

When forest creatures have a problem, they call an engineer

July 27 2017



NJIT's Joseph Vitale, Gabrielle Grompone and Shaun Delaney are some of the civil engineering and digital design students who created the book *Roxy the Fox* to introduce children to engineering. Credit: NJIT

Charlotte the spider saved a pig's life through clever marketing. The Cat in the Hat rescued children from a dull day indoors with magical powers of destruction and repair. Roxy the Fox, a newcomer to the pantheon of can-do critters, tapped coveted STEM skills to secure new foraging territory for her forest community.

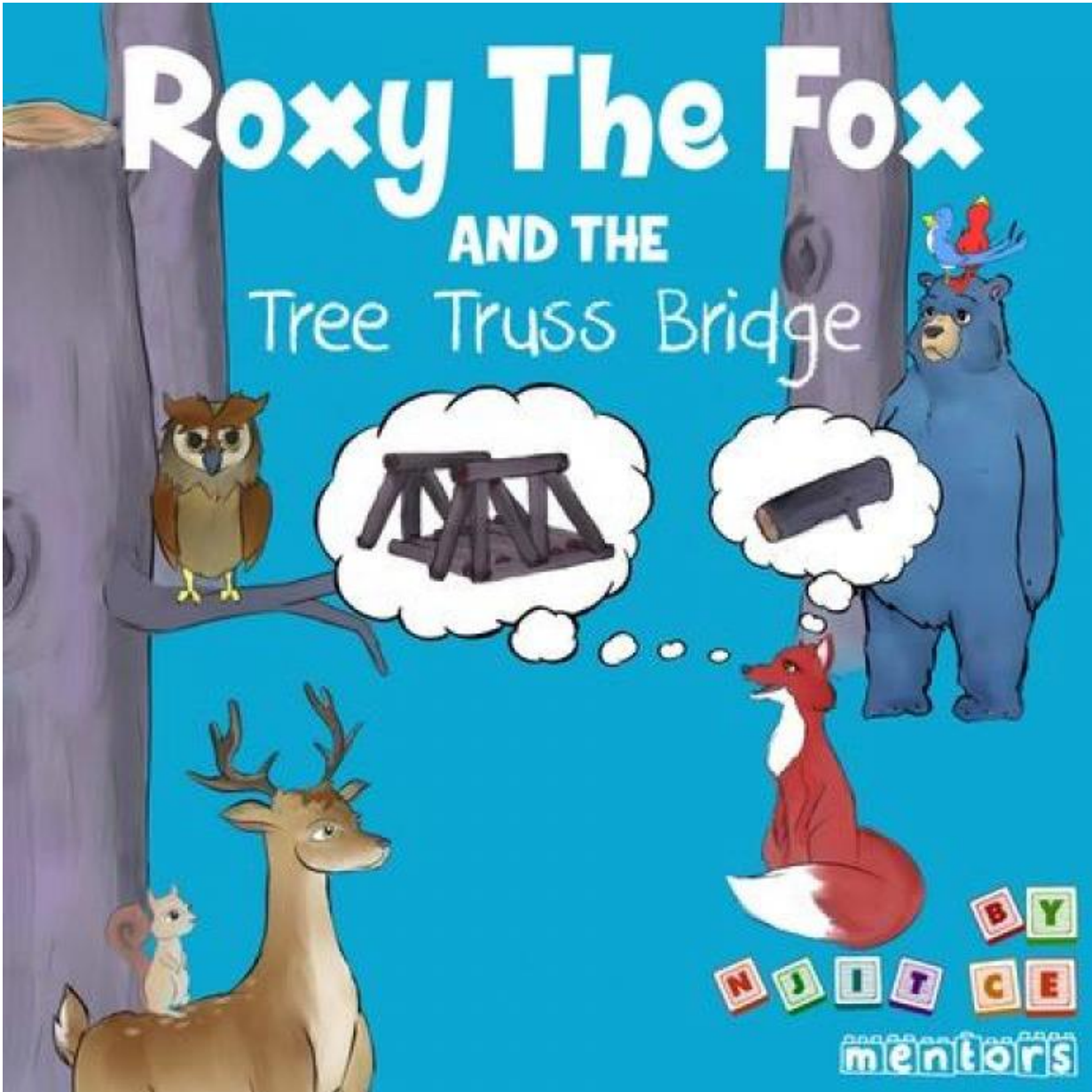
Exactly how? "She's the best [engineer](#) around and the smartest one yet. There isn't a single problem she doesn't get!"

Dreamed up by a team of [civil engineering](#) and digital design students at NJIT, the project-leading fox makes her debut in the recently published "Roxy the Fox and the Tree Truss Bridge." In it, she assembles a design-and-build crew to construct a bridge that will get her mates - bears, squirrels, beavers and deer - to the delicious berries on the other side of a stream.

Engineering skills are indispensable, as any forest creature knows, but also useful and fun. And that is the point of the book, says Gabrielle Grompone '17, the writing coordinator.

"I thought it was a great idea to create a book that tells children what an engineer does," she notes. "It was not until college that I understood what it meant to be an engineer. You go to doctors, so you know what they do, but you don't run into engineers in the same way. I definitely relate to Roxy."

Now in a training program at Skanska and on site at LaGuardia Airport, Grompone says she also enjoyed channeling her inner Seuss in the waning days of college. "My first attempt," she notes.



Credit: New Jersey Institute of Technology

Nate Soto '17 and David Kong '17, both digital design majors, shared illustration duties.

"We looked at a lot of children's [books](#) before Nate started the sketches

and I did the inking and digital printing. We wanted it to be very colorful - like Dr. Seuss," recounts Kong, who is working on freelance projects this summer. "We had both studied illustration in high school and it was fun to go back to 2-D where we started."

Pitched at students from kindergarten through the third grade, the back of the book contains definitions of building terms such as beam, span and civil engineer.

"Education is the greatest thing you can give to someone, and knowing our book can educate and influence is absolutely amazing," says Joseph Vitale '19, the production coordinator, who is interning this summer at T&M Associates in Middletown.

"The day we read the book to students at Abington Avenue Elementary School in Newark, we asked who knew what engineering is and only a few raised their hands. We then asked what a civil engineer does, and even those students had trouble giving a definite answer," he recounts. "After reading the book, we asked the same questions, but had much different results. Almost all the students knew what engineering is and what a civil engineer does. We then asked who wanted to be a civil engineer. Seeing almost all the kids raise their hands - to all of these questions - put the biggest smile on my face."

Thomas Jaworski, the undergraduate academic adviser for the Department of Civil Engineering, proposed the project and then supervised the approximately 10-member writing and production team. "We were all able to contribute to the writing, melding our ideas together," Vitale notes.

Published by Xlibris and available for purchase, a percentage of the proceeds from book sales will be donated to the STEM program in Newark public schools.

Provided by New Jersey Institute of Technology

Citation: When forest creatures have a problem, they call an engineer (2017, July 27) retrieved 8 May 2024 from <https://phys.org/news/2017-07-forest-creatures-problem.html>

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