might find a job working for NASA. Elsie explains that she wrote von Braun and he responded. Homer is overjoyed with his gift. He shows it to his friends, who treat it like a holy relic.

With each rocket launch, the BCMA achieves a little more success. Here, Mr. Dubonnet is in attendance, and Homer Sr. is not. This reminds us that there’s still a big distance between Homer Sr. and Homer, even if they’re making some progress. Quentin continues to use mathematics by calculating the height of the rocket—his intelligence gives him a kind of authority over his fellow BCMA members.



Here, Quentin and Homer switch roles for the first time in the memoir. Thus Quentin wants to push ahead and enter the science fair, while Homer, for once, is cautious and conservative. Homer might just want everything to be perfect for his big moment—or perhaps he’s still a little shy about being perceived as nerdy and geeky, concerns that clearly don’t affect Quentin at all.



As Homer grows up, he doesn’t simply get better at math and science—his scientific education parallels his moral education. Here, Homer shows signs of being a more compassionate and open-minded person than before: he feels sorry for Dorothy, recognizing that Dorothy (and many of the other girls at his high school) have to deal with unkind boyfriends and gender double standards.



Here, there’s no mention of von Braun’s complicity in Nazi war crimes—Hickam has clearly moved on from the issue. While Hickam’s methods of dealing with this subject may seem lackluster and incomplete, it’s important to keep in mind that this is a memoir, not really a work of fiction, and Hickam really did idolize von Braun growing up.



CHAPTER 13: THE ROCKET BOOK

It is January, 1959. One day Homer wakes up to the sight of snow outside his house. As he gets on the bus, he notices Roy Lee, practicing his “speech assignment” for school. As Carlotta Smith gets on the bus, Roy Lee and Homer perk up—Carlotta isn’t stunningly beautiful, but she has an attractive body. She sits near Homer. The bus proceeds to school, and at one point, the driver orders everyone off so that he can make a narrow turn without endangering the students’ lives. As a result, Homer and his friends are an hour late for school.

When Homer arrives in chemistry, Miss Riley tells him that she has a surprise for him, and that he should see her at the end of the day. Unfortunately, Homer forgets Miss Riley’s advice, and takes the bus home without seeing her.

The next day, the buses aren’t running, meaning that Homer stays home from school. Along with O’Dell, Roy Lee, and Sherman, Homer goes to sled around Big Creek. They hitch rides toward the high school, stopping to sled along the way. When Homer is within range of school, he remembers that he was supposed to see Miss Riley. Although school has been canceled that day, Homer finds Miss Riley in her classroom. She presents Homer with a book: *Principles of Guided Missile Design*. Riley excitedly explains that she’s ordered the book especially for Homer and the BCMA. Homer is dazzled by the book, and he flips through it, noticing the complicated math and design. Inspired by this wonderful gift, he agrees to join the science fair, under Miss Riley’s guidance.

Homer leaves school and rejoins his friends, who are still sledding in the area. Roy Lee announces that they’re all going to Emily Sue’s house to play cards. At Emily Sue’s house, Homer is pleased to find Dorothy, though he notices Roy Lee looking at him unhappily—clearly, Roy Lee’s come to dislike Dorothy. Homer argues with Roy Lee—Homer is convinced that Dorothy loves him. Eventually, they agree to “test” whether Dorothy will kiss Homer or not. Homer asks Dorothy for a kiss, explaining his argument with Roy Lee. Dorothy nods, and “pecks” Homer, first on the forehead, then on the mouth. She then leaves the room. Homer is disappointed with this bloodless gesture, but Roy Lee finds it amusing.

After a few hours, Homer’s friends leave Emily Sue’s house. Homer hangs back, hoping to talk to Dorothy a little longer. Dorothy emerges from hiding, and Homer apologizes for asking her for a kiss. He shows her the book Miss Riley gave him, and Dorothy seems excited—she confesses that she wants to learn calculus, too.

We’re reminded that Homer is still a novice when it comes to romance, and he has a long way to go before he can achieve anything that could be called “maturity.” Hickam also delights in describing the minutiae of small-town life. Here, for instance, he takes the time to explain how tiresome it could be to ride the bus to school in the middle of winter.



It’s surprising that Homer would forget about Miss Riley’s surprise, considering his love for rocketry, but this reminds us that he has a lot of other things on his mind, too: girls, his family, and his future.



Miss Riley’s devotion to Homer and his friends is inspiring. There’s no stipulation in her contract that requires her to buy books for her students, but she sincerely believes in the value of education, and clearly wants to help Homer and Quentin go to college (and get out of Coalwood). It’s this display of generosity that finally convinces Homer to join the science fair.



In this moment of bathos, Homer plummets from a sense of excitement and ambition (entering the science fair, reading about mathematics) to one of humiliation (kissing Dorothy passionlessly). In Coalwood, this seems to be inevitable, as Homer is always bouncing from one activity to another, and nothing remains optimistic for very long. This is a necessary side effect of living in a poor, small town, and often of being a teenager in general.



Dorothy doesn’t appear often in Rocket Boys, but she does act as a kind of parallel for Homer—she too is ambitious and loves learning (and is more naturally intelligent than Homer), but because she is a girl, she doesn’t get the same kind of attention or affirmation.



Emily Sue tells Dorothy that her mother is on her way to pick her up. Dorothy and Homer step outside. As she's getting ready to climb into her mother's car, Dorothy, quite unexpectedly, gives Homer a real kiss on the mouth, and tells him that she doesn't know what she'd do without him. Homer is stunned with this development.

Dorothy seems unable to make up her mind about her feelings for Homer—which is totally understandable for a teenaged girl, but for Homer it means frequent leaps between joy and heartbreak.



Homer, still reeling from Dorothy's kiss, prepares to make his way home by sled. He manages to sled down the slope near Emily Sue's house, but after a while, the snow becomes too wet for him to continue. As night falls, he remembers the stories he's heard of explorers freezing to death in cold weather. Fearing the worst, he comes to an old, dilapidated house, and knocks on the door. To his surprise, a middle-aged woman answers and lets him in. Homer explains that he's trying to get back to Coalwood, and the woman replies that he needs to warm up before he can go any further.

Homer encounters all kinds of dangers in Coalwood: there are mining accidents, the bullies who threaten to hurt him, and here, snow storms. Clearly, it's possible to freeze to death in this kind of weather, and this sudden peril leads to another side episode of the memoir.



Inside the mysterious woman's house, the woman asks Homer to remove his wet, cold clothing so that she can dry it—Homer does so, a little uncertainly. While Homer waits for his clothes to dry, the woman introduces herself as Geneva Eggers, and Homer replies that he's the son of Homer Hickam, Sr. Geneva, surprised, explains that she's known Homer Sr. for many years. She offers Homer a big meal, which he eagerly accepts. As the two of them eat, Geneva explains that she used to play with Homer Sr. when she was only a child. She knows Homer Sr. as a kind, generous, and heroic figure. After Homer finishes eating, Geneva sends Homer on his way, making him promise to tell Homer Sr. that she helped him, but adding that Homer should do so when Elsie isn't around. Homer can't imagine what this means.

As Homer grows up, he learns more and more about his father, here in a very unexpected place. While Geneva doesn't say why she admires Homer Sr. so much, it's clear that she has good reason to do so: otherwise, she wouldn't take such good care of Homer, feeding him and drying his clothing. There's a moment of sexual uncertainty both when Geneva asks Homer to remove his clothes (although this is standard procedure when one is potentially freezing to death) and when she warns him about not mentioning her when Elsie is around.



Geneva and Homer walk outside, into the snow. Homer sees a heavy dump truck—he stops the truck, attaches his sled to it, and sleds all the way back to the mines. When Homer arrives home, he finds Jim and Homer Sr. waiting for him. When he's alone with Homer Sr., he shows him Miss Riley's book, and adds that Geneva Eggers took care of him. Homer Sr. seems disturbed by this news, especially after Homer lets slip that he removed his clothing in front of her. Homer goes to bed, confused by his father's reaction.

It seems there was indeed a sexual element to Geneva's request that Homer remove his clothing, unless this is just Homer Sr. being his usual conservative and repressed self. We'd almost forgotten about Miss Riley's book in the confusion of the snowstorm episode.



The next evening, Homer Sr. sits down with Homer and tells him a story. When Homer Sr. was in his early teens, there was a fire in a neighboring house. Homer Sr. ran into the house and was shocked to find a baby lying in the midst of the fire. Homer Sr. quickly ran out of the house, carrying the baby. It was only later that he learned that there were ten other people in the house, all of whom died. This baby, Homer Sr. explains, was Geneva Eggers. Homer Sr. asks Homer what he knows of “girls and life.” Homer replies, “I’ve never …” but trails off. Homer Sr. seems to understand, and explains that Geneva is a “friend” to bachelors and married men. He tells Homer to never see Geneva again, and never tell Elsie that he met her.

Shortly thereafter, Homer rides the bus past Geneva’s house. Though they see one another and smile, he doesn’t wave to her, and she doesn’t wave to him. Homer realizes that he’s gained new respect for his father.

Here, Homer gets a better measure of his father as a younger man. Not only was Homer Sr. more popular and charismatic, but he also saved a child’s life. It’s also interesting to see how the characters talk about sex in the late 1950s: it’s clear that Homer Sr. is asking Homer about his virginity and then explaining that Geneva is a prostitute, but it’s also clear that they both feel uncomfortable talking about this, and prefer to do so with allusions and euphemisms. There’s something poignant about Homer Sr.’s insistence that Homer never see Geneva again—Homer Sr. saved her life, but he won’t allow his son to spend time with her.



In the end, Homer gains great respect for his father because of this episode—admiring him for saving a child’s life, and growing closer to him through talking about it.



CHAPTER 14: THE PILLAR EXPLOSION: AUKS XVI-XIX

On February 1, the Russians launch Luna I, the first man-made object ever to break away from the Earth’s gravitation pull. Shortly thereafter, Homer meets with Jake at the Club House to look through Jake’s telescope. While he’s at the Club House, Homer notices that Jake has a new girlfriend, a beautiful redhead. Homer spends the rest of the evening staring at the moon through the telescope. Though he’s hoped to catch a glimpse of Luna I, he sees nothing. Later, he learns that the object missed the moon by less than 4,000 miles.

Homer spends hours at a time reading his “rocket book,” and one afternoon, he and Quentin take turns poring over its dense chapters. Quentin points out that the book presumes detailed knowledge of other scientific and mathematical fields, such as thermodynamics and calculus. Homer is disheartened by this news. Nevertheless, he’s glad to find a chapter in Miss Riley’s book on “flow passages”—essentially the same thing as rocket nozzles. An engineer, Carl Gustav De Laval, has shown that a divergent passage to a converging nozzle (in other words, a small opening for gas) produces kinetic energy. This is a key discovery, Homer realizes: it means that the BCMA can build nozzles in such a way that they’ll produce enough kinetic energy to shoot their rockets miles into the sky—provided that they can master the mathematics behind the technology.

The information about Luna I reminds us that, just as Homer has a long way to go before he achieves success with his rockets, NASA also has a long way to go before it successfully launches a lunar mission. Meanwhile, life goes on in Coalwood: Jake gets a new girlfriend, and Homer keeps longing for space.



Homer and Quentin know that they have a tremendous amount of information to learn before they can master the science of propulsion, but they are also eager to get started. Hickam continues to mix details of rocket science into his memoir of teenaged and small town life.



The night after Homer's insight, there is an earthquake in Coalwood. Homer is frightened that Homer Sr., who's working in the mine, will be crushed to death, though he remembers his father explaining that the mine is specially designed to be resistant to earthquakes. The next day, Homer wakes up to find his father alive and well. Homer Sr. has gone into the mine to assist with his rescue team, risking his own life in the process. Elsie scolds Homer Sr. for doing so, reminding him that it's his job to oversee the mine, not assist with rescues.

On a Saturday, Homer and his friends gather at the launchpad to launch Auk XVI. In the audience for the event is Valentine Carmina. Confidently, Valentine tells Homer that he should look past Dorothy to "other girls," hinting that she's interested in him. Homer is lost for words, and he goes to assist with the **rocket** launch.

Quentin, O'Dell, and Roy Lee have been busy installing telephones in the blockhouse—now, they can communicate with one another from the launchpad to the blockhouse. Homer gives a countdown over the telephone, and Sherman launches the Auk XVI. It shoots straight up—much straighter than any of its predecessors, and travels high into the sky. The next three **rockets**, Auks XVII to XIX, are equally impressive—they "steer" well, and fly very high. Quentin calculates that the shortest rocket—only 2 feet—reaches the highest altitude, about 3,000 feet. As the BCMA leaves the launchpad, they notice a group of girls waving their panties from a car.

Homer and his friends return to Homer's house, where they find Jim sourly watching TV. Jim insults them for wasting their time on **rockets**, and Quentin shoots back that Jim is only jealous of their success. The BCMA quickly retires to Homer's room, joined only by Daisy Mae, the cat. They agree that learning calculus will be an important step in mastering their rocket designs.

CHAPTER 15: THE STATE TROOPERS

Homer approaches Mr. Hartsfield, his math teacher, and asks him for help learning calculus. Hartsfield is dismissive at first—he reminds Homer that he couldn't even make As in algebra. Homer admits that Hartsfield is right, though he points out that his friends—Quentin, O'Dell, Sherman, and Roy Lee, are all good math students. Hartsfield seems somewhat sympathetic to the BCMA's goals of mastering **rocketry**, but he sadly explains that they'll never succeed in lobbying for a calculus class—Big Creek is a mining and football school, not a calculus school. Homer and his friends find this wildly unfair, and Mr. Hartsfield admits they're right.

Homer Sr. never hesitates to go above and beyond the requirements of his job. Even when he's only required to wait while the miners bail each other out of danger, he risks his life trying to save them. While this devotion is impressive and even heroic, it irritates and worries Elsie—understandably, she doesn't want her husband to die, leaving her to take care of her family alone.



It's been fairly obvious to us for some time now that Valentine is interested in Homer, but only now does Homer realize it as well. He's always thought of himself as having to be the one pursuing romance, and so is surprised to find himself being pursued.



Here, more than ever, it's clear that the BCMA's efforts at building rockets have translated into attention from the girls of Big Creek High School. At first, Homer and Roy Lee were afraid that their peers would shun them for being nerdy, but here, their fears seem utterly misplaced. Once again it seems like the football team and its "jocks" have been replaced—on both the high school social ladder and in the hearts of the townspeople—by the BCMA.



The BCMA members are getting more confident as a result of their success. Here Quentin—seemingly the person least likely to engage in an argument—stands up to Jim, and wins. Perhaps the sight of women at the latest rocket launch has inspired Homer and his friends to stand up for themselves more.



Even if Homer and his friends are getting more support in Coalwood now, they continue to run into difficulties when it comes to the logistics of building rockets. Here, they receive a sobering reminder that Coalwood isn't seen as an intellectual place—the school board thinks of it as fit only for producing miners and football players. Even the teachers admit to Homer that this is highly unfair, but it seems there is little that can be done to change it.



Aided by Miss Riley, the BCMA goes to talk to Mr. Turner about organizing a calculus class. Miss Riley is a forceful advocate for the boys, explaining that they're very serious about calculus. Turner explains that he'll need to speak to the superintendent, who will undoubtedly turn down the request. Afterwards, Homer notices that Miss Riley isn't as cheerful as usual when she teaches chemistry.

The next day, Homer and Quentin are called to Mr. Turner's office. There, they're shocked to find Miss Riley and Mr. Turner standing with two West Virginia State police officers. The two men show Quentin and Homer a metal tube and demand to know if they recognize it. Homer tells the truth: the **rocket** isn't one of his, though it's beautifully designed. Turner and the officers refuse to believe Homer, and they tell him that the rocket in question caused a vast forest fire. The officers say that Homer and Quentin—along with the other BCMA members—are under arrest.

Before the officers can handcuff Homer and Quentin, Mrs. Turner, Miss Riley protests that the boys can't have caused the forest fire—their launchpad is too far away. Mr. Turner's wife then bursts in, carrying a map of the surrounding area. Homer notices that Mr. Turner seems to be irritated with his wife for entering his office. Nevertheless, Mrs. Turner unfolds the map and asks Homer to show the officers where his launchpad is located. He points to the Cape Coalwood—more than ten miles away from the forest. Miss Riley interjects that Homer couldn't possibly have started a fire from this distance. Suddenly, Quentin realizes that the metal tube is a flare, much like those in a book he read a few months ago. A local airplane must have dropped the flare into the forest, he concludes.

After Quentin finishes explaining the origins of the metal flare, there is an awkward silence. Mr. Turner clears his throat and asks the state troopers, along with Homer and Quentin, to leave. One week later, Mr. Turner summons the BCMA to his office and tells them that there will be a calculus class at Big Creek, with an enrollment of six students.

A few days later, Homer gets some depressing news: there were seven applicants for the six positions in Mr. Hartsfield's calculus class, and because Homer's grades are the worst of the six applicants, he'll be unable to take the class. Homer learns from Mr. Turner that Dorothy Plunk took his place. While Homer is crushed by this news, he's not angry with Dorothy—her grades are much better than his, and she'd already told him how much she wanted to learn calculus.

Miss Riley clearly devotes a tremendous amount of her energy and attention to helping her students succeed. When she faces an obstacle in starting a calculus class, she's sad, maybe even sadder than Homer himself.



This scene parallels the earlier scene in which Mr. Van Dyke accused Homer and his friends of being thieves, and threatened to send them to jail. As before, here the police officers' anger and aggression seem entirely misplaced—if Homer denies his guilt, there's no reason to arrest him (as surely there must be dozens of forest fires every year).



Even now, when it seems that Homer and the BCMA will never be treated fairly, their allies rush to their side—and new allies (like Mrs. Turner) at that. Perhaps this suggests that the BCMA's prestige and fame have spread to the point where more Coalwoodians support it than don't. Comically, it's Quentin's own ingenuity—not Mrs. Turner or Miss Riley—that saves the BCMA for the time being. Quentin remains accurate and methodical even on the verge of being arrested.



Amazingly, Mr. Turner is so embarrassed about nearly arresting two of his own students that he gives in and organizes a calculus class. This suggests that he had more control over which classes are taught than he'd let on, and was at first just using the superintendent as an excuse.



Ironically, Homer can't enroll in the class which he's lobbied for so energetically, but he takes this depressing news with surprising maturity. In part, this is because the person taking his spot is Dorothy, his crush. But it's also fair to say that Homer is becoming more mature: he recognizes that Dorothy deserves the position more than he does.



A few days later, Homer and Quentin are standing together in Miss Riley's class. Quentin offers to teach Homer calculus personally, insisting that Homer is still a part of the BCMA. Before Homer can reply, Miss Riley demonstrates a new chemical reaction: the combination of sulfur and zinc, resulting in sulfur dioxide. Quentin exclaims that they've found their next rocket fuel—rock candy will never propel a rocket beyond a few thousand feet into the air.

The spring of 1959 begins, and Coalwood, thanks to extra orders from surrounding steel mills, works overtime to ship out coal. Unemployed miners regain their jobs, and the town as a whole becomes more prosperous. College football coaches also begin visiting the Hickam house to recruit Jim—much to his surprise, his suspension senior year hasn't destroyed his chances of getting a sports scholarship.

Homer Sr. walks into his house, grinning—he's just gotten news that Jim will be visited by dozens of college recruiters. Then he notices Homer looking glum, and Homer explains that he's been cut from calculus class. Homer Sr. nods, but quickly moves on to talk to Jim. Angry and hurt, Homer goes upstairs to his room with Daisy Mae, his cat. He notices a book on a shelf in the hallway: *Mathematics, a Guide for Self-Study*. He leafs through it, noting chapters with writing in his father's hand. He decides to teach himself calculus.

CHAPTER 16: A NATURAL ARROGANCE: AUK XX

In March 1959, Homer Sr. leaves Coalwood to attend a mining-engineering conference in Ohio. The entire week that he's gone, Homer prays for him to have a safe trip home. Homer Sr. does, indeed, return safely.

A few days after Homer Sr. returns, he finds Homer studying calculus in his old math book. Homer Sr. accuses Homer of taking the book without asking permission first. Instead of responding to this accusation, Homer asks his father for help with a calculus problem. Homer Sr. starts to answer the question, but then cuts himself off—he wants to know why Homer is bothering to study calculus at all. In response, Homer begs his father to come watch his **rocket** launches at Cape Coalwood. He further accuses Homer Sr. of paying more attention to Jim than to him. Homer Sr. doesn't respond directly to these accusations, but he does suggest that there's still time for Homer to become a mining engineer. Homer replies that he has no interest in such a career. Homer Sr. looks disappointed and leaves Homer alone.

Quentin proves that he's a loyal friend, willing to do some extra work to ensure that Homer doesn't fall behind the other members of the BCMA. In many ways, Quentin is a driving force behind the Rocket Boys: not only does he tutor Homer, but he's also responsible for designing most of the rocket features, and pushing for more changes and improvements.



It comes as a pleasant surprise that Jim still gets to go to college on an athletic scholarship, especially after seemingly losing his chance because of his father. Jim may not be a particularly likable character, but it's depressing to see him—the former pride of Coalwood—reduced to laziness and loneliness.



The rivalry between Homer and Jim persists—at its heart, a rivalry for Homer Sr.'s affections. Homer Sr. had seemed to be showing more support for Homer lately, but now it seems as if all this progress was just because there were no football games in which to support Jim. Ironically, Homer Sr.'s indifference seems as powerful a motivator to Homer as his love and support.



Homer seems more comfortable praying and thinking about Christianity in general than he was at the beginning of the memoir.



Homer Sr. wants Homer to be successful and have a stable income, and while there's nothing wrong with wanting these things for one's son, Homer Sr. is too quick to judge an engineering career in NASA simply because he doesn't know anything about it. In general, Homer Sr. seems reluctant to try or support new things and new ideas—thus, he distrusts NASA, science, etc. Homer is so desperate for his father's attention and love that he finally asks him, point-blank, to come to his rocket launch—and Homer Sr.'s tepid response is heartbreaking.



Mr. Ferro calls Homer, asking him how he'd like to position the nozzle on his latest **rocket**. Homer calls him back later, explaining that the nozzle must be built for lightness and efficiency. Mr. Ferro agrees, explaining that he's already designed the nozzle in exactly this way. He enthusiastically asks Homer if he'll launch more rockets over the weekend. When Homer replies that he will, he hears whoops and cheers over the phone.

Shortly after his phone call, Homer bikes over to Ferro's store, where he finds a three-foot **rocket** waiting for him. Mr. Caton has designed the rocket with special fins attached to the tube. He's also added a wooden cone to the top of the tube, and extra screws for the fins. Homer accepts the new rocket, though he's worried that it's become too heavy.

Homer shows the new **rocket** to Quentin. Quentin is impressed but worried by the additions Mr. Caton has made—he argues that the BCMA will only find the best rocket design if they make changes one at a time. He adds that Homer is clearly in a hurry, but he should be taking his time and proceeding in a "scientific" manner instead. Homer tries to cheer Quentin up by telling him that they need to hurry up in order to enter the science fair. A science fair medal would be an excellent achievement, Homer thinks privately—it would prove to his father that he hasn't been wasting his time.

Quentin asks Homer if he's going to college. Homer isn't sure how to reply—he admits that he might go to college, if he can convince his father. Quentin explains that he'll have no way of paying for college unless he wins a science fair medal—the same is probably true of the other BCMA members, he adds. Even if the medal itself isn't worth any money, it's a surefire way to get the BCMA noticed: by scientists, scholarship providers, and engineers. Homer realizes that Quentin is absolutely right.

Right after this crushing conversation with Homer Sr., Homer gets a pleasant reminder that he does have loyal supporters in Coalwood—many of them, in fact. Mr. Ferro and his friends at the machine store have grown so accustomed to helping Homer with his rockets that they now have a personal stake in Homer's success.



Homer is becoming more discerning with his rockets now. He doesn't just accept Mr. Caton's designs without reservation, as he did before. This suggests that Homer is learning to be more patient—and, in a sense, more scientific.



Quentin and Homer argue in this scene, illustrating a basic tension between their two approaches. While Homer has a tendency to rush ahead with his rockets, leading to sloppy work, Quentin has the opposite problem: he acts as if the BCMA has infinite time and resources. The best course of action probably lies somewhere between Quentin and Homer's two approaches. In this situation, Homer tries to rush ahead with the launch for personal reasons.



Once again, Quentin proves that he's always thinking about the big picture. Homer thinks about his future at NASA, but he doesn't always have much to say about how to become an engineer in the first place. Perhaps Quentin's social awkwardness is his greatest asset: while Homer and his friends are overly focused on their day-to-day teenage lives, Quentin focuses on the practicalities of the future.



The narrative skips ahead to the next **rocket** launch. Auk XX launches normally, but before it's gotten 500 feet in the air, it explodes. The BCMA tries to understand what made the rocket explode, but they can't agree—it might have been the casement, the fins, the nozzle, etc. Quentin seems to have been right—because Mr. Caton made so many changes to the rocket, there's no way for them to measure their progress. Suddenly, Mr. Caton—who's attended the launch—rushes forward. He explains that he welded two halves of the rocket tube together—evidently, his welding wasn't strong enough, since the pressure inside the rocket has caused a deep rent in the welded section of the tube. Homer calmly asks Mr. Caton to redo the welding, using a stronger, seamless weld. Homer's still very angry with his father, but he thinks that he can use his anger to help him focus on success.

Homer is still angry and disappointed with his father for abandoning him in favor of Jim, his favorite child. Homer acts as though he's content to be angry with Homer Sr., but it seems more likely that Homer merely wants his father's love and support. His project to design rockets, then, is—on one level—an elaborate strategy of making Homer Sr. regret his actions. In any case, Homer is lucky to have other father figures to rely on in the meantime: Mr. Caton is only one of several. Homer grows more confident both in his technical knowledge and in expressing his wishes.



CHAPTER 17: VALENTINE

Homer describes the “golden age of rock and roll.” High school students throughout Coalwood would gather every Friday night to listen to Elvis, Chuck Berry, Jerry Lee Lewis, and others on the radio. Ed Johnson is a local hero: an ex-marine who fought in Japan, Johnson invites the locals over to listen to new records on his hi-fi sound system.

At times, Hickam take a break from the narrative of Rocket Boys to describe the culture of Coalwood in the 1950s. Although Coalwood is isolated from the rest of the county in many ways, the invention of radio links it to broader cultural trends like rock and roll.



One day in April, Sherman calls Homer and tells him that it's time to take a short break from **rocketry**—the BCMA needs to go to Ed Johnson's “Dugout,” which is in the basement of a local restaurant. Homer agrees, and suggests that they ride with Jim. Unfortunately, Jim has already left by the time Homer calls to ask him for a ride. As a result, Sherman and Homer decide to hitchhike to the Dugout.

We are reminded that the Rocket Boys are still just boys—not rocket scientists devoted to full-time work. Notably it's Sherman, not Quentin, who asks for a break (we can imagine that Quentin would be perfectly happy to continue working on rockets all night).



Sherman and Homer successfully hitchhike to the Dugout, where they find Ed, his girlfriend, and a big crowd of dancers. Sherman goes off to dance with a girl he likes, and Homer finds himself alone, trying to find someone to dance with. Suddenly, he sees Valentine arguing with Buck. Homer is horrified to see Valentine with Buck in the first place, though he's a little happy to see that they're not getting along.

Homer may be increasingly popular in Coalwood, but this doesn't mean he's a ladies' man. Buck and the other football players continue to attract the most attention from the girls of Big Creek High School. Homer isn't above showing some childish pleasure when Valentine and Buck don't get along.



Homer sees Dorothy, looking beautiful. He's glad to see her, until he realizes that she's going out with Jim. He watches in horror as they dance, slowly and romantically. Suddenly, he hears a voice—it's Valentine, asking him for a dance. Homer accepts, eager to have a reason not to be looking at Dorothy and his brother.

Homer was irritated seeing Valentine with Buck, but he's furious when he sees Dorothy with Jim. Jim is not only the opposite of Homer—handsome, athletic, non-intellectual—but he's also Homer's brother and closest rival, so this hits him especially close to home.



Homer dances with Valentine, and in the middle of a song, she kisses him on the lips, much to his surprise. She leads him outside, into Buck's car, where she turns on the radio. At one point, Buck comes outside and bangs on the door, but afterwards he leaves them alone. Homer modestly doesn't describe what happens inside the car, but afterwards, Valentine tells Homer, almost sadly, that she'll always be the one who "had him first." Homer leaves the car, and notices Buck looking depressed. For the first time, he feels a wave of sympathy for Buck—he's now lost both his scholarship and his girlfriend.

Homer treats Valentine as a kind of "consolation prize"—he would have preferred to dance with Dorothy, but he'll settle for Valentine instead. It's implied that Homer loses his virginity to Valentine, though Hickam doesn't say so explicitly. It's no coincidence that Homer feels sympathy for Buck immediately after he loses his virginity. Hickam suggests that Homer has become more mature (and sexual maturity is part of this), developing genuine sympathy even those who show nothing but disdain for him. This contrasts to the early scene where Homer mocked Buck for losing his sports scholarship.



Since it's well after midnight, Homer returns from the Dugout. As he rides home, he notices lights on in houses, and a group of people walking toward the mine. At home, he finds Elsie, waiting for him. She tells him that he's not to go to the mine that night, no matter what else he does.

The chapter ends on a note of suspense. Once again, Homer's teenage trials and triumphs are interrupted by the harsh reality of life in Coalwood.



CHAPTER 18: THE BUMP

Homer has just learned that there was an accident at the mine—two fans were struck by lighting, and as a result the mine was no longer ventilated. Workers are trapped without a source of oxygen, and could die soon. As Elsie explains all of this to Homer, Homer Sr. rushes through the kitchen, about to head to the mine. Elsie sends Homer to bed, reminding him not to go out that night.

Homer Sr. may not always show his love for Homer, but he distinguishes himself as a good man in other ways. Here, he shows incalculable bravery by risking his life to save the men in the Coalwood mine. Even if Homer hates his father for ignoring him, he's forced to respect him for his courage.



Homer goes to bed, still thinking about Valentine. He's forgotten about Dorothy forever, he realizes—he'll never be able to look at her now that she's gone out with his brother. Even his romance with Valentine seems curiously sad, he thinks—Valentine seemed almost to pity him when she said goodnight.

It's interesting that Homer remembers this detail of his night with Valentine after he's gone home. Perhaps the accident at the mine makes his own problems seem small, and he sees the experience in a more negative light.



Unable to sleep, Homer decides to slip out of his room and walk toward the mine. There, he sees Mr. Van Dyke standing with a group of engineers and miners. One old miner is trying to argue that the trapped miners still have a chance—they can drill a small hole that connects to a ventilation shaft, giving them a source of air. Horrified, Homer sees Mrs. Bykovski without her husband, and realizes that he must be trapped underground.

Homer's discovery about Mr. Bykovski triggers a wave of guilt. Because Homer's misdeeds supposedly resulted in Mr. Bykovski's being condemned to work in the mine, Homer immediately blames himself for Mr. Bykovski's predicament—ignoring Homer Sr.'s more active role in the situation.



Suddenly, Homer hears a shout—it's his mother, furious that Homer has disobeyed her. Homer tries to argue that he was worried about his father, but Elsie insists that Homer only worries about himself. As they argue, the miners hoist a few of their trapped coworkers up. Homer notices Mr. Bykovski being carried away on a stretcher. There are cries that everyone else is alive—cries which traumatize Homer, because they confirm that Bykovski is dead. Then, Homer sees his father—he's wearing a bloody bandage over his eye. As Homer Sr. walks away, "Doc" Lassiter whispers to Homer that a dozen men would have died tonight if it hadn't been for Homer Sr.

Homer begins to cry, and he tearfully explains that if it hadn't been for *him*, Mr. Bykovski wouldn't have been relegated to the mines, and wouldn't have been injured. Doc insists that Mr. Bykovski built Homer's **rockets** because he wanted Homer to be happy. Doc warns that if he ever sees Homer crying again, he'll hit him.

The next day, Homer Sr. goes to the hospital. Homer visits him many times. At the same time, he realizes that he's changed enormously in the past few days. He begins to think that he'll never be able to change his life—instead, he just feels guilty and sorry for himself.

Elsie's accusation that Homer only thinks about himself comes as a surprise, since Homer doesn't seem to have done anything overtly selfish in Rocket Boys. Yet we are also seeing the story from Homer's point of view, so he might be totally unaware of how his actions or self-absorption affect others. Even if he's been selfish in the past, however, Homer has shown great moral progress in recent chapters, expressing his sincere sympathy for other people in a way he was unable to before.



Here the people of Coalwood (represented by Doc) encourage Homer to continue with his rockets and stop feeling sorry for himself. It may seem insensitive for Doc to threaten to hit Homer in this period of anxiety and sadness, but there also seems to be something selfish and childish about Homer's depression—focusing on himself instead of Mr. Bykovski and rocketry.



Despite Doc's warning, Homer does indeed start to feel sorry for himself—but in a way, he's been doing this for some time, as when he tried to use his anger at his father as a motivation to build more rockets—in essence letting a strong "negative emotion" guide his behavior. The same criticisms that Doc made of Homer as a child Hickam now makes of himself.



CHAPTER 19: PICKING UP AND GOING ON: AUK XXI

Ever since witnessing Mr. Bykovski's death, Homer becomes sullen and lonely. He talks to his parents as little as possible. He wonders if he's finally become a "good" West Virginian—stoic, stolid, and silent. Yet the fact that he can't feel anything—no pain—terrifies Homer. He thinks of Jesus Christ, enduring pain for the good of the human race, and hates himself for feeling no pain of his own.

One day, Mr. Ferro asks Homer if he'll be launching a new **rocket** soon, and Homer replies that he's not making any more rockets. Homer decides to go to Jake, who's usually good at cheering people up. At the Club House, Jake's usual spot, Homer learns that Jake has gone to Ohio. Leaving the building, he runs into Mr. Dubonnet. Dubonnet tries to tell Homer that he can't hold himself responsible for Mr. Bykovski's death, but Homer ignores him.

Hickam paints Homer's moral dilemma in explicitly Christian terms. This is telling in and of itself: Homer has seemingly embraced Christianity in the past year, or at least become less skeptical and apathetic. The implication of Homer's self-criticism is that pain is necessary to heal—one has to experience a strong catharsis in order to move on.



Even if Homer is lost in misery and self-hatred, he's intelligent enough to try to find ways to cheer himself up. It's difficult to read about Homer's interactions with Mr. Dubonnet, the kind, friendly man who had supported Homer in the earlier chapters. Homer not only rejects his own father, he also rejects the father figures who've helped him build rockets.



At school, Homer ignores his friends, gets poor grades, and avoids all contact with Valentine, who seems to be spending more and more time with Buck. He even ignores Dorothy when she tries to comfort him. As he walks away from her, Homer hears Jim say, “what a dope.” Miss Riley asks Homer why he’s not working on **rockets** anymore, and Homer replies that there’s no point. Miss Riley refuses to give up on Homer, however—she tells him that if he gives up rockets and continues reveling in his anger and guilt, he’ll regret it for the rest of his life.

A few days later, Sherman calls Homer, and tells him to come to the Little Shore bus stop. When Homer demands an explanation, Sherman gives one to him—and though Homer doesn’t tell us what this explanation is, he rushes to the bus stop immediately. There, he finds Mrs. Bykovski: she’s leaving Coalwood to live with her relatives. Homer tells her that he’s responsible for Mr. Bykovski’s death—if it hadn’t been for him, Bykovski would never have been moved to the mines. Mrs. Bykovski smiles sadly and tells Homer the truth: Bykovski could have gone back to the machine shop at any time. She makes Homer promise never to forget Mr. Bykovski, and as she gets on her bus, Mrs. Bykovski yells that her husband would have loved nothing more than seeing Homer launch more **rockets**.

Three weeks after Mr. Bykovski’s death, Homer organizes another **rocket** launching—he’s taken Mrs. Bykovski’s advice to heart. Nevertheless, he looks at his life in Coalwood coldly. Jim will be going to college on a sports scholarship. Homer himself plans on going to college through the army or the air force—Jim has often told him that he’d do well there. Homer doesn’t want to ask his parents for any money to pay for his education.

Mr. Caton delivers Homer the seamless steel tubing he’d asked for. Homer—who has made up with his friends, quickly and painlessly—works with Quentin to perfect the De Laval equations and build a satisfactory nozzle for the **rocket**.

The narrative cuts ahead to the launch of Auk XXI. There are at least three dozen Coalwoodians present for the launch, including Mr. Dubonnet and Basil. Even before the **rocket** fires, Homer knows that it will be a huge success, and it is. Auk XXI attains a height of more than 4,000 feet, a record for the BCMA.

That Homer cuts himself off from his friends and family is particularly distressing, since it had seemed for a while that he was getting closer to his father, closer to Quentin, and closer to his peers in Coalwood. Miss Riley again proves herself an intelligent, perceptive woman—it’s hard to imagine any of Homer’s other teachers (let alone Mr. Turner) delivering a similarly inspiring speech.



Mrs. Bykovski’s speech to Homer mitigates his guilt, insofar as she explains why, quite literally, Homer had nothing to do with Bykovski’s death: Bykovski chose to work in the mine. This is one of the more poignant scenes in the memoir, both because it emphasizes Mr. Bykovski’s selflessness, and it reminds us that in Coalwood, widows are forced to leave almost as soon as their husbands pass away. Because mining conditions are brutal, miners die all the time, leaving their widows behind to fend for themselves (earlier in the book, Homer described how the same thing happened to Tony’s parents).



Homer is learning how to balance his hatred for Coalwood with his love for rockets. While it’s hard not to sympathize with Homer (the people of Coalwood have often been cruel to him), we also recognize that it’s unfair for Homer to hate Coalwood categorically: there are good, trustworthy people there, and many support him.



Homer doesn’t linger on his making up with the other members of the BCMA—he doesn’t tell us what he said or what they said in reply. Homer’s friends love him sincerely, and theories of rocketry are unaffected by personal problems.



With each rocket launch, there are more people in attendance. This reminds us that Homer is wrong to hate Coalwood so blindly and categorically: he has a growing number of supporters and well-wishers, and shouldn’t turn his back on them.



Always thinking ahead, Homer tells the BCMA that next time the group must use a combination of zinc dust and sulfur. Roy Lee and Sherman are confused by this news. Homer angrily insists that he's going for maximum altitude, so that "I—we" win the county science fair next year. Roy Lee accuses Homer of electing himself leader of the BCMA, and Homer lashes out at him, saying that he doesn't care what anyone else thinks. Roy Lee punches Homer in the chest. He angrily explains that Homer must be a fool if he thinks the other members of the BCMA are worthless. Then he immediately apologizes for hitting Homer. Homer, ashamed of his own arrogance, says that he's not sorry Roy Lee hit him.

Elsie had earlier accused Homer of selfishness, and now Homer recognizes the truth in this accusation. He's wallowed in his own pain and misery, cut himself off from the rest of his town, and contemplated, to the exclusion of everything else, his journey to NASA. For the remainder of the novel, Homer will have to learn how to balance his personal ambitions with respect for the groups around him: his friends, his family, and the people of Coalwood in general. It is a sure sign of maturity, however, that he is willing to accept criticism about himself without lashing out in response.



CHAPTER 20: O'DELL'S TREASURE

Homer Sr.'s eye hasn't healed properly since the mining accident—he can't see clearly, and probably never will. Elsie is angry with him for risking his life to save the miners, but she's polite to him. In general, Homer's family is cold and quiet: they almost never eat together, and while Homer is polite with his parents, he's not warm or trusting.

In a way, the icy "equilibrium" in which the Hickams find themselves is worse than any one of their arguments. At least in the aftermath of an argument the two sides can reconcile, or reach a grudging truce. Here, the Hickams are just quietly, passively irritated with each other.



One day, Homer is hitchhiking to school, having missed his bus because Jim took too long in the shower. As he's walking, he notices Jake driving his Corvette. He hops in the car—this is the first time he's seen Jake since the accident. Jake drives to Big Creek, past Geneva Eggers's house. Jake greets Geneva like an old friend, and she seems happy to see both Homer and Jake.

