

## Preparing Youth for Success in the 21st Century

How a 5th grade teacher stepped out of her comfort zone to incorporate innovative STEM technology in her classroom\*

### Challenge

Christine Tarver, a former 5th grade teacher in Merritt Island, Florida, was determined that her students receive the best education possible and was passionate in her efforts to achieve that goal. Unfortunately, after over a decade of teaching, she noticed that students were becoming less receptive toward traditional methods of teaching. She said, “With traditional teaching — when students are working on a worksheet, textbook, or just writing — it’s a mundane task. I have found in my years of teaching that my students aren’t as active in this type of learning. They need more.”

Tarver felt the weight of responsibility in making sure her students advanced their abilities and skills with education technology. She understood that when students experience hands-on learning combined with emerging technologies such as 3D printing, they can develop skills that will prepare them as they grow and mature in the 21st century.

### Key Solutions

In her efforts to find new technology resources and tools to use with her

### BENEFITS

- Increased hands-on learning
- Builds on prior knowledge
- Improved concept mastery
- Easy to incorporate with lessons

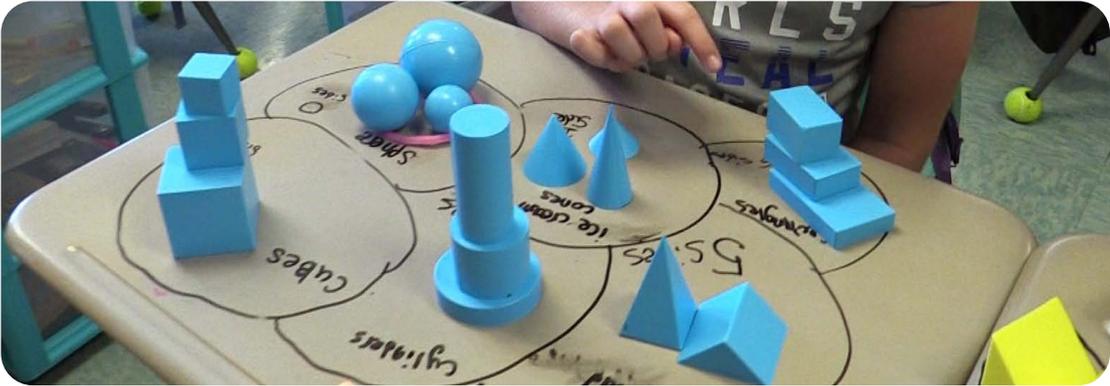
students, Tarver discovered [MyStemKits](#) curriculum. “I feel as though it is part of my responsibility as an educator to seek new technology to incorporate into my curriculum,” said Tarver. “With students so widely immersed in the digital age, MyStemKits presented a way to bring lessons to life for them in a new and exciting way.”

MyStemKits is a collection of over 330 STEM lessons aligned to Next Generation Science Standards (NGSS) and National Common Core Standards. The lessons and Design Challenges work in tandem with a 3D printer to produce 3D-printed manipulatives that help students better understand the STEM concepts and skills being taught. Each MyStemKits lesson includes 3D printable files, a teacher guide, an extensive lesson plan, and student assessments, activities, and handouts.

**KIT USED: Basic Shapes Triangle Kit**



## CASE STUDY



Although initially intimidated by the thought of using a 3D printer due to her lack of experience, she soon discovered that the simple set-up and one-click-print interface through MyStemKits was a low hurdle to jump over and her class would soon be on its way to experiencing hands-on and interactive activities.

### Benefits

As previously mentioned, MyStemKits provides a web-based, one-click-print interface that automatically sends 3D files for the lesson plan directly to the 3D printer without having to adjust any settings.

Tarver stated, “Having a 3D printer in my classroom was a little bit scary. But now that I have my own 3D printer in my classroom and printing 3D resources from MyStemKits.com, I’ve realized how easy it is and how accessible it is to bring this type of resource and technology into my classroom. It is something that excites my kids every day.”

After implementing the research based MyStemKits curriculum, Tarver noted a substantial improvement in her students’

ability to grasp difficult concepts. For example, when she used the Basic Shapes Triangles Kit, she saw that her students were more actively engaged with the 3D-printed lessons.

**“ I feel as though it is part of my responsibility as an educator to seek new technology to incorporate into my curriculum. With students so widely immersed in the digital age, MyStemKits presented a way to bring lessons to life for them in a new and exciting way.”**

- Christina Tarver, 5th grade teacher

“The benefits of using MyStemKits is that the shapes include distractors – shapes that might look like a triangle but do not fit the defining attributes of a triangle. So, what students really need to do is process if they know the defining attributes of the shape,” says Tarver.

Because students went beyond exploring to testing what they knew about triangles, they were able to master many of the core concepts of the material quicker than had been done before. Confusion with geometric shapes was no longer an issue!

Tarver also recognized that the 3D-printed manipulatives provided a great way to assess her students' overall familiarity with various concepts before diving into a new topic or concept. She used the 3D-printed objects to test her students' base knowledge on various topics before moving on to new topics for 5th grade. When a student demonstrated that a little extra help was needed with a specific concept, the 3D-printed manipulatives made working through misunderstandings easier and enjoyable.

Ms. Tarver felt more confident integrating technology in her teaching career and was completely satisfied using MyStemKits with her lessons. Her students' positive reactions to the 3D-printed manipulatives and their greater understanding of geometric concepts boosted her confidence as she continued to effectively prepare her students for their futures.

To watch Ms. Tarver's video testimonial, click [here](#).

“ If you're thinking about integrating a digital resource, such as a 3D printer, or you want to learn more about it, I would highly suggest going to [mystemkits.com](http://mystemkits.com) and just checking it out. I think you would be surprised at the ease in which you can begin integrating these types of resources into your instruction.”

- Ms. Tarver

\*Reprinted from 2018



MyStemKits.com is the online platform for all MimioSTEM curriculum. From ready-to-print 3D models, STEAM design challenges, and virtual STEM kits, to lesson plans for the MyBot robots and Labdisc portable sensