I’ve always had a fascination for computers and technology,” said Thomas Suarez as he stood onstage, in front of the bright lights and cameras, giving his first TED Talk in Manhattan Beach, California. “And I made a few apps for the iPhone, iPod Touch, and iPad.”

It was October 2011. Thomas wore a light blue, untucked button-up dress shirt with khaki pants. He held an iPad in his left
hand that he used to control the large Keynote slides behind him. His talk was about the importance of giving kids the opportunity to learn how to create and develop apps. “A lot of kids these days like to play games,” he noted, “but now they want to make them.” He gave his 4½-minute speech, livestreamed for the world to see, with an air of confidence that typically comes with the credibility of a college professor or senior engineer. Thomas was neither, but his own credibility was no less impressive. He knew what kids wanted, because he was one.

As twelve-year-old Thomas casually graced the stage and continued his speech, he talked about being inspired by Steve Jobs, and how he was able to use the iPhone’s software development kit to help teach himself how to create apps. “I’ve started an App Club at my school that a teacher there is kindly sponsoring,” he notes. “Any student there can come and learn how to design an app. This is so I can share my experience with others.” I think this is a perfect example of everything discussed so far coming together: potential, motivation, learning, and digital natives’ need to both create and share. It also brings us to the importance of the final piece of my 21st Century ABCs of Learning: coding.

Coding, a.k.a. computer programming, is the language of technology and, I believe, is one of the most important things that we should be teaching kids of all ages. I say this not because I expect all kids to become professional app developers like Thomas, but because the process of learning to code doesn’t just benefit those interested in being programmers or engineers; it benefits everyone. I don’t want to create a world filled with computer programmers, just one filled with people with the ability to think like them when it comes to solving problems. No matter
what a child’s learning style or intelligence type may be, the kind of critical thinking that is learned in coding is greatly beneficial.

**BUT WHY CODING?**

I see coding as an important skill to learn for several reasons, and when it comes to discussing why, I once again tend to start from the inside and work out. On a psychological level, learning to code has been shown to give kids a significant boost in self-confidence. Because coding is popularly seen as being difficult to learn and understand, even learning its most basic tenets can go a long way in helping us believe in our own capabilities and potential. I’ve seen kids with low self-esteem start turning things around after learning a single programming command, such as making a computer figure walk a straight line. Self-confidence leads to improved motivation and, as we’ve seen previously, and as Thomas has kindly reinforced, a highly motivated student has the potential to learn and succeed at anything.

Aside from the psychological benefit of learning to code, it teaches tons of practical skills that have nothing to do with programming computers. For example, learning to code boosts both critical and computational thinking skills, just as some math can. It also allows for the sense of creativity and autonomy that digital natives need. Most important, success in coding can translate to success in other areas. Kids don’t need to learn how to code for the sake of coding; they need to learn how to code because the process of learning how to code is the same process that teaches them to think logically and visually and imparts other important lessons.