Jake has been a force for good in Homer's life so far, but it remains to be seen if he can continue to cheer up Homer. Clearly, Jake patronizes Geneva's house (or brothel), and takes advantage of her services. (Hickam plays Jake's philandering and romantic tastes for laughs, and this section is no exception.)



At school, Jake walks Homer to chemistry. There, he seems pleased to meet Miss Riley—Homer notices that they make eye contact for a split-second too long. Jake talks to Miss Riley warmly, and Miss Riley replies in a voice sweeter than any she's ever used in class. As he leaves the class, Jake whispers to Homer that he'll drive him to school as often as he wants. Shortly thereafter, Homer reports, Jake and Miss Riley begin dating.

It's strangely refreshing to see Miss Riley show interest in Jake, and vice versa. Miss Riley has done so much for Homer and his friends that she seems almost more like a saint, and less like a human with her own needs and desires. Even so, it's a little strange to see her attracted to Jake—especially after learning of his familiarity with the brothel.



As the boys' junior year draws to a close, the BCMA discusses its next steps. They need zinc and sulfate, as well as more scrap iron—and they still need to find a way to pay off Mr. Van Dyke. O'Dell explains that they can pay off their debt by finding and selling the scrap iron buried out by the railroad tracks: there are dozens of defunct iron drainage pipes there. The group agrees to this plan, since, O'Dell insists, it's perfectly legal.

As the BCMA proceeds with its rocket research, the various members of the group distinguish themselves. Here, O'Dell proves his value by suggesting a perfectly legal, straightforward method of getting money to pay off Mr. Van Dyke.



At the end of the June, the BCMA drives out to the abandoned tracks. There, they camp out with food and sleeping bags, knowing that it'll take hours to find the pipes. The boys dig ten feet into the ground before they find what they're looking for. They spend days digging up the area, while their food dries up and eventually gets moldy. Despite the rain and lack of food, Homer loves his camping experiences—he didn't realize how miserable he'd been since the accident in the mine. Now, he can enjoy swimming in the nearby river, spending time with his best friends, and looking forward to the science fair.

After many days of work, the boys succeed in extracting ten pipes from the ground. While he's removing the tenth pipe, Homer cuts his wrist, spurting blood everywhere. His friends use their T-shirts to tie the area around his wound, and then walk him to Frog Level, where Doc lives. There, Doc sutures Homer's wrist. He offers Homer anesthetic, mentioning that Homer Sr. never needed it. Homer refuses anesthetic, but when Doc begins sewing the stitches, he screams that he wants it after all. Doc shakes his head—it's too late. Homer yells to the other members of the BCMA to get their scrap iron. Reluctantly, they leave him to recover, and return to the railroad tracks.

The BCMA takes its scrap iron to a nearby scrap yard. There, they're disappointed to find that they've only made twenty-two dollars. This means that, counting the cost of food and sleeping bags, they've made only four dollars. Jake Mosby saves the day by offering to settle their debt with Mr. Van Dyke, in return for which the BCMA will wash his Corvette "until the end of time." Jake also buys the group ten pounds of zinc dust.

Homer's experiences outside of town remind him of what he likes about Coalwood: his friends, his projects for building rockets, and his adventures looking for supplies. There's a common motif in coming of age stories: the protagonist has to leave his hometown, have a cathartic experience elsewhere, and then return to his home, endowed with a new appreciation for it. Homer experiences his own kind of catharsis in this scene (one might say he's "baptized" anew in the river), and then can return to Coalwood refreshed.



It's important—in a thematic sense—that Homer be hurt during the course of his "baptism." When he goes to Doc for stitches, Homer gets a stern reminder that he's still only a child, not yet like his strong, stoic father. The further implication of this episode is that Homer is wrong to cut himself off from the rest of the town: he depends on other people (like Doc) to help him. Finally, Homer displays some of his devotion to rocket science by valuing scrap metal above his own safety.



Here, Jake proves himself to be a "fairy godmother" for the BCMA: he'll pay off their debts and even throw in some zinc dust, asking only for some car washes in exchange. This is another example of how luck plays such an important role in one's success—the BCMA worked hard and earned little money, but then had a windfall by chance.



CHAPTER 21: ZINCOSHINE: AUKS XXII, A, B, C, AND D

The school year begins in the fall, and the BCMA proceeds with its **rocketry**. As Homer works, he visits the Reverend Richard, who tells Homer that he had a dream in which Homer walked on the moon. Unfortunately, the BCMA's next launch is a total failure: Auk XXII explodes on the launchpad, suggesting that the zinc fuel isn't stable enough to be useful. Worse, when Homer returns to his house, Elsie tells him that the mining company is selling houses in Coalwood.

Homer explains the status of Coalwood in 1959. Steel companies are experiencing deficits, meaning that they need to sell off houses, as well as sewage and water systems, and even the churches. It's possible that the coalmine will be shut down next.

In this opening section of the chapter, we're brought suddenly back to earth (as it were) when Elsie explains that the mining company is selling houses. Homer is often so focused on his own projects that he loses sight of the big picture—that is, the state of affairs in his town, and the precariousness of the mine.



The mining company dominates life in Coalwood, so it makes a frustrating kind of sense that the mining company would be the entity to end life in Coalwood. The company has the power to repossess houses, churches, and utilities.



After a particularly difficult meeting with the union, Homer Sr. returns to his home, reporting that the union wants to know how to pay for workers' houses. The company has promised to lend the workers money with no interest rate—a generous move, but still a major strain on the workers' finances. Elsie insists that the coalmine itself will be shut down soon. Homer Sr. angrily denies this, arguing that the sense of community in Coalwood will make the workers loyal and productive, in turn making the mine itself financially productive. Shortly thereafter, Mr. Van Dyke is fired for complaining about the property sale, and the unions go on strike.

Meanwhile, the BCMA experiments with zinc-sulfur combinations. They realize that the mixture is too loose, and has too much air in it to be stable. Thus, they try to find a way to "bind" the zinc and sulfur together. Quentin decides to use a mixture of alcohol to keep the chemicals together, since alcohol is stable and evaporates quickly.

The group goes to John Eye's to find pure, 100% alcohol. John Eye is a local legend—the most popular moonshiner in the region. At John Eye's house, they find a big room full of gamblers. There, Roy Lee takes the lead, asking John Eye for his purest brew. John Eye encourages Roy Lee to sample his product to make sure that it's 200-proof. The group decides to taste the alcohol. Homer reluctantly takes a swig, which burns his insides. It's enough to make him—and the other BCMA members—very drunk. Homer is sick for hours afterwards. When he goes home, carrying a big container of alcohol, Elsie scolds him for drinking. Nevertheless, he hears her laughing with Homer Sr. as he goes to bed, and the sound of their laughter cheers him up.

A new superintendent comes to Coalwood: Mr. Fuller. He's totally charmless, and the town instantly dislikes him. He essentially dares Mr. Dubonnet to declare a strike. Mr. Dubonnet doesn't do so, and the property sale proceeds. Reverend Richard manages to pay for his church, but Reverend Lanier loses his job—because he works for the company, he's dismissed from his position. No one else wants to be a priest in Coalwood, so the Coalwood Community Church is closed for the first time in living memory.

No one is safe in the world of mining: even superintendents like Homer Sr. and Mr. Van Dyke are ultimately expendable, and can be dismissed at any moment. Mr. Dubonnet had already pointed out this very fact to Homer Sr. in an early chapter, but Homer Sr. had refused to believe it. Just as he can't believe in the reality of entropy, Homer Sr. can't acknowledge that the mining company could destroy his career at the drop of a hat.



Quentin continues to think of novel solutions to the logistical problems of rocket building. Again Hickam jumps between the struggles of small town life and technical descriptions of rocket science.



At the beginning of Rocket Boys, Homer and his friends had worried that working with rockets would cut them off from the rest of the high school, making them seem immature, nerdy, or otherwise unmanly. Here, it becomes clear that just the opposite is the case: the BCMA comes of age by studying rockets. Consider how many classic "coming of age" activities the boys participate in: camping, the losing of one's virginity, and here, drinking alcohol. For Homer, all these things have been closely linked to the BCMA.



The mining company is responsible for establishing all the "culture" of the town of Coalwood: its religion, its parks, and its schools. At the same time, it's capable of snatching away this culture at any given time. Thus, when the company mandates it, Reverend Lanier has no choice but to step down from his position, and the religious life of the whole town is affected.



As these disturbing changes come to Coalwood, Homer continues with his **rocketry**. He mixes moonshine, zinc, and sulfur, and gets a thick, clay-like substance. He dries the “clay” and lights up a small portion of it, happily noting that it’s extremely flammable, and thus makes for good fuel. One night, he and the BCMA are lighting up fuel near their house when Mr. Fuller yells at them to stop. Tag, who’s walking by, defends the “Rocket Boys,” and tells Fuller that he’ll get used to them in due time.

The BCMA announces its next rocket launch: Auk XXII-A. More than 200 people show up for the launch. There, Auk XXII-A shoots up so high that no one can see it. Sherman uses Newtonian physics to calculate that the **rocket** attains a height of 5,776 feet—a BCMA record, and the first time they’ve broken the “mile barrier.” The boys are exhilarated with their success, and Basil publishes an article about their achievements that gushes with praise for their ingenuity.

The BCMA’s next step is to perfect the nozzle equations necessary to make their **rockets** more efficient. Thus will require measuring the rocket’s thrust. In order to do so, the group borrows a “meat scale” (the kind that’s used to hang sides of beef from the ceiling) from a local butcher shop. At Cape Coalwood, they try to use the scale to measure their rockets’ thrust, but in the end the rocket is so hot that it melts the scale to pieces. The BCMA spends the next few weeks working at the butcher shop to pay off their debt.

The BCMA next tries to measure thrust using Elsie’s bathroom scale. They manage to attach the **rocket** to the spring in the scale, and measure the “weight” of the rocket’s movement in the split second before the rocket destroys the scale. O’Dell is able to obtain a new bathroom scale for Elsie, and the group is satisfied—they’ve learned the thrust of their rocket.

The BCMA prepares for its final countersunk nozzle-rocket, Auk XXII-D. Afterwards, Homer and Quentin will experiment with different nozzle shapes, using the proper equations from their guidebook. For Auk XXII-D, Homer designs especially small, narrow fins to prevent “wobbling.”

This an important moment, because it establishes that the BCMA has become an accepted part of Coalwood society. Only a few months previously, the BCMA had been regarded as a dangerous, “foreign” group, fit only for causing mischief. Now, the BCMA is as quintessentially Coalwoodian as the people themselves—and a part of the town community that doesn’t belong to the mining company.



The BCMA’s latest rocket launch is an even bigger success than its predecessors. The huge crowd is probably related to the closure of the Coalwood church: it’s as if the BCMA has come to replace the church (as it did football) as a cultural staple of Coalwood. In the absence of any other stable meeting place where the town can congregate, the people of Coalwood go to watch the rockets.



It’s worthwhile to remember that the BCMA continues to cause some damage and mayhem, even as their rockets get more sophisticated. Science is not an exact science, and one consequence of this reality is that things get broken and ruined along the way to a successful invention. Elsie’s bathroom scale is far from the only casualty of the BCMA’s research.



The BCMA is investigating the thrust of their rocket—a complicated Newtonian concept that they wouldn’t have been able to explain even a few months ago. Once again they must use their ingenuity and makeshift materials to continue their research.



Homer begins to take a more active role in the design of the rockets. Previously, Quentin had dominated most of the scientific aspects of rocket building—Homer’s tasks were more administrative (organizing where to launch) or material (finding scrap iron, for example).



The BCMA launches their Auk **rocket**. It flies straight up, but Homer's small fins turn out to be a mistake—the rocket swerves and heads toward Frog Level. Homer is terrified that his rocket will kill someone, as is Roy Lee. As it turns out, Auk XXII-D lands in an abandoned field, hurting no one, and the townspeople are more amused than angry. The only exception is Mr. Fuller, who considers the rockets a “menace.” The townspeople angrily defend the “Rocket Boys,” saying that Fuller can take away their homes, their water, and their power, but not their rockets. Nevertheless, Mr. Fuller promises to report Homer to Homer Sr.

Shortly after the launching of Auk XXII-D, Homer Sr. calls Homer to his office. He tells Homer they're going for a ride. Homer Sr. drives Homer out to Cape Coalwood. There, Homer is horrified to see that Mr. Fuller has organized the bulldozing of the BCMA's blockhouse and launchpad. Homer Sr. reasons that Homer has broken his end of the bargain—he's sent **rockets** into Coalwood, even though he promised to never do so again. Homer Sr. gently advises Homer to wait until after college to pursue rockets. Homer shoots back that he'll never come back to Coalwood after he goes to college—a remark which hurts his father's feelings enormously.

Suddenly, Mr. Dubonnet drives up to Cape Coalwood. He tells Homer Sr. that it's not right that Fuller is taking apart Homer's launchpad. Dubonnet even threatens to go on strike if the launchpad isn't rebuilt immediately. Reluctantly, Homer Sr. goes to talk to Mr. Fuller. Homer watches as his father argues with Mr. Fuller. Though Homer can't hear anything they're saying, he's amazed to see Homer Sr. lift Mr. Fuller off the ground in anger. Afterwards, Homer Sr. tells Homer that he can still use the field.

CHAPTER 22: WE DO THE MATH: AUKS XXII-XXIV

A few days after Homer Sr.'s argument with Mr. Fuller, Mr. Fuller leaves town. This could be because of Homer Sr., Homer admits, but it could also be because Mr. Fuller's only job was to be the company's hatchet man, and now that the property sales are in effect, there was no more need for him. Meanwhile, Jim goes off to college, having ended his relationship with Dorothy. Homer hears that Valentine and Buck have gotten married. Homer is worried for Valentine. When Dorothy tries to talk to him, he ignores her, even though he misses her company.

