

RED BANK, New Jersey (Achieve3000, March 5, 2021). Then, he installed a makeshift antenna on the roof of his house and delivered his first broadcast as "DJ Focus." Doe's broadcasts featured music and news. Most importantly to Doe, though, they served as a platform for the community to share ideas, discuss problems, and work toward solutions. Doe sold advertisements and used the earnings to invest in the station and pay other young people to host shows. Soon, Doe's talent and determination caught the attention of the Massachusetts Institute of Technology (MIT). In 2012, at age 15, Doe was invited to spend three weeks at the university. There he became the youngest inventor ever to participate in its "Visiting Practitioner's Program."

Doe was just 10 years old when he began collecting discarded parts from garbage heaps in his hometown of Freetown, Sierra Leone—a city in West Africa. He started by taking apart an old alkaline battery to see how it worked. Photo credit: John Lamparski/Getty Images

Kelvin Doe became famous for his inventions as a teenager. Eventually, though, Doe taught himself how to transform that trash into technology—lighting up his home, his neighborhood, and the Internet with his inexhaustible determination. A camera crew captured the entire experience, from Doe's first impressions of the U.S. to his enthusiasm, wisdom, and even some homesickness. The following year, Doe lit up the Internet again when he shared the next chapter of his story as a featured speaker at a TEDx Teen event. This nonprofit organization empowers young people in Africa to design innovative solutions to critical issues in their communities.

Kelvin Doe waited until his family was sound asleep before sneaking out of bed and littering the living room with salvaged garbage. He silently tinkered with the bits of metal, broken electronics, and other junk. He built a receiver, an amplifier, a mixer, and a microphone. On that action-packed trip—his first visit to the United States—Doe presented his inventions and worked with researchers. Now a young adult, Doe works with educators, government leaders, and others through his foundation to provide resources for the next generation of changemakers.

The electricity was out, as usual, so the young boy toiled in the shadows of a flickering candle. Because of the area's frequent power outages, Doe wanted to find a way to make batteries to light his family's home. He noticed that even though electrical service was spotty, most people in his community had radios. He also taught engineering students as a guest lecturer at nearby Harvard College. "Creativity is universal and can be found in places where one does not expect to find it," Doe said. "And perseverance and passion are essential to nurturing that creative ability."

He also founded the Kelvin Doe Foundation. It would take time, repeated failures, and many nights of being sent back to bed by his mother. And where others saw discarded junk, Doe saw possibilities. Now he leads a program to encourage other young inventors in Africa. Then, when he was about 13, he used soda, acid, scrap metal, and tape to assemble his own. But Doe didn't stop there. So Doe set out to build his own community radio station, again using parts rescued from trash. He also converted some old equipment into a power generator. Doe quickly became an Internet sensation. He reflected on his experiences and discussed his plans for the future. Doe went further than simply encouraging others with his words, though. Doe was determined to find a solution for the darkness. Money was scarce, but trash was free. And when the video was posted on YouTube, the world took notice. The video racked up millions of hits in just a few weeks. It worked. And it worked! He also shared his advice for putting ideas into action.