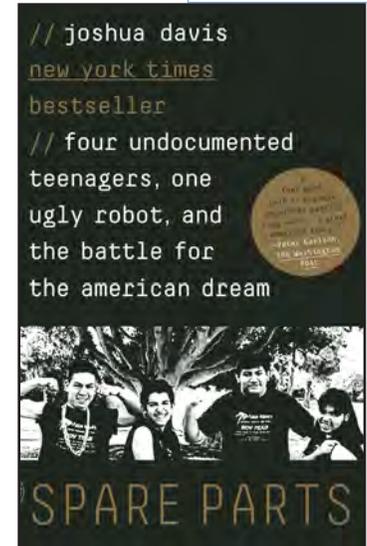
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Spare Parts

Four Undocumented Teenagers, One
Ugly Robot, and the Battle for the
American Dream

by **Joshua Davis**



240 pages

ISBN 978-0-374-53498-1

“It’s the most American of stories: how determination and ingenuity can bring triumph over long odds. There are too few stories like these written about Latino students. Poignant and beautifully told, *Spare Parts* makes you feel their frustration at the obstacles and indignities faced by Cristian, Lorenzo, Luis, and Oscar—and to cheer as they rise to overcome each one of them.”

—Sonia Nazario, author of *Enrique’s Journey*



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TO THE TEACHER

Spare Parts traces four undocumented Latino high school students, all born in Mexico but raised in Phoenix, from their anxious moments of arrival and individual efforts at assimilation in this country to their inspiring victory at a national underwater robotics championship (the Marine Advanced Technology Education ROV competition) at the University of California, Santa Barbara.

An incredible yet true story that was first told in a piece for *Wired* magazine, has been the basis for two different feature films (one a Hollywood drama, the other an independent documentary), and is widely read and studied in classrooms across the United States, *Spare Parts* is a memorable and multidimensional profile of four young men who found confidence in the face of failure, academic achievement in a world of low expectations, and both acceptance and triumph amid widespread poverty, fear, immigrant-bashing, and violence. In his graceful yet grounded story of Oscar, Lorenzo, Cristian, and Luis, author Joshua Davis takes us to the very crossroads of immigration and education in America today. And we as readers discover, on reaching that crossroads, not just what it means to be a 21st-century American but also, perhaps, where America’s STEM-driven future really resides.

“An unforgettable tale of hope and human ingenuity. Against a backdrop of urban desert decay, a faltering school system, and our country’s cutthroat immigration policies, Joshua Davis offers a moving testament to how teamwork, perseverance, and a few good teachers can lift up and empower even the humblest among us.”

—Héctor Tobar, author of *Deep Down Dark*

“A great feel-good tale of scrappy underdogs beating long odds. But there’s more to the story, and *Spare Parts* illuminates the human side of two polarizing political issues: immigration and education Delightful A great American story.”

—Peter Carlson, *The Washington Post*

“Davis is a master storyteller. It’s hard to imagine anyone not pulling for these kids and not caring about what happens to them To people who truly believe that America and Americans can’t show compassion to illegal immigrants or that all illegal immigrants are ‘lazy’ and are here to ‘leech off the government’, hopefully this book will provide another perspective. Nothing about immigration is simple, and Davis certainly doesn’t suggest any quick fixes or serve up any platitudes. But in a world where the media often seems more interested in highlighting the negative rather than the positive, Davis’ book, which manages to do both, is a most welcome read.”—Catherine Ramsdale, *PopMatters*

“This is important reading Young adults will benefit from reading and discussing this realistic, eye-opening chronicle Davis pulls no punches as he describes the grim sociopolitical atmosphere that allows the oppression of talented people for no morally acceptable reason. The four young inventors and their struggles helped spur the DREAMers movement.”—Donna Chavez, *Booklist* (starred review)

“Perhaps the most gripping popular-science book I have read.”—Noel Sharkey, *Nature*

“*Wired* contributing editor and *Epic* magazine co-founder Davis explores the lives of four teenagers who could have easily fallen through the cracks but instead managed to channel their creative energy into a preposterous victory in a much-regarded robotic competition. The author lets the narrative grow organically: Nothing came easily; brainstorming didn’t save the day, but ingenuity did; there was anger, poverty and neglect, as well as the quandary of U.S. immigration policy [This is] both heart gladdening and a challenge to start making sense of national immigration policy.”—*Kirkus Reviews*

This teacher’s guide is intended to help educators use *Spare Parts* in their classrooms. The guide is divided into two parts, “Understanding the Narrative and Themes of This Book” and “Discussing and Studying This Book as a Class.”

