

Nicole & Charmaine: Good morning everyone. We are the STEM prefects this year.

Nicole: Hey Charmaine, have you ever watched the movie Iron Man? I remember the protagonist has some machinery implanted in his heart, allowing him to carry out different functions. How extraordinary!

Charmaine: Yes! This reminds me of someone who has created a LEGO-made artificial arm similar to Iron Man!

Nicole: Wait, Is it David Aguilar, who is also known as ‘the real-life Tony Stark’? I remember in 2017, this 18-year-old Spanish inventor created the world’s first functional prosthetic arm made of LEGO pieces. It miraculously detects muscle movements of a person without arms, allowing users to regain the ability to move the upper limbs. They can grab pens or even do push-ups like normal people.

Charmaine: You are totally correct! The prosthetic arm he created is widely available and affordable to all those in need. It is a dream come true for many children who don’t have arms. In fact, Aguilar was also born without a right forearm. Yet, this didn’t bring him down. He mentioned that LEGO was his first toy as a kid, he felt that he could build anything and imagination was the only limit! This optimistic mindset therefore built his determination and dreams of designing prosthetic arms to help limbless children like him.

Nicole: I know he started designing this invention since the age of nine. Although it’s rough, it’s an important starting step for him. For nine years, he ceaselessly created new, improved LEGO models. For example, he improved the arm’s functionality and comfortability by wearing them himself-- the most recent model even has a servo motor which enables people to lift things without straining their muscles.

Charmaine: In fact, STEM is accessible for all of us. Just like David, he conquered all the seemingly insurmountable difficulties, and made his dream come true with the ladder of STEM. Who would have thought that the common LEGO toys could be a suitable material for prosthetic arms? Actually, STEM is also about the desire for improvements, the willingness to learn from failures, the spirit of perseverance, and most-- the bravery to try new things. No one would have thought that a 9-year-old child could build a prosthetic arm on his own, nor the fact that he had persisted for nine years, and he hasn't planned to stop yet.

Nicole: I totally agree with you. In this technology era, we can utilize ample resources to discover new things with STEM. With the use of curiosity, doing research on the Internet can also give you inspiration to do some at-home experiments. Maybe you will encounter hitches in the process, but if we persevere to reach our goals, I'm sure that success will come.

Thank you!