Homer's earlier attempts to design rockets are failures, but also steps toward success. It's important that Homer tries only one change at a time—now he knows not to use small fins again. It's also refreshing to hear the townspeople defending their Rocket Boys whole-heartedly. The speech about how the mining company can take Coalwood's power but not its Rocket Boys reminds us that the BCMA has become part of Coalwood's unique culture—impossible for the company to repossess.



Homer has just seen an inspiring reminder that the people of Coalwood support him and the BCMA whole-heartedly, but now Homer refuses to return the favor by expressing his love and respect for the people of Coalwood. Homer's remarks seem designed to hurt Homer Sr.'s feelings: Homer knows perfectly well that Homer Sr. wants him to be an engineer in the Coalwood mine. Homer isn't wrong to want to leave Coalwood, but there's also a sense of spite and personal revenge in his ambitions.



The chapter ends on another inspiring note: the unions, as well as Coalwood as a whole, stand behind the BCMA. Homer Sr. has been reluctant to lobby for Homer, especially if it means risking his own job with the mining company, so it's inspiring to see him arguing with Mr. Fuller. It's also comical to picture him lifting a grown man off the ground like a child—and a reminder that Homer Sr. is a force to be reckoned with.



It's a little disturbing to read about Valentine settling down with Buck. Buck is a bully and a rude, immature young man, and it seems almost like a betrayal that Valentine could love someone who treats one of her close friends so horribly. Homer's confusion regarding women and romantic relationships will persist throughout the rest of the memoir—he's coming of age, but this certainly doesn't mean he's figuring women out.



The BCMA prepares for Auk XXIII: the first **rocket** based on the group's lessons from Mr. Hartsfield's class, Quentin's calculus knowledge, and the group's previous experiments. Quentin comes to Homer's house every weekend to research nozzle shapes. The key, they realize, is to make the gas travel faster than the speed of sound. They aim to use mathematics to calculate thrust coefficient and nozzle-throat area.

Quentin and Homer calculate that their **rockets** have attained speeds of 545.45 miles per hour—incredibly fast, but still short of the speed of sound. Homer is proud of the group's achievements, but he finds himself losing his nerve to continue with the mathematical calculations. Quentin encourages Homer to continue, reminding him that they're close to building a "great rocket"—a rocket that satisfies the equations and attains a height of two miles.

Homer continues doing the necessary calculations, encouraged by Quentin. At many points, Quentin angrily tells Homer that he's doing the work wrong—when this happens, Homer starts his calculations from scratch. After hours of work, Homer reaches his answers: he's calculated the precise shape and angle necessary to give the BCMA's **rockets** the maximum thrust and efficiency.

The next week, Homer takes his calculations to Mr. Hartsfield. Hartsfield is greatly impressed with Homer's progress as a mathematician. Miss Riley is even more impressed, though Homer notices a certain sadness in her eyes, the source of which he doesn't know. Miss Riley shows Homer's drawings and equations to Mr. Turner, explaining that Homer and the BCMA should represent Big Creek in the county science fair in March. Mr. Turner summons Homer to his office and explains that he's willing to send Homer to the fair. However, he wants Homer to be a charismatic presenter—he has to be able to explain his work and answer questions about it. In the following days, Homer notes, he'll find that he can explain his designs and equations perfectly.

Homer and Miss Riley leave Mr. Turner's office, and Miss Riley tells Homer that she'll enter him in the upcoming science fair. She adds that she's been feeling exhausted and glum lately. She adds, off-handedly, that Homer should say hello to Jake the next time he sees him—Jake has been summoned back to Ohio for a few months.

*The BCMA's ambition to break the sound barrier with their rocket propulsion parallels the measures that American scientists took at the beginning of the 20th century—measures which led to the establishment of NASA and the dawn of the Space Race. Tom Wolfe's excellent book on the Space Race, *The Right Stuff*, begins with Chuck Yeager breaking the sound barrier.*



Surprisingly, Quentin acts as another inspiring, supportive figure for Homer here—encouraging him to give rocketry his all as he approaches a "great rocket." This is surprising because, although Quentin has shown great intelligence and insight when building rockets, he hasn't shown much in the way of emotional maturity or wisdom in human interactions.



Homer finally succeeds in solving the mathematical problem on which the success of the BCMA hinges: he finds a nozzle that results in the greatest combination of pressure and speed. This will allow the rockets to break the sound barrier and attain heights of many miles.



Mr. Hartsfield's praise gives us a benchmark for Homer's intellectual progress in the memoir. At first, Homer was a mediocre student who could barely pass algebra. Here, he's mastered calculus, and translated his mastery into sophisticated, well-thought-out designs. Mr. Turner's change in attitude is also significant: first he thought of Homer as a nuisance, but now he recognizes him as a valuable representative for the school. Although Turner has doubts about the value of the science fair in the first place, he seems to have come around to the idea that Big Creek needs to excel in math and science.



Miss Riley's descriptions of Jake suggest relationship troubles, especially given our knowledge of Jake's womanizing nature. Miss Riley's physical exhaustion also forebodes disaster.



In the months leading up to the science fair, Homer sends his designs to Mr. Ferro and asks him to build the corresponding **rocket**. He spends long hours on the phone communicating with Mr. Ferro and Mr. Caton about his designs.

Homer now seems to be settling into the business of building rockets. He acts remarkably mature, setting up regular calls with Ferro and Caton, his “business partners.”



In late November, the BCMA conducts its first major test of the new **rocket**. They load their rocket with zinc fuel, drying it for hours and hours. Meanwhile, Homer Sr. is forced to fire miners from Coalwood due to industry cutbacks. This is an especially stressful job, since the new town preacher often preaches against the evils of “corporate greed”—in other words, the town hates Homer Sr. more than ever. Even Mr. Dubonnet, who’s urged the workers to continue on at the mines, becomes unpopular.

Previously, Mr. Dubonnet has reminded Homer Sr. that the mining company bears him no love or loyalty—he’ll be fired whenever he’s no longer of use to the company. Here, Mr. Dubonnet finds that same is true of himself: the union and its workers shun him when he comes bearing unpopular news.



The weekend after Thanksgiving, three hundred people show up at Cape Coalwood to watch the BCMA launch their latest **rocket**. They launch it, counting the seconds it remains in the air in order to determine its distance. Quentin and Homer calculate that their rocket attains a height of 7,056 feet—the highest flight yet for the BCMA. While this is an impressive achievement, Homer is puzzled, as the height is substantially less—3,000 feet less—than what his equations predicted.

It’s a sign of Homer’s progress as a student of mathematics that he and Quentin calculate the height of the rocket simultaneously. This kind of mental calculation would have been inconceivable to Homer only a few weeks beforehand. Homer is a harsh critic of his own work, and recognizes that his new rockets don’t measure up to the standard he’d set himself—so it’s back to the drawing board.



The BCMA tracks down the remains of their rocket to investigate what went wrong. This leads them to a glade full of a strange root, which O’Dell identifies as ginseng. O’Dell is overjoyed—the BCMA has been low on money for some time now, and ginseng root will give them a source of income for the foreseeable future. Quentin and Homer dig up the remains of their **rocket**, and notice erosion on the inside of the nozzle. The other members of the BCMA are amazed by Homer and Quentin’s perfectionism.

At one time, Quentin was the “odd man out” in the BCMA, because he was a perfectionist, and refused to celebrate if the rockets attained anything less than their maximum height. Now, Homer has joined Quentin in his perfectionism, recognizing that there is almost always room for improvement.



O’Dell sells his ginseng root for a good sum of money, enough to buy twenty pounds of zinc dust. Three weeks later, the BCMA has completed work on Auk XXIV. It is twelve inches longer, and features a curved nozzle that will limit erosion—Homer guesses that the excessive heat of the gas caused the erosion on the previous nozzle.

Homer continues to show a sophisticated understanding of rockets, guessing that excessive heat translates into nozzle erosion. He’s been a quick study, learning not only from studying textbooks, but by launching rockets of his own.



The BCMA's next **rocket** launch is scheduled for the same day as the Christmas formal. Only Roy Lee has succeeded in finding a date for the formal—the other BCMA members will be going unaccompanied after the launch. At the launch, Homer is surprised to see that his rocket doesn't launch at—it remains on the launchpad. He guesses that the curved throat of the nozzle is blocked. Homer insists that they need to approach the rocket to fix the problem. While everyone is reluctant to do so, Sherman and Homer eventually agree to crawl toward it and try to fix it.

When Sherman and Homer crawl toward the **rocket**, they see that Homer was right: the nozzle is blocked, and the wire fuse is no longer in place. Carefully, they replace the fuse and relight it, knowing that they'll need to sprint away as soon as the fuse is burning.

Homer lights the fuse, and the rocket launches instantly. Homer and Sherman are unharmed—and Homer calculates the rocket's height in his head: 8,500 feet. Pooky, who's in the crowd watching the BCMA's launch, mutters that he could shoot a gun higher than Homer could launch a rocket, and that Homer has “the money to build **rockets** while the rest of the town's starvin' to death.” Homer ignores Pooky and celebrates with Quentin and the other BCMA members.

After the rocket launch, Homer and his friends attend the Christmas formal. The girls there are dressed in beautiful pastel dresses. One girl, Melba June Monroe, flirts with Homer, and by the end of the night, Homer has used his “Rocket-boy fame” to dance with Melba and make out with her in the backseat of Roy Lee's car.

It is January of 1960, and Senator John F. Kennedy has become a national celebrity. While his boyish charm and good looks make him a charismatic speaker nationwide, Homer finds him a little odd, particularly because of his strange, nasal voice and Boston accent. Homer Sr. mutters that the Kennedys are the “worst kind of people,” explaining that Joe Kennedy, John's father, made millions bootlegging.

Homer has grown so focused that he's basically willing to risk his life to launch a successful rocket. Hickam racks up the suspense by describing, in agonizing detail, how Homer and Sherman crawl toward the launchpad. As is the nature of rockets, there is always the danger of explosion or fire, and so this kind of suspense and peril occurs often for Homer.



Even in this moment of suspense, we recognize that Homer was correct to guess that the nozzle was blocked: he's clear-headed about his own rockets, even in moments of danger.



Only a few moments after risking his life, Homer is level-headed enough to perform the calculation necessary to determine the rocket's height. Pooky Suggs' insult seems comically lame, but it is also telling of the state of the town. Homer has had to scrimp, save, and haggle for every piece of scrap metal, but at least he's always had enough to eat.



Homer's bravery and intelligence turn out to be attractive to the girls at Big Creek High School—he now seems to have little trouble finding a date at the dance.



Hickam reminds us of the larger political situation at the time. A young, charismatic figure like Kennedy isn't the instant hit with Coalwood that one might suspect. Instead, Homer Sr. seems to want a more establishment figure, and we can imagine that he'll probably vote for Nixon, the Republican candidate who was the product of a working-class background, and an energetic prosecutor of Communists.



One day, Homer is talking with Homer Sr. in their house. Homer Sr. is discussing the dangers of unchecked greed, and argues that wealthy Americans can be as dangerous to their country as the Communists in Russia. He leans forward in his chair and tells Homer that Dwight Eisenhower will be the last good president American will have for many years. As soon as Homer Sr. finishes this sentence, a bullet whizzes past his head—right where he had been sitting a moment before.

The chapter ends with a cliff-hanger, and also a poignant point, as Homer Sr.'s conversation with his son may save his life—if he hadn't been leaning in to talk to with Homer, the bullet would have struck his head. Neither Homer nor Homer Sr. could know this at the time, but it's strangely ironic that Homer Sr. should be shot at immediately after talking about John F. Kennedy, who would himself would be shot in the head only three years later.



CHAPTER 23: SCIENCE FAIRS

Someone has just tried to shoot Homer Sr. in his own home. There is a sound of screeching tires—whoever fired the shot is getting away. Homer is amazed at how calmly Homer Sr. is handling the incident. Homer Sr. remarks that he'll be able to repair the bullet hole—which was made by a .22 bullet—and Elsie agrees. Homer Sr. suggests that the assassin was either Pooky or another disgruntled miner.

It's not entirely clear why the assassin tried to hurt Homer Sr., but he has become extremely unpopular because of his position in the mine, and someone in dire straits might need a scapegoat to lash out at. It's chilling to think that the bullet might also have something to do with Homer's rockets as well.



As Homer Sr. calmly discusses his would-be killer, Elsie interjects: she's going to buy a house in Myrtle Beach. Homer Sr., confused, asks Elsie where she'd get the money for such a thing. Elsie calmly explains that she's been investing Homer Sr.'s income in the stock market—at the moment, she could buy two houses if she wanted to. Elsie has been communicating with a New York stockbroker for years, cleverly investing in booming industries, such as Band-Aids. She informs Homer Sr. that she'll be moving to Myrtle Beach, whether he wants to retire and join her or not. She'll wait until Homer goes off to college. Homer Sr., utterly bemused, asks Elsie what the town will say—she cheerily replies that she doesn't "give a shit."

Elsie has always given hints that she's dissatisfied with her life in Coalwood, but this is still a huge surprise. It's remarkable that Elsie could have invested in the stock market for 20 years without Homer Sr. knowing anything about it. This reminds us that Elsie plays an enormously important role in the Hickam household: while Homer Sr. works in the mine for ten hours at a time, Elsie is responsible for nearly every other aspect of their family life: educating and disciplining her children, cooking food, and, it now seems, controlling finances.