The first part will help students follow and grasp the book’s major points and plot lines, while the second will help them explore and explicate *Spare Parts* alongside their classmates. Finally, please note that this guide has been written to adhere to the Common Core State Standards Initiative. After each question below, the Common Core Standards relating to said question are listed parenthetically—and all of the questions appearing in this guide pertain to the English Language Arts Standards (Grade 11-12) for History/Social Studies, Reading: Informational Text, Writing, and/or Speaking & Listening. Note that while we have listed the Grade 11-12 standards as examples, *Spare Parts* has a reading level of 7th grade and up, and would thus also fit well in other grades.

1. Early in this book, we learn that Lorenzo would often spend hours after school watching his grandfather, Hugo, repair automobiles. How did this experience teach Lorenzo, as noted on p. 14, “to think outside the norm . . . [and to realize that] an usual idea wasn’t necessarily bad”? And where, over the course of *Spare Parts*, do we see Lorenzo employing his off-the-wall thinking in an especially beneficial or successful way? Cite a few examples as it occurs throughout the book. (CCSS.ELA-LITERACY.RI.11-12.1, CCSS.ELA-LITERACY.RH.11-12.2, CCSS.ELA-LITERACY.RH.11-12.3)

2. Explain the “overpass” metaphor appearing on p. 40 (and elsewhere). What does this freeway overpass symbolize to the eleven-year-old Oscar? Why does it matter so much to him; why does he keep thinking about it? (CCSS.ELA-LITERACY.RI.11-12.4)

3. A bit later in the narrative, we find that Oscar—by now an outstanding Junior Reserve Officers’ Training Corps cadet—has memorized the Preamble to the U.S. Constitution. After reading this document yourself, explain why Oscar would want to commit it to memory—especially after he’s been told that, as an illegal immigrant, he won’t be allowed to enlist in the Army. (CCSS.ELA-LITERACY.RI.11-12.7; CCSS.ELA-LITERACY.RI.11-12.8, CCSS.ELA-LITERACY.RI.11-12.9)

4. Describe Fredi “Ledge” Lajvardi and Allan Cameron. Where is each man from, and why did each decide to become a teacher? Also, how did each of them end up on the faculty of Carl Hayden High School? What obstacles did each overcome in order to become an educator? Explain how the unorthodox teaching styles exhibited by both Fredi and Allen contributed so crucially to their mentoring of Cristian, Lorenzo, Luis, and Oscar. (CCSS.ELA-LITERACY.RI.11-12.1, CCSS.ELA-LITERACY.RI.11-12.2, CCSS.ELA-LITERACY.RI.11-12.3)

5. Paraphrase the visit to Niagara Falls made by a group of students from Phoenix’s Wilson Charter High School in 2002. Why were these kids traveling to the falls in the first place? What problems did they encounter after they arrived? And why does this incident loom over the rest of *Spare Parts*, especially in regard to Cristian and his mother? (CCSS.ELA-LITERACY.RI.11-12.3, CCSS.ELA-LITERACY.RI.11-12.5, CCSS.ELA-LITERACY.RH.11-12.2)

6. Define the following terms, explaining how each pertains to the book’s robot-building narrative: “pulse-width modulation” (p. 6), “trebuchet” (p. 77), “ROV” (p. 85), “refraction” (p. 99), “thermocouple” (p. 104), “submersibles” (p. 109), and “torque” (p. 123). (CCSS.ELA-LITERARY.RI.11-12.3, CCSS.ELA-LITERARY.RI.11-12.4)

7. “Everyone looked at Luis,” we read on p. 112. “He looked calmly back at everyone else. It was as if the oracle had spoken.” Who or what is “the oracle”? And why is Luis being likened to such? What is it about Luis—his manner, his behavior, or his way of looking at or dealing with the world—that invites this metaphor? (CCSS.ELA-LITERACY.RI.11-12.4, CCSS.ELA-LITERACY.RI.11-12.6)

