

Zian Shi
Grade 10

Hobbies: Hiking, Kayaking, Catan, Coding random scripts, Go, Applying DFS to Wikipedia :)

Clubs: Science Bowl, Competitive Programming Club (P), Experimental Science Club (VP), Math Circle (assistant instructor), OPhO Committee

Contest/Competition Experience or Honors: US Physics Team 2021, USAJMO Honorable Mention, USACO Platinum

Autobiography:

When passionate people talk about how they managed to be so successful in a subject, they usually weave a tale of ups and downs. One of extreme struggles and how they overcome them. And how they eventually succeeded with determination.

I don't really feel this fits my story. While I have always been interested in science in general, my main path before starting physics was most definitely CS or Math. I believed it, my parents wanted it, and my friends saw it. And that was how things would have usually worked out most of the time. I would have probably ended up cramming competition math every day of my life. I would never have had a single minute of free time -- time to let my mind wander and evaluate my life, time to explore other prospective subjects.

But that's not how it played out. Instead, I lived in the rural community of Fresno, where free time was plentiful and people were carefree (obviously an oversimplification lol). While I initially saw this as a hinderance to my life -- very few people around me shared my level of interest in STEM, and there were a bit fewer resources. Eventually, I came to see this as a blessing, for I discovered a subject that absolutely mesmerized me.

I only started physics in 8th grade. It was initially just "hey I'll take the $F=MA$ for fun" effort. As time passed, however, I found that physics just clicked. It wasn't a sharp, distinct click of a metronome, but rather the long, continued note of a violin bow. Physics just flowed naturally. Conclusions, results, and models seemed obvious and intuitive, not just a bunch of equations. Even though the only resource I had access to were public online books, I managed to make camp in my first year. No struggles, no late nights cramming textbooks, no solving 100 problems a day. But there was no denying it: I did have a good understanding.

My urge to pursue physics reached even greater heights this year. What jump-started the whole thing was a really great research opportunity at a local university (related to low-temperature calorimetry). Afterwards, my love for physics evolved into a full-blown passion. This time I decided on rigorous preparation and extremely thorough understanding to extend the intuitive sense of physics I developed prior. Though this strategy may sound boring, as time wore on, I found physics to continue to be fun and natural, the connections across subjects and

symmetries pulling me in. This may have been in part due to SPARC (a rationality/effective altruism summer camp). There, I gained the belief that I need to discover what I really want to do, not what others expect me to do. And after some thought, I decided that thing is physics. And so I allocated more of my time to pursue physics and take time from activities I care less about. Though of course I had to make some tradeoffs, I felt I definitely made the right choice.

I would like to thank my family and friends for their never-ending support of my pursuit of physics. I would also like to thank my physics teacher Mr. Kipp for organizing the exams and introducing me to the amazing world of olympiad physics.