Afterwards, Homer goes to talk to his BCMA friends about the sudden events in his family. After he explains that someone tried to shoot his father, O'Dell asks him what kind of bullet the assassin used, and Homer answer that it was a .22. O'Dell laughs and says that this is only a pop-gun. Homer is irritated that O'Dell is taking this news so lightly. Suddenly, Billy tells the group that Miss Riley is sick with cancer, and has been for some time. Homer is crushed to hear this.

Homer gets another reminder that his own personal tragedies and anxieties pale in comparison with those afflicting others. Homer Sr. survived the attempt on his life, but Miss Riley, by contrast, will almost certainly die of her cancer. Homer's sympathy for Miss Riley shows how important she has been to him personally.



Homer goes to see Miss Riley after school. She looks sad and tired, and Homer finds himself tearing up as he talks to her. Miss Riley tells Homer that he'll be representing Big Creek at the upcoming science fair on his own—as only one member of the BCMA is allowed to attend. Homer contends that Quentin would be a far better representative, but Miss Riley laughs—Quentin, she explains, would try to hard to impress the judges with his big vocabulary. Suddenly, she tells Homer that she's been diagnosed with Hodgkin's Disease. While it's possible that she'll live a long life, there's no surgical operation that can cure her. As a result, Miss Riley is constantly tired, and she won't be able to attend the science fair with Homer.

The next day, Mr. Caton calls Homer and tells him that he's no longer able to help Homer with his **rockets**—the union is officially on strike. Mr. Caton hasn't finished Homer's latest design—the Auk XXV, along with a selection of nozzles, casements, and nose cones for the science fair. Homer goes to talk to Mr. Caton at his store, where he also finds Homer Sr. Homer Sr. and Mr. Caton argue over how long the strike will last—it could be a day, or it could be months. Homer begs his father for help with the science fair, which takes place in only one week. Homer Sr. shakes his head sadly.

Homer is desperate to finish his **rocket** designs, so he and the BCMA hatch a daring plan. In the middle of the night, they sneak into the machine shop, find Mr. Caton's lathe, and attempt to operate it themselves. The work is harder than Homer thought it would be, and for more than an hour he struggles to make a clean cut with the lathe. Suddenly, the door opens—it's Mr. Caton. To Homer's great relief, Caton puts a finger to his lips and whispers that he'll finish the work himself.

Homer and the BCMA leave the machine shop, and Homer rides his bicycle back to home. As he rides, he passes a group of disgruntled miners, including Pooky. Pooky and his friends recognize Homer and chase after him. Homer manages to evade the strikers, making it back to his house only a few hours before he has to wake up to catch the bus to school.

There is a national wave of strikes, Homer reports. At the same time, Senator Kennedy is visiting West Virginia as part of his bid for the presidency. Kennedy has proposed sending federal assistance to the miners: free food and other resources. Homer Sr. finds this infuriating, since it means that the miners in Coalwood will try to “wait out” the mining company in the hopes that the White House will help them out.

Based on everything we've seen, Quentin's contributions to the rockets seem to have been more substantial than Homer's (it was Quentin, after all, who designed both rocket fuels, calculated the maximum efficiency of the rockets, designed the fins, etc.), yet Homer was the one who started the BCMA, and he has recently proven himself to be an innovative, intelligent rocket scientist. He also has better interpersonal skills than Quentin—something that will be important in impressing the science fair judges.



Homer experiences near-constant setbacks. Only a few weeks after Homer had seemed to settle into his routine, calling Ferro and Caton on the phone nightly, he now finds that he can't communicate with Caton about rocket design at all. This merely reiterates a frustrating truth: Homer isn't living his life in a vacuum. As a citizen of Coalwood, he's inevitably effected by the events in the town, even union strikes that seem totally unrelated to rocketry.



This scene is comedic because both the BCMA and Caton are breaking the same rule at the same time, each unknown to the other. It also reminds us that the BCMA has won the respect of many—before, the BCMA was regarded as a group of troublemakers, but now its popularity is such that it's inspired others to break the rules.



It seems quite likely that Pooky was responsible for shooting at Homer Sr., even if it's impossible to prove it. His anger with Homer Sr. is matched only by his anger with Homer himself—thus, he had every reason to try to hurt someone in the Hickam household.



Homer Sr.'s dislike of John F. Kennedy has some symbolic resonance, since Kennedy would go on to fund NASA's manned missions to the Moon, culminating in the Apollo 11 mission in 1969. Since Homer Sr. is suspicious of NASA and rocketry in general, it's only appropriate that he should dislike Kennedy, too.



It is the spring of 1960. One day, Homer pays a secret visit to Mr. Caton, where Caton gives him the nozzles, nose cones, and casements he'd promised. On Homer's way home, Calvin Suggs, Pooky's son, chases him, and Homer swings the heavy sack containing the nozzles and other **rocket** parts at his attacker. The sack slips out of Homer's hands and sails into the nearby creek. Homer is furious—he punches Calvin in the chest and jumps into the creek, trying to recover the rocket parts.

Homer yells at Calvin for making him lose his **rocket** parts. Calvin looks confused, and mutters that he “just wanted to talk” to Homer, and he offers to help Homer look for his things. Calvin explains that he was going to ask Homer for help getting a job at Cape Canaveral. Homer angrily replies that it'll be “a while” before he works there, and goes home. The next day, Homer is astounded to hear a knock at his door. It's Calvin, holding the sack containing Homer's nozzles and nose cones.

A few days later, Elsie drives Homer to the McDowell County Science Fair in Welch. Roy Lee drives the other members of the BCMA in his car. Homer is carrying his plans and equations for the **rocket**, along with all his rocket parts. Miss Riley is unable to attend. At the fair, Homer sets up his designs while O'Dell inspects the competition: Welch High School has elected to present on fossils and rocks. This seems to be the BCMA's stiffest competition.

The science fair begins. A panel of judges walks around the room, asking questions of Homer and the other presenters. When the panel gets to Homer, their first question is, “You ever blown anything up?” Homer replies that he hasn't, thinking about his mother's rose-garden fence. Afterwards, the judges asks Homer a number of technical questions about his nozzles and equations. Homer boasts that his **rocket** can attain a height of three miles. Strangely, the judges seem unimpressed—they comment that Homer's work seems very dangerous.

Homer and his friends go off to lunch. When they return, they're astounded to discover that they've been awarded first prize for their **rocketry**—the BCMA will be moving on to the state science fair finals. Homer is overjoyed, and he can't wait to tell Miss Riley and Homer Sr.

Ironically, it's Homer's attempts to defend himself from the aggression of the people of Coalwood, not their actual aggression itself, that results in his losing his rocket parts. This is very telling—it suggests that Homer's hatred for Coalwood is a little irrational, and ultimately self-defeating.



We see why Calvin was chasing Homer—surprisingly, he's been trying to get a job at NASA. This reminds us of how popular and influential Homer's rockets have become in Coalwood, and even for an apparent bully they represent an escape from life in the mines. This scene also suggests that Homer has been excessive in his dislike of the people of Coalwood. While many of them are intolerant or unkind, the majority are sincerely supportive of him.



The two schools' presentations seem symbolic, as Big Creek looks to the future of American science (engineering, space, and the unknown) while Welch looks back to the past (animals that died out millions of years ago). Studying the past is often just as vital as innovation, but in a small, conservative town like Coalwood, innovation seems especially important.



When the judges give Homer a hard time for causing explosions, we're reminded of the abuse that Homer endured from Coalwood residents at the beginning of Rocket Boys (after he blew up Elsie's rose-garden fence). There's something almost reassuring about these associations: just as the people of Coalwood changed their minds about Homer, perhaps the judges at the science fair will too.



In retrospect, it seems perfectly correct that the judges should award top prize to Big Creek. Rocketry was arguably the most relevant area of American science at the time—no matter how dangerous it might seem for high schoolers.



Homer returns to school, where he tells Mr. Turner about his success—Turner grins and congratulates Homer. Homer also tells Miss Riley, who’s extremely proud of Homer. Homer doesn’t tell his father personally, since he’s in the mines, but Elsie promises to let him know when he returns in the morning. In the following weeks, the BCMA is invited to the Coalwood Women’s Club, where Quentin boasts about their hard work and ingenuity.

Shortly after Homer’s victory at the science fair, Elsie and Homer Sr. leave for Myrtle Beach, since it’s the usual time of year for miners’ vacations. Homer has the house to himself for the week, which happens to be the week of the prom. Homer invites Melba June, the girl whom he danced with at the Christmas formal, to the prom, and she eagerly accepts. Homer learns that Dorothy has a new boyfriend, another college student, and Homer makes a point of “not caring.”

The BCMA schedules a celebratory **rocket** launch on the day of the senior prom. There is a healthy crowd at the launch, though Homer notices that the people divide along union and company lines. The Auk XXV attains a height of 15,000 feet, exactly as predicted. Homer has modified the Auk XXV by adding a layer of putty to the nozzle—this limits erosion, as Homer predicted it would.

After the rocket launch, Homer and his friends go to the prom. Homer walks into the gymnasium with Melba June. He has a wonderful night dancing and making out with Melba. A few days later, his mother and father return from Myrtle Beach. Elsie, delighted, tells Homer that Homer Sr. has agreed to retire from mining and go into real estate near Myrtle Beach after Homer goes to college in the fall. Homer Sr. seems as happy and excited as Homer has ever seen him.

Homer prepares for the area science fair in Bluefield. One day, while he’s in his room, he hears a screech of tires. Elsie and Homer Sr. yell downstairs, and Homer comes running down to them. He is shocked to see the bloody body of his beloved cat, Daisy Mae. Someone has run over Daisy Mae and driven away. At first, Homer thinks that this must be an accident, and he blames himself for letting Daisy Mae outside. Shortly thereafter, Roy Lee and the other BCMA members show up at Homer’s house—it’s as if they’ve sensed that something is wrong with Homer. Roy Lee promises to make whoever killed Homer’s cat “pay for it.” Homer realizes that the same person who tried to shoot Homer Sr. also killed the cat.

Despite the BCMA’s victory, there’s a general mood of dissatisfaction in this section, since Homer doesn’t get to tell Homer Sr. about his victory—at least not personally. The reconciliation between Homer and his father is yet to come (if, indeed, it is to come at all).



Even though he’s just won a prestigious award, Homer can’t forget the fact that both his father and the “love of his life” are still ignoring him. Much like Homer Sr., Homer is always thinking ahead to the next thing, rather than celebrating in the moment. This is a useful quality for a scientist, but it doesn’t necessarily translate into much happiness or sense of personal fulfillment.



Even as the rocket launches bring the people of Coalwood together, there continue to be divisions and boundaries between them, most notably between the union and the company. Meanwhile, we’re given another reminder of how much progress Homer has made as a resourceful thinker—his putty provides an elegant solution to an important technical problem.



When Homer Sr. leaves Coalwood for a short time, it becomes clear that he doesn’t enjoy his life in Coalwood in the slightest. His stubbornness and stoicism are so great, however, that he continues to work in the mines, causing himself misery (and poor health), and saddening Elsie.



The screech of tires reminds us of the night someone tried to shoot Homer Sr.—and it’s likely that the same person committed both crimes. Homer seems curiously slow on the uptake, as he takes a while to grasp the link between the cat’s death and the attack on his father. Roy Lee shows a vengeful, determined side, proving that his loyalty and concern for Homer run deep.



Homer attends the Bluefield science fair and proceeds with presenting the BCMA's findings. He's accompanied by his fellow BCMA members, though he's the only official representative. Although Homer is distracted by the death of his cat, he's surprised to find that the BCMA has again won the fair—a first for Big Creek High School. The BCMA will now be attending the National Science Fair. As an added bonus, the Air Force, which sends a representative to the area science fair every year, awards the BCMA a prize for "Outstanding Achievement in the Field of Propulsion." The Air Force representative, an experienced major, tells the boys that their **rockets** are the most sophisticated he's seen outside of Cape Canaveral.

A few days after the BCMA's victory, Mr. Turner summons the BCMA onstage during a school-wide assembly. Turner and Miss Riley congratulate the BCMA in front of the entire school for their hard work, and for proving that Big Creek students are capable of anything. Homer is particularly gratified to see Miss Riley in such good spirits.

The night after the assembly, Homer hears a tapping at his window—it's Roy Lee. Homer climbs outside, where Roy Lee explains that he's found the culprit for Daisy Mae's death, just as he'd promised. The killer was a member of the miners' gang, a friend of Pooky's. Roy Lee adds that Pooky has left town: Calvin, Pooky's son, lashed out at him for beating his mother, and as a result the police chased Pooky out of Coalwood. Homer feels a sudden attack of sympathy for Calvin. Although Calvin had always been cruel to Homer, he helped Homer recover his rocket parts, and stood up to Pooky. Roy Lee offers to give Homer the name of the person who killed Daisy Mae, but he mentions that the culprit feels horrible about his crime. Homer thinks, and realizes that there's no point in learning the name of the killer. "Justice" will come to him, just as it came to Pooky. Homer thanks Roy Lee for helping him, and privately senses that they'll always be friends.

Alone, Homer goes down to his yard and scoops up a handful of West Virginia soil, putting it in a small fruit jar. He decides to take this jar with him to the National Science Fair in Indianapolis. He remembers hurting his father's feelings by claiming that he'd never return to Coalwood. Homer sees how foolish he was to spite his father—Coalwood is in his blood, and always will be. Nevertheless, Homer finally feels comfortable pursuing his dreams of becoming a NASA engineer.