8. One of the remarkable things about *Spare Parts*—as a true story of know-how and accomplishment, of succeeding far beyond everyone’s expectations—is how Cristian, Lorenzo, Oscar, and Luis all bring their individual talents and personal strengths to the Carl Hayden robotics team. The whole really is greater than the sum of its parts; the four boys on this team attain success—amazing success, at that—only because they work, think, and achieve together, always pooling their resources. Describe the individual resources that Cristian brings to this team, considering, for example, his “change the acceleration curve” remark on p. 143. How does Cristian in particular contribute to the foursome? (CCSS.ELA-LITERACY.RI.11-12.3, CCSS.ELA-LITERACY.RH.11-12.2)

9. At the end of Part Two of this book, Lorenzo looks at a group of people picking watermelon near the town of Blythe, California. Why is he so haunted by what he sees? (CCSS.ELA-LITERACY.RH.11-12.2)

10. Who or what is Stinky? And how did it acquire this fragrant nickname? Also, given its decidedly “low-tech approach to engineering” (see p. 176), why is Stinky awarded the design prize at the 2004 Marine Advanced Technology Education ROV Competition? (CCSS.ELA-LITERACY.RH.11-12.1, CCSS.ELA-LITERACY.RI.11-12.4)

11. When the four Latino heroes of *Spare Parts* are asked to tell their amazing, real-life story to ABC-TV’s “Nightline,” they are uncertain about whether they should do so. Why are they unsure? And what does Oscar mean when he says, on p. 187, “This is a Rosa Parks moment”? (CCSS.ELA-LITERACY.RI.11-12.3, CCSS.ELA-LITERACY.RI.11-12.4, CCSS.ELA-LITERACY.RH.11-12.9)

12. After the underwater-robotics team wins it all in Santa Barbara—and, indeed, after various other Carl Hayden robotics squads prove victorious at other competitions—we read on p. 189: “The robotics program became a pathway to college Fredi and Allan may have succeeded in giving their immigrant students new dreams, but often the reality was that those dreams were impractical [Fredi] might be able to inspire and train extraordinary engineers, but the world didn’t seem to want them.” Expand on this point. Why, for example, does Cristian eventually decide to drop out of Arizona State University? And why does Oscar—after hearing President Obama speak, no less—decide to deport himself? (CCSS.ELA-LITERACY.RH.11-12.1, CCSS.ELA-LITERACY.RI.11-12.3)

13. In 2009, as we find on pp. 193-4, Lorenzo gives a realtor the keys to the home where he and his family live in Phoenix. After visiting this home, the realtor obtains a bottle of rubbing alcohol and immediately douses his feet and legs. Were you, as a reader, surprised by this? Why or why not? (CCSS.ELA-LITERACY.RH.11-12.1)

14. What is the DREAM Act—and what does “DREAM” stand for? Why do some lawmakers in Washington, DC, support this legislation? Why do others continue to oppose it? And how did Oscar, in the fall of 2010, become a “poster child,” as it were, for those in favor of the DREAM Act? (CCSS.ELA-LITERACY.RH.11-12.2, CCSS.ELA-LITERACY.RI.11-12.3, CCSS.ELA-LITERACY.SL.11-12.3)

15. Define and critique Arizona’s “Proposition 200,” “Proposition 300,” and “State Bill 1070.” Why were these three laws created? And why do certain voters and lawmakers in Arizona support them? How have these laws directly affected the lives of Oscar, Cristian, Lorenzo, and Luis? (CCSS.ELA-LITERACY.RH.11-12.2, CCSS.ELA-LITERACY.RI.11-12.3, CCSS.ELA-LITERACY.SL.11-12.3)

1. It’s clear that the “spare parts” denoted in this book’s title refer to the expendable, relatively inexpensive materials that Oscar, Cristian, Lorenzo, and Luis use to build their award-winning underwater robot: the PVC piping, the plastic briefcase, the balloon, etc. However, having read the book, do you think “spare parts” also refers to these four boys themselves? Write a short paper discussing whether and how this could be so, citing examples from the book in support of your argument. (CCSS.ELA-LITERACY.RI.11-12.1; CCSS.ELA-LITERACY.RI.11-12.3; CCSS.ELA-LITERACY.RI.11-12.4, CCSS.ELA-LITERACY.W.11-12.1, CCSS.ELA-LITERACY.W.11-12.9)

