

Book Review:
School of Dreams
by Edward Humes

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What can happen when a Pulitzer Prize-winning journalist spends a year in a top-ranked public high school—a school where a majority of the student body has near-perfect SAT scores and dreams crowded with science-related career pathways? Author Edward Humes did just that—he immersed himself in the daily life of Whitney High School where students, parents and teachers struggle to co-exist in a high-achievement marathon. Whitney High is a 7-12 school near Los Angeles where learning, Ivy League college admissions, family reputations, and student dreams are all at stake, and where many of the high-achieving adolescents have science career aspirations in their blood. Humes tells a story that uncovers the complexities of life for some of America's top high school scholars.

Certainly the best place to start is where Humes himself began, by introducing Rod Ziolkowski, one of Whitney students' favorite people and their only physics and digital filmmaking teacher. Humes uses teachers and their classrooms from across the curriculum to paint a rich picture of life at Whitney High, but it is through the interplay with Ziolkowski and his thoughts, conversations, and classroom vignettes that we learn about students' and parents' science-related goals, understandings, struggles, and successes.

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As early as the book's prologue we meet "Mr. Z," as his students call him:

When he's on a roll, they crowd around him as if sitting at a campfire listening to ghost stories, except he's riffing on the mysteries of light or gravity. There's almost always a hodgepodge group of kids hanging out in his lab, building robots or writing computer programs or trying to figure out why their force-and-distance equations for the water-balloon catapult Ziolkowski built from Home Depot scraps keep coming up thirty meters short.

Humes' descriptive writing engulfs you in the moment. As science educators we are at once drawn in and made to feel very comfortable with Ziolkowski, a talented and committed teacher who is constantly probing within to better reach his students. He is a teacher with a rich personality—a man with high expectations of self and of students, a science teacher stretching to define what we should be offering students, a comedic fellow with a booming boisterous voice, and an educator not afraid to speak his mind—to students, colleagues, administrators, and parents. He is a unique teacher who epitomizes the type of person that Principal Tom Brock is looking for to engage Whitney's young people.

When parents bring their children to school with expectations of entrance to Stanford, Berkeley, Harvard, and Princeton, life is never slow or dull. In fact, the students Humes describes are highly driven, strongly motivated and frequently exceedingly caffeinated. The stakes are high and the students are goal-oriented, but this environment is far from stress-free. In one passage Humes writes:

One of the conundrums facing Whitney's teachers and administrators lies in balancing genuine learning and experience of academic subjects with the sometimes conflicting need to shine in objective measures of a school's success—test scores, AP offerings, GPAs.

For example, Humes shares with us the struggles Rod Ziolkowski has first with himself and then with his students as he contemplates and implements a non-traditional, collaborative learning, quarter-long challenge with his honors physics class. He wants these very bright students to be in a position to contribute to knowledge and insight rather than simply soak up information from the teacher and books.

They'll [his students] say, "Mr. Z, tell us what chapter to read, give us the lecture, and we'll ace the test." And they will. Just about every time. They are test-taking machines. But Ziolkowski has in mind a new sort of challenge, something unpredictable, independent, outside the box, where the usual test-taking strategies and all-night cram sessions won't cut it. "Next Quarter," he tells his class, "we're going to do something com-

pletely different. You are going to teach me. And it's going to be totally cool."

Basically, Ziolkowski gives his grade-driven honors physics students a problem to solve. One day, just after his students had settled in for class, Ziolkowski, in his Mr. Wizard-like way, takes a 35mm film canister, drops in an Alka-Seltzer tablet, pours in a small amount of water, quickly snaps on the lid, and puts the whole thing into a cannon-like piece of plastic PVC tubing sitting angled out over the students' heads. Seconds later the canister is rocketing across the room to the glee of all present. Ziolkowski tells his honors students that for the next six weeks they will study the physics behind the film-canister missile. There will be no other homework and no tests. He continues by explaining that they can choose to do anything they wish so long as they are able—at the end of the six week period—to predict how far the canister will fly and where it will land repeatedly, regardless of the amount of Alka Seltzer or water placed inside. They must show an understanding of the physics behind the canister-problem by creating a computer model based on the fundamental laws of physics and make a PowerPoint presentation of their models, equations and experiments to showcase their understanding.

We won't tell you the details of what transpires during that six-week period, but it is safe to say that what happens next is a tale that offers the reader a look straight into the many faces and hearts of Whitney's most promising students. Humes allows you to see the struggles within groups of students and individual students as they thrash about with this novel unbounded learning challenge, grapple with physics content with new ownership, and begin to rely on self and others not simply for studying for a test, but for learning with a purpose. Through this six-week period Humes is able to uncover the best and worst of daily life at Whitney High for high-achieving science students pushed into unfamiliar learning territory. Along the way, we are also privy to the frustrations of Ziolkowski as he struggles with this learning experiment from his role as coach and consultant rather than lead-facilitator of the physics learning.

During Humes' year at Whitney he spent hours in classes, after school activities, and countless discussions with students, teachers, administrators, and parents. He even served as a teacher facilitator for those students preparing their college admissions essays. An excerpt from Angela's self-reflective college application essay showcases how many Whitney students tussle due to the dichotomy between parents' visions for their children's futures and students' personal interests and goals.

"And as we slaved away at quantitative comparison problems and

ground out analogies, as we suffered unspeakable cramps in our hands and cut up thousands of flash cards, no one ever let us forget the goal of those [SAT] numbers—our potential tickets to the great lottery of life...” She can still hear her mother’s words, pricking old wounds: “Don’t you want to go to college? A good college?” ...All the while, silent fears gnawed at Angela that she just might not be (or, worse, might not want to be) Stanford or Ivy League material. Even admitting this privately felt like sacrilege, speaking it to her parents was out of the question.

The stresses and inner conflicts for students can often run high, but Humes’ overall findings reveal a school where learning is elevated to a top priority as the school’s, parents’ and students’ educational goals align and add up to much more than the sum of their parts. He notes that there are other schools across the nation similar to Whitney—not many, but certainly some—and they share some important commonalities:

They are small, intimate, attentive schools that are marked by high expectations put to work in tangible ways; rigorous traditional studies; longer hours of study and work; strong parental involvement; low absenteeism and few discipline problems; and leadership with a vision.

What a story Humes has to tell! Budding scientists, poets, mathematicians, artists, politicians, doctors, lawyers, historians, engineers, journalists and so many more. *School of Dreams* is a book that opens a door into the best of what the future has to offer, yet Humes paints us a real picture of a distinguished school where young people and their teachers struggle daily with classroom learning under pressure. In the end, there are many successes. As educators there is much we can learn from schools such as Whitney, and Humes offers us the first step in beginning to understand the complexities of this *home* for learning—especially excellent science learning.