



## Building a Better Athlete

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“Everyone deserves to feel the power of crossing a finish line,” says the Challenged Athletes Foundation. Our driving question was: What do athletes need to do to compete at their optimum level? This interdisciplinary project examined the physics behind athletic training through the lens of challenged-athlete Kyle Maynard’s book “No Excuses.” We looked at how athletic clothes affect heat transfer, the interplay of torque and prosthetic limbs, designing a better athletic shoe, and products that allow completion of simple tasks without the use of a limb. Students also interviewed classmates, teachers, parents and community members about overcoming struggles, recognizing that adversity does not discriminate and can always be faced with bravery and courage. In addition, the class visited the Olympic Training center and met with challenged athletes. Finally, students volunteered at the San Diego Triathlon Challenge, hosted by the Challenged Athletes Foundation, and created an exhibition at Road Runner sports.

### Teacher Reflection

This project created an opportunity for students to really integrate physics and humanities in an authentic way. Students learned about the way the human body functions and how those functions can be augmented by technology in the form of prostheses. They were also able to explore the ethical and emotional considerations of challenged athletes through Kyle Maynard’s book and by interacting directly with challenged athletes.

### Student Reflections

Challenged athletes want to be treated like everyone else. They don’t mind if anyone asks them about their “obstacle.” They want to prove that they can do what anyone else can do. —Frida D

This project has changed my perspective of those with physical differences by seeing how they are not really disabled at all. They may have lost a limb or have autism but they go to the Olympics. These people are not disabled in my opinion. They show to millions that they can do regular things that people think would be impossible for them. —John D

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