2. The four boys at the heart of this account were all born in Mexico but raised in Phoenix. And they all met and eventually became friends, of course, at Carl Hayden Community High School. What do we as readers learn about this school? What sort of learning environment does Carl Hayden offer, at least in general? What kinds of kids attend the school—that is, culturally, ethnically, and economically? What sort of neighborhood does Carl Hayden exist in, and how does it reflect changes that have occurred over the past generation or two in Phoenix itself? As you discuss these questions with your classmates, compare and contrast Carl Hayden with your own high school. (CCSS.ELA-LITERACY.SL.11-12.1, CCSS.ELA-LITERACY.RH.11-12.8)

3. Roger Barnett, Pat Buchanan, Sheriff Joe Arpaio, and so on—several people profiled in this book don’t just dislike illegal immigrants, or don’t simply feel that they’re harmful or dangerous to America. Rather, they actively despise the undocumented migrants who come to this country, for whatever reason, from Mexico; they are intensely focused on demonizing as well as eradicating illegal aliens. Based on what you’ve read in *Spare Parts*, and on whatever relevant outside research you can conduct, write a page or two paraphrasing why people like Barnett,

Buchanan, and Arpaio are so extremely acrimonious on this point. Where is their spite and anger coming from? What is it based on; what is it rooted in? Try to be as specific and factual as you can; explicate this hateful passion, but don't partake of it. (CCSS.ELA-LITERACY.SL.11-12.4, CCSS.ELA-LITERACY.SL.11-12.5, CCSS.ELA-LITERACY.W.11-12.9)

4. Why is Luis, just after he develops a fondness for cooking and baking, so intent on preparing “a classic American roast turkey”—that is, a turkey to be served without mole sauce (p. 83)? Talk with your classmates about how the universal need to assimilate is depicted in *Spare Parts*; explore the ways in which various people in this book choose their own cultural identities, deciding for themselves who they want to be. Cite passages from the text in defense of your views. (CCSS.ELA-LITERACY.W.11-12.9, CCSS.ELA-LITERACY.RI.11-12.1, CCSS.ELA-LITERACY.RI.11-12.3)

5. Why does Fredi suggest to Allan that their underwater-robotics team ought to compete in Santa Barbara at the college level—instead of the high school level, where they'd normally be ranked? Is it apt to see Fredi's suggestion as indicative of this book's theme of adjusting one's goals or expectations—or even forging a totally new path—in order to succeed? Discuss this matter, and discuss manifestations of this theme throughout *Spare Parts* with your fellow students. (CCSS.ELA-LITERACY.RI.11-12.1, CCSS.ELA-LITERACY.SL.11-12.1, CCSS.ELA-LITERACY.SL.11-12.4)

6. Another major theme in this book must be “The American Dream” —or, if you prefer, “El Sueño Americano.” Indeed, the ways in which this Dream relates to both education and immigration today—in Arizona, and everywhere else—seems like the obvious larger context or overall background at hand. Has this Dream changed? Why or why not? And does The American Dream mean something different to immigrants than it does to those born here? And now, having read and thought about *Spare Parts*, has your own understanding of this Dream been altered? Debate these questions with your fellow students. (CCSS.ELA-LITERACY.RI.11-12.1, CCSS.ELA-LITERACY.SL.11-12.1, CCSS.ELA-LITERACY.SL.11-12.4)

7. Another major theme in this book must be “The American Dream”—or, if you prefer, “El Sueño Americano.” Indeed, the ways in which this “Dream” relates to both education and immigration today—in Arizona, and everywhere else—seems like the obvious larger context or overall background at hand. Has this “Dream” changed? Why or why not? And does “The American Dream” mean something different to immigrants than it does to those born here? And now, having read and thought about *Spare Parts*, has your own understanding of this “Dream” been altered? Debate these questions with your fellow students. (CCSS.ELA-LITERACY.RI.11-12.1, CCSS.ELA-LITERACY.SL.11-12.1, CCSS.ELA-LITERACY.SL.11-12.4)

8. On p. 155, while looking over at the MIT robotics team that he and his friends from Carl Hayden are about to compete with, Lorenzo thinks: “I've never seen so many white people in one place.” He also thinks that the MIT ROV team looks

“like the embodiment of power.” What does he mean? Cite an outside source of your own choosing—a poem, play, novel, or short story, perhaps—that gives us as readers this same perspective (namely, the point of view of a non-white outsider or underdog who’s about to square off, in any sort of contest or battle, against a white/Anglo-Saxon ruler). Compare your cited work with those chosen by your classmates, referring to any other ways in which your own choice might echo *Spare Parts*. (CCSS.ELA-LITERACY.SL.11-12.1.A, CCSS.ELA-LITERACY.RI.11-12.1, CCSS.ELA-LITERACY.RI.11-12.7)