It seems that Quentin and Homer have been right all along: attending the science fair will open up many doors for the BCMA. Here, they meet an experienced military man who essentially offers them careers outside of Coalwood. This scene is also an insightful reminder of the motives behind the Space Race. The United States pumped billions of dollars into math education, NASA, and rockets because they believed that this technology had military applications. Although the greatest achievement of the Space Race—the Moon landing of 1969—was completed on behalf of "peace for all mankind," it only emerged from years of conflict.



We're coming now full circle—at the beginning of the memoir, there was another assembly, in which Homer was relegated to the audience. Now, he's on the stage, cheered on by his fellow students.



Immediately following his latest victories at the science fair, Homer shows that he's grown as a moral being as well as a scientist. While it would certainly be easy for Homer to track down the attacker and punish him to the full extent of the law, Homer recognizes that such an action would be ultimately futile—it wouldn't bring his cat back to life, and wouldn't make him feel any better. In essence, Homer's attitude toward this unnamed assassin parallels his attitude toward his father, and toward Coalwood. He has many problems with Coalwood, but no longer seeks "revenge" on his home town. Rather, he wants to forgive his town, his father, and his cat's killer, and move on with his life.



Here Hickam makes the link between Homer's epiphany about his cat's killer and his feeling about Coalwood explicit. Paradoxically, respecting Coalwood and wanting to leave it aren't mutually exclusive: it's perfectly possible, Homer now finds, to recognize that Coalwood has been a huge influence on his life, while also still wanting to leave Coalwood and join NASA.



CHAPTER 24: A SUIT FOR INDIANAPOLIS

With only a few weeks left before the National Science Fair, Emily Sue volunteers to take Homer to buy a suit. In the car ride to the suit store, Homer asks—as casually as he can—about Dorothy. Emily Sue informs him that Dorothy isn't interested in Homer, even though she feels bad that Homer is angry with her. Homer tries to act like he doesn't care about Dorothy, but Emily Sue isn't fooled.

Emily Sue and Homer drive to a men's store in Welch called Philips and Cloony. Inside, he finds that the clerk knows Jim—a regular at the store. The clerk enthusiastically helps Homer find a beautiful suit. While he's near the store, Homer is surprised to run into O'Dell, who's gone into town to sell more ginseng. O'Dell encourages Homer to buy his new suit, and Homer does so.

While Homer is in Welch, he sees a crowd, and posters saying, "Jack Kennedy for President." A bystander informs Homer that Kennedy will be making a speech in Welch in less than an hour. Homer finds Emily Sue, and they decide to stay for the speech. Emily Sue is shocked to see that Homer has purchased a bright orange suit, with O'Dell's encouragement.

Before Emily Sue and Homer can argue about his suit, Kennedy arrives and begins speaking. Homer notes his beautiful brown tan. Kennedy talks about the legacy of Franklin Roosevelt and the New Deal, and promises to bring prosperity and jobs to West Virginia. Homer notes that the crowd seems unenthusiastic, and remembers his father complaining about Roosevelt for his socialist policies.

At the end of the Kennedy's speech, he takes questions from the audience. Homer raises his hand, and because of his shocking orange suit, Kennedy calls on him. Homer asks Kennedy about space exploration, and suggests that Americans should go to the moon and mine it for energy. Kennedy nods, and suggests that perhaps Americans should explore the moon. The crowd cheers.

Even after his moral epiphany at the end of the last chapter, Homer isn't completely grown up. He seems no closer to getting over his feelings for Dorothy, even though she continues to show no signs of romantic interest in him.



Homer gets a pleasant reminder that his relationship with his brother isn't entirely antagonistic—here, Homer appears to get better service because Jim patronized Philips and Cloony so regularly. In contrast to his usual thriftiness, Homer splurges on a new suit.



In this welcome comedic section, we get a reminder that Homer, for all his growing intellectual and emotional maturity, is still a clueless kid in many ways.



It's not totally clear where Hickam's politics lie, but he makes it clear that most of West Virginia doesn't support liberal policies. FDR and Kennedy are now generally considered great presidents, but at the time they had their detractors like any politician.



At times, Rocket Boys blurs the line between fiction and fact (something which Hickam acknowledges openly in the introduction to his book), so we must wonder if Hickam really did meet JFK and give him an idea for the Space Race. The entire episode seems incongruous with the rest of the memoir, especially because Kennedy is such a recognizable historical figure. In any event, it's important to keep in mind that Kennedy's initiative played a major part in sending a manned mission to the Moon in 1969.



Homer and Emily Sue leave the crowd, and Emily Sue insists that Homer must replace the suit before the store closes. Homer reluctantly replaces his orange suit with a more modest blue one. Back in Coalwood, Homer Sr. and Elsie compliment Homer on his appearance in the new suit. Homer mentions that he asked Kennedy a question about space exploration, and Homer Sr. mutters that Kennedy is a “pinko.” Homer retires to his room, noting that he’s kept one part of his original outfit: a bold red tie with a cardinal embroidered on it. The tie will help Homer stand out at the Science Fair, and bring some “BCMA style” to the competition.

Emily Sue acts like Homer’s mother, giving him clothing advice and scolding him for his foolishness when it comes to fashion—although it seems that his orange suit is what made him stand out to JFK. Homer Sr.’s critique of Kennedy reminds us that he’s a fervent Communist-hater. “Pinko” was a common term of abuse for Communist sympathizers at the time—but also an insult directed at homosexuals, perhaps suggesting another kind of lifestyle Homer Sr. would disapprove of.



CHAPTER 25: THE NATIONAL SCIENCE FAIR

In the months leading up to the National Science Fair, Homer notices Miss Riley getting healthier and seemingly happier. She visits Homer to prep him for the competition, giving him elaborate notes on how to present his findings. Quentin helps Homer prepare, as well—he visits Homer’s house and gives him charts and diagrams on nozzle functions. O’Dell prepares a beautiful case for the BCMA’s **rocket** parts, and Sherman and Billy photograph Cape Coalwood to make Homer’s presentation more visually interesting.

Miss Riley continues to devote herself to Homer’s success, and indeed, her devotion to Homer seems to correlate closely with her own health. In general, the BCMA’s preparation is a team effort, with everyone contributing equally to the success of the “mission” to Indianapolis.



Meanwhile, the Coalwood miners continue to strike. Some try to break the strike line in an effort to make money and feed their families, but the strikers prevent them from doing so. Mr. Caton begs Mr. Dubonnet for a chance to help the BCMA prepare new nozzles for their presentation, and Mr. Dubonnet relents. Caton outdoes himself with a set of shiny new nozzles, precisely designed for maximum efficiency. Homer notices that Homer Sr. seems relatively uninterested in Homer’s science fair pursuits. He rarely brings up the subject.

As the BCMA gets closer and closer to the National Science Fair, it becomes more and more apparent that Homer Sr. isn’t interested in their success at all—or at least he doesn’t show any signs of interest. Homer Sr. is notoriously stubborn, and refuses to admit that he was wrong about anything, so it’s entirely possible that he secretly wants Homer to succeed, but just won’t admit changing his mind.



Shortly before the science fair begins, Homer overhears Elsie ask Homer Sr. if he’s told the company he’s quitting yet. Homer Sr. replies that he’ll need to wait until the strike ends—he doesn’t want the mining company to think that the union intimidated him into retiring. Elsie accepts this explanation, but doesn’t seem happy. Homer spends the night before he leaves for Indianapolis talking with Quentin, who drills him on trigonometry, calculus, physics, chemistry, and other difficult subjects.

Quentin may not be presenting in Indianapolis, but he’s still an invaluable part of the BCMA. From the beginning, Quentin’s intelligence has been the guiding force behind the rockets’ success, and now it’s as if he’s passed on his intelligence and drive to Homer.



Homer travels to Indianapolis by bus. Many Coalwoodians show up to see Homer off: Basil, Mr. Turner, Melba June, Mr. Dubonnet, Homer Sr., Elsie, Mr. Caton, Mr. Ferro, and the entire BCMA. Just before Homer gets on the bus, he sees Miss Riley in Jake’s Corvette—and she looks very happy.

Homer’s success seems correlated to the success of the town of Coalwood: when he’s doing well, others are doing well, and vice versa. As proof, we see Miss Riley with Jake again—it’s as if the BCMA’s success has translated into good fortune in her own life.



At the Science Fair in Indiana, Homer surveys his competition. He's initially afraid because a team from Texas is also presenting on **rocket** propulsion, but he's relieved when he sees that none of their designs rival the BCMA's in sophistication. Homer befriends a competitor named Orville, who's presenting on electromagnets as well as rocket nozzles. Orville warns Homer that neither one of them will win a prize at the competition, because the prizes always go to big, expensive projects. Homer walks around the exposition hall, and senses that Orville may be correct. The other projects are lavish and beautifully presented, including a self-contained biosphere complete with a pair of monkeys. Orville adds that the judges dislike rocketry, because they find it dangerous. Homer's heart sinks.

The fair lasts three full days before the judges make their assessments. During the first two days, Homer notes that his project draws a big crowd, but Orville warns that this means nothing by itself—**rockets** are inherently popular. On the second night of the competition, Orville and Homer join the other competitors for a big group dinner. Homer finds that he misses West Virginia. He wonders what he'll do if he's forced to go home empty-handed.

On the second night of the fair, Homer passes through the exhibition hall and is shocked to find his **rocket** parts missing. Homer complains to the security guard, who tells Homer that he's in a big city—he needs to lock his things up. Homer is stunned. He's left with his display case, his photographs, and his equations, but not his nozzles, casements, or nose cones—so his presentation will make no sense.

With no other option, Homer calls his home. He explains to Elsie that he needs extra **rocket** parts, immediately. Elsie explains to Homer that this will be impossible—Homer Sr. is busy with the strike. Homer goes to bed, thinking that, much like his father, he's been "too big for his britches."

Late at night, Homer wakes up to a call from his mother. She explains that there's a box waiting for him at the train station. The next morning, Homer rushes to the train station, where he finds a box with extra **rocket** parts. Hugely relieved, Homer prepares for the judges' assessments.

Hickam enjoys describing the temporary setbacks afflicting the BCMA along its path to success, like Orville informing Homer that he doesn't have a chance of winning. In essence, Orville is saying that Homer's best effort simply isn't good enough, that there will always be definite limits on what a boy from Coalwood is capable of, simply by virtue of being poor and lacking the necessary budget to wow the science fair judges. Whether Orville is right or wrong about this remains to be seen, but for the time being, it causes Homer plenty of consternation.



As when Homer went camping with the BCMA, being away from Coalwood reminds him of how much he loves his town, despite its many flaws. This scene also reminds us that Homer isn't only competing for the BCMA—he's competing for honor and respect, both from his father and the people of Coalwood.



Homer gets a nasty reminder that he's not in Coalwood anymore: he's not prepared for life in a big city, where there's more of a danger of theft and other crimes. This is crushing for Homer: he's been planning to leave Coalwood, and yet he's hasn't realized how little he knows about life outside Coalwood.



Homer's career as a rocket scientist seems to have come to a disappointing close: he's failed to impress the judges in Indianapolis, and his failure stems directly from his upbringing (if he'd been from a big city, he wouldn't have let his things be stolen).



Miraculously, Homer receives rocket parts from Coalwood. While it isn't immediately explained how this could happen, it's clear that Homer has underestimated Coalwood considerably: the townspeople are devoted to him, and work together to make sure that he succeeds in Indianapolis.



On the day of the judges' assessments, Homer puts on his blue suit and sets up his display. That morning, Orville gives him some surprising news: while Homer was frantically looking for his **rocket** parts, Orville and the other competitors told the judges panel that if Homer wasn't given a "fair shake," they would protest. As a result, the judges have added a special propulsion category to the fair.

The judges begin to assess the competitors' designs. One of the judges, a middle-aged, German-accented man, tells Homer that he's on von Braun's research team. The man asks Homer difficult questions about propulsion, and Homer answers them skillfully. Afterwards, the man compliments Homer, and tells him that von Braun is at the science fair. Homer runs to find von Braun, but can't locate him. When he returns to his display, Orville informs him that von Braun himself stopped by Homer's display and complimented his nozzles, calling them "marvelous." The judges award Homer the top prize for propulsion, and Orville comes in second. Homer is exhilarated by his success.

Homer returns to Coalwood. When he gets off his bus, he's surprised by a crowd of his friends and supporters. As they cheer, Roy Lee pulls Homer aside and tells him that Miss Riley is in the hospital. Horrified, Homer and the other BCMA members visit Miss Riley in the hospital in Welch. There, they find Jake tending to Miss Riley, who looks weak and pale. Homer shows Miss Riley his medal, and Miss Riley seems overjoyed. Homer senses that he'll never know anyone as kind and good as she is.

Homer leaves Miss Riley's side, tearfully, and Jake runs after him. Jake tells him that God has a plan for everyone, and that Homer can't let Miss Riley's illness interfere with his happiness at having won the Science Fair. Homer angrily accuses Jake of drinking too much—an accusation which Jake doesn't deny. Nevertheless, Jake argues, Homer must take pleasure in his life, and continue to pursue his dreams of **rocketry** and engineering. Homer confesses to Jake that he's afraid of his future. Jake only laughs, and tells Homer that everyone is.

Homer realizes that he's no more alone in Indianapolis than he was in Coalwood—he can always rely on his friends and well-wishers for help. This is a stark change from the way Homer had viewed the world earlier in the memoir, where he'd thought of himself as a lonely individual, fighting for success against the world.



Ironically, it's Homer's own desire to find von Braun that results in his not seeing him at all—if he'd only stayed put, von Braun would have come to him. There's also some metaphorical significance to this fact, as Homer sometimes tries a little too hard to succeed, cutting himself off from his peers and assuming that he has to do everything himself. Homer's success at the science fair is the result of his own hard work, but also the support of his friends, especially Orville—indeed, if it hadn't been for Orville, Homer wouldn't have his medal.



When Homer returns to Coalwood, he's reminded that he's only achieved his success with the help of a great number of other people. At the same time, Homer has to face the crushing fact that Miss Riley has cancer, and might not live much longer. At his greatest moment of success, this must come as an especially heavy blow.



It's ironic that Homer's most important moral lesson, arguably, comes from Jake—not a particularly moral person. Homer has come a long way in Rocket Boys: he's learned to balance ambition with realism, and individualism with collaboration. Here, he learns to balance his joy with sadness: he realizes that he can be happy about winning a medal but also sad about Miss Riley.



CHAPTER 26: ALL SYSTEMS GO: AUKS XXVI-XXXI (JUNE 4, 1960)

Homer learns what happened in Coalwood after his nozzles were stolen in Indianapolis. In less than an hour after Homer called his mother, the entire town of Coalwood had been alerted to Homer's problem. Accompanied by Elsie, Homer Sr. argued "nose-to-nose" with Mr. Dubonnet. In the midst of the argument, Mr. Caton intervened, protesting that he needed to work in the machine shop to print more of the necessary **rocket** parts. In the ensuing fight, Homer Sr. was forced to give in to the union. The strike coincided with a major deal between the mining company and General Motors—as a result of the new demand for mine labor, the union got its demands. Homer Sr. agreed to sign the necessary documents, ensuring that the fired miners would be given their old jobs back. Afterwards, Mr. Caton proceeded to build new rocket parts for Homer.

Homer realizes what Homer Sr.'s decision to sign the union's agreements mean. Because his relationship with the union is a key part of the new agreement with General Motors, Homer Sr. must stay on at the mine for the foreseeable future—he can't retire to Myrtle Beach. He admitted to Elsie that he wasn't good enough for her, and Elsie was so touched by this that she decided to stay in Coalwood with her husband. Homer thinks about his conversation with Jake—when Homer Sr. signed the union papers, he decides, it was a great moment for "God's plan," and thus a great moment for Coalwood.

Homer and his friends graduate from Big Creek. Dorothy is the valedictorian, and Quentin the salutatorian. Most of the other BCMA members are in the top ten, except for Roy Lee and O'Dell. At graduation, Mr. Turner personally congratulates Homer for bringing honor to his school, and places Homer's science fair medal in a trophy case next to the football awards. Afterwards, Homer takes Melba June to the graduation dance. He doesn't see Dorothy again for the next 25 years.

After graduation, the members of the BCMA go in separate directions. Instead of getting college scholarships, O'Dell, Billy, and Roy Lee take the Air Force recruiter up on his offer and join the Air Force—afterwards, they plan to use the GI Bill to go to college for free. With his parents' help, Sherman finds the money to attend West Virginia Tech. Homer decides to accept his mother's help with college, and thinks about studying engineering at the Virginia Polytechnic Institute. Quentin enrolls at Marshall College in Huntington, West Virginia. He's unsure how he'll pay for this, but Homer senses that he'll "do fine."

Homer's actions result in the breaking up of the miners' strike, completely unrelated to his intentions. Homer Sr. offers a powerful act of support for his son, allowing the strike to end so that Mr. Caton can prepare Homer's nozzles on time. At the same time, he also confirms his devotion to the mine, above all else: he signs the papers so that the miners can get back to work as soon as possible. In all, this section reiterates one of the key ideas of Hickam's book: Homer isn't "cut off" from Coalwood by his desire to build rockets. On the contrary he's deeply connected to life in Coalwood, whether he likes it or not. Homer's recognition of this fact is among his most important moments of growth.



Ironically, Homer Sr. confirms his steadfast devotion to the mine in the same instant that he suggests that he might be more invested in Homer's success than he lets on. By signing the union papers, he helps Homer while also attaching himself to the mine for the foreseeable future. It's often frustrating for Homer to try to decipher his father's feelings, so it's telling that Homer doesn't try to do so here: he accepts that what's happened is a part of "God's plan."



These sections feel like an epilogue to the memoir, as we've passed the climax, when Homer was awarded the top prize from the National Science Fair judges. It's disappointing but realistic that Homer doesn't reconcile with Dorothy—if this were a work of fiction, we could imagine Homer, the hero, ending up with Dorothy, his love interest. But Hickam is more realistic—Homer doesn't "get the girl."



While Homer and his friends go on to attain great success, they don't do so in the neat, straightforward way one would expect if this were a conventional work of fiction. For example, none of the BCMA members get scholarship money as a result of their Science Fair win, even though this was Quentin's plan from the very beginning. Even Homer, who'd vowed never to accept his parents' charity, goes to college on his mother's dime, not because of his own hard work. Overall, we see that academic success doesn't immediately translate into scholarships or lucrative careers. The universe simply doesn't work out this neatly, Hickam suggests—life is unfair.



With college about to begin, the BCMA decides to say goodbye in style, by launching their remaining **rockets** into the sky. Quentin proposes that they should launch the rockets from above the ground, first lifting them high with a helium balloon so that they attain a height of many miles. The BCMA announces a final rocket launch at Cape Coalwood, and Homer prepares his final rockets.

On the first Saturday in June of 1960—the day of the final **rocket** launch—Homer is sad to see Homer Sr. walk to the mine for his usual schedule instead of attending. At the launch, there are hundreds of people—one of the biggest crowds in Coalwood history. People have come from across the county for the event. Homer also notices Miss Riley, Jake, and Mr. Turner.

The BCMA launches Auks XXVI-XXX exactly as planned, and they attain heights of many miles, wowing the crowd. Finally, Homer announces the launch of Auk XXXI, the final and largest **rocket**. Inside is the same nozzle that Dr. von Braun praised at the science fair. Just as Homer is about to launch the rocket, he hears a noise—it's Homer Sr., taking time off from his schedule to witness his son's achievements.

Homer calls Homer Sr. to his side and asks him if he would like to launch Auk XXXI himself. Homer Sr. is visibly pleased with this offer. He enthusiastically turns the switch that triggers the fuse to light, and Auk XXXI launches high into the sky with a thunderous burst. Homer and the BCMA watch in awe as their **rocket** attains a height of more than six miles, and continues shooting up—to the point where nobody can see it. Suddenly, Billy cries out that he sees the rocket falling to earth.

Homer turns to his father. Homer Sr. is beaming—he praises the **rocket** for being “beautiful.” Suddenly, he begins to cough, and bends over, as though in pain. Gently, Homer tells his father, “You did really good, Dad. Nobody ever launched a better rocket than you.”

The BCMA's decision to have one final rocket launch reminds us that the BCMA wasn't only building rockets for the purposes of ambition and scholarship money—they also enjoyed putting on shows, and got intrinsic pleasure out of rocket science.



In the last two chapters, Hickam has challenged our expectations of how the story should end, and here he dashes our hopes once again. It seems as if Homer Sr. won't join Homer for the final rocket launch, even though everything seemed to be building up to such a moment of reconciliation.



This is a major development in Rocket Boys: after hundreds of pages of Homer Sr.'s indifference to Homer's work, he finally shows up for a launch. It's fair for us to ask why Homer Sr. hasn't been to one of Homer's launches before (nobody's that busy), but it's implied that Homer Sr. has a hard time admitting that he was wrong—thus, he's struggling to show his support for his son while also saving face. In the end, his love for his son seems to win out.



The final rocket launch of the BCMA is hugely successful, and deeply symbolic. The rocket shoots so high that it seems to hang in the heavens without falling to earth—in essence, it defies all expectations. One might say the same of Homer's life and career.



In this touching scene, the tables turn. We'd expected Homer Sr. to praise his son: to compliment him on his rockets, and admit that he's been secretly rooting for Homer all along. Instead, it is Homer who compliments his father. Perhaps this suggests that there will always be a gap between Homer and Homer Sr.—and Hickam also suggests that Homer has finally reached a new kind of maturity. Instead of begging his father for approval, he now calmly praises his father, refusing to feel sorry for himself any longer. At the same time, Homer Sr. swallows his pride and allows himself to appreciate the beauty of his son's work. Homer Sr.'s coughing at this moment is also symbolic, as suddenly he seems like the weak one, both physically and emotionally, while Homer takes on the role of maturity and strength.



EPILOGUE

Homer explains that all of the BCMA members went on to college—something inconceivable before the age of Sputnik. Roy Lee became a banker, O'Dell became a farmer, and Sherman died, tragically, of a heart attack when he was only 26 years old. Billy, Quentin, and Homer became engineers. Jim became a hugely successful football coach. Homer admits that he's enormously proud to be Jim's brother.

Homer continues to explain what happened to the characters in *Rocket Boys*. "Dorothy"—which he admits is a false name—became a wonderful wife and mother. When Homer saw Dorothy again, 25 years later, he found that he still loved her. Miss Riley died of cancer at the age of 32, in 1969.

Homer, inspired by his dreams of lunar colonization and global freedom, fought in Vietnam. He never met Dr. von Braun, who died of cancer in 1977. In 1981, Homer finally became a NASA engineer in Alabama, at von Braun's old headquarters. Homer often went to Cape Canaveral to watch space shuttle launches. He even traveled to Russia to meet with the engineers who launched Sputnik. In short, his NASA career was "everything I hoped and dreamed it would be."

Homer Sr. continued to work at the mine for years, despite his damaged lungs. He was forced to retire at the age of 65, at which time he continued to work as a consultant for the mining company for another five years. Finally, he joined Elsie at the house in Myrtle Beach.

Hickam isn't writing a work of fiction, and this means that not everyone lives "happily ever after." Sherman's sudden death comes as a shock, as does Homer's admission that he's proud to be Jim's brother. We've seen Homer make moral progress throughout, learning to respect people with whom he has considerable differences. By finally voicing his love and respect for Jim, Homer proves that he comes of age.



The women in Rocket Boys simply don't have the same opportunities as men: they inspire great, productive careers, but they don't always have successful careers themselves. This is especially noticeable in the case of Dorothy—she was as ambitious as Homer, and much better at math, yet Dorothy never became an engineer. The BCMA remained a "boys' club," a microcosm of the sexism inherent in American society (especially in scientific fields, and especially at the time). Miss Riley's death is also heartbreaking—she devotes her life to helping young people learn, and yet doesn't get to do so for more than a decade.



Rocket Boys isn't the entire story of Hickam's life—his experiences in Vietnam would make for a whole other book— but it's enough for Hickam to say that his dreams of working at NASA came true. In essence, he's saying that he, at least, lived "happily ever after."



Homer Sr. continues to be stubborn and stoic, working in the mine long after any other man would retire. Yet he doesn't forget about or abandon Elsie, and eventually, he seems to recognize that his family is as important as his profession.



In 1989, Homer received news from Elsie that the mines at Coalwood were finally shutting down. When Homer talked with his father on the phone, Homer Sr. sounded healthy and confident—nevertheless, Elsie told Homer that Homer Sr.’s lungs were rapidly deteriorating. Within a few days, Homer Sr. was dead. Homer flew back to West Virginia, strangely comforted by the fact that he wasn’t present for his father’s death. Since leaving Coalwood, Homer wasn’t close with his father—they rarely talked except on vacations and over the holidays. When he spoke to the doctors, Homer learned that Homer Sr. had died of lung failure, and that he’d refused all medical help up to the very end of his life.

After Homer Sr.’s death, Homer looked through the old boxes left at his parents’ house in Coalwood. Among these boxes, he found one labeled with his name. Inside, he was amazed to find his old science fair prizes, along with a beautiful **rocket** nozzle.

In 1997, Homer’s friend, Dr. Takao Doi, carried one of Homer’s science fair medals aboard the space ship Columbia as it launched into space. Homer was thrilled: “the BCMA was finally going into space.”

Homer contemplates Coalwood. The town is largely abandoned now: without a mine, there are few residents left, and the old community places—the Club House, for example—are old and decayed. Nevertheless, Homer maintains that “Coalwood still lives” in the hearts of those who remember it fondly. Coalwood will always live on, he concludes, for the BCMA—who remember their childhoods, during which they were inspired by the love of their friends, their teachers, and their fellow townspeople.

Homer and Homer Sr. simply don't have a close relationship. In this sense, Hickam resists the urge to give his story a happy ending—the unfortunate reality is that Homer's efforts to please his father don't pay off. Homer Sr. continues to view rockets and NASA with suspicion, despite his son's work. In the end, there's something almost self-destructive about Homer Sr.'s stubbornness—he denies himself the chance to be happy. This is aptly symbolized by the manner of his death. Even though he's surrounded by people who want him to be happy, Homer Sr. persists in refusing medical help and making himself feel pain.



While he's not especially close with his parents, Homer now recognizes that they do love him and respect his achievements as a scientist—as shown by saving his medals.



Homer's experiences with the BCMA continue to inspire him throughout his life—this is why he insists on taking their old medal into outer space.



Throughout Rocket Boys, Homer has struggled with conflicted feelings for Coalwood. At times he's despised it, considering it a hostile, hopeless place where no sane person would choose to live—but at other times, Homer has seen Coalwood as a friendly place, full of concerned townspeople who want to help others. In the end, Homer comes to something of a compromise: he recognizes that Coalwood is full of good people who have helped him along the way to NASA, but he also concedes that for a scientist like himself, Coalwood could never be a lasting home. For most of the memoir, Homer has wanted to escape Coalwood, but now that he's long gone, Hickam looks back on his hometown with a sweet, melancholy nostalgia.





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