9. Author Joshua Davis thus enters the story on p. 186: “In April 2005, I published an article in *Wired* detailing the 2004 MATE championship in Santa Barbara.” Write a short paper discussing the role that Davis plays in this narrative. What is his tone, his perspective, his stance or position? Consider, for example, that readers of his *Wired* article subsequently send in money so that Oscar can attend Arizona State University on a full-time basis. But also consider how carefully Davis reports on the book’s various education and immigration matters, and how he therefore gives “both sides” of these issues (telling us not just what becomes of the four Latino protagonists from Carl Hayden post-Santa Barbara, for instance, but what becomes of their MIT counterparts, too). In your short paper, above all, describe how Davis as a reporter/participant affected your own reading of this book, how he as a writer shaped what you did or didn’t glean from the text. (CCSS.ELA-LITERACY.RI.11-12.5, CCSS.ELA-LITERACY.RI.11-12.6, CCSS.ELA-LITERACY.SL.11-12.3)

10. “Opponents of the DREAM Act view immigrants as competitors for finite American resources,” we read toward the end of the book, on p. 220. According to such opponents, American citizens who want to attend college, or acquire financial aid for college, or the like, should not have these privileges effectively taken away by immigrant college students who are in the U.S. illegally. But look back to p. 49, where Glenn Goings, Oscar’s instructor in the JROTC program at Carl Hayden, reverently cites the Emma Lazarus poem at the base of the Statue of Liberty: “Give me your tired, your poor, / Your huddled masses yearning to breathe free. . . .” Is this famous poem—written in 1883—a valid argument in support of the DREAM Act? Is it a viable and sensible position to take, for those who want to aid or assist the DREAMers? Or is taking such a position, in this day and age, basically naïve? Locate and read the entirety of “The New Colossus,” which is the title of the Lazarus poem in question, and then discuss this point with your classmates. (CCSS.ELA-LITERACY.RH.11-12.1, CCSS.ELA-LITERACY.RH.11-12.2, CCSS.ELA-LITERACY.RI.11-12.4, CCSS.ELA-LITERACY.RI.11-12.9)

11. Listen to this brief personal essay by Barbara Olachea, a DREAMer who recently graduated from Alhambra High School in Phoenix: <https://hereandnow.wbur.org/2015/05/28/dream-act-college>. Then, considering Barbara’s remarks—and considering the experiences of the four protagonists of *Spare Parts*—discuss why, as Barbara says, the children of immigrants “have to try harder than everybody else.” Is it fair to equate this idea of trying harder with the notion of “exploration” that is cited in the epigraph for *Spare Parts*? Discuss why, or why not, and note that this “exploration” quote also appears on p. 94. (CCSS.ELA-LITERACY.RH.11-12.2; CCSS.ELA-LITERACY.RH.11-12.3; CCSS.ELA-LITERACY.SL.11-12.1)

12. Conclude your discussion of *Spare Parts* by looking back to what must be one of its greatest moments—the point in the narrative (see p. 216) where Oscar gets to, at long last, join the Army. We see this driven, resourceful, and indefatigable young gentleman and leader “becoming part of something bigger than himself: the Army, the country, and an idea about how people should live together.” Describe this “idea” in detail; compose a short essay in which you both paraphrase and illustrate this idea, or at least your own understanding of it. (CCSS.ELA-LITERACY.RI.11-12.1, CCSS.ELA-LITERACY.RI.11-12.2, CCSS.ELA-LITERACY.RI.11-12.4, CCSS.ELA-LITERACY.W.11-12.1, CCSS.ELA-LITERACY.W.11-12.2, CCSS.ELA-LITERACY.RH.11-12.2)

ABOUT THE AUTHOR

Joshua Davis is a longtime contributing editor at *Wired* and the co-founder of *Epic* magazine. He is also the author of *The Underdog*, a memoir about his experiences as an arm wrestler, backward runner, and matador. In 2014, his work for *Wired* was nominated for a National Magazine Award for feature writing. Davis has also written for *The New Yorker* and other periodicals. He lives in San Francisco with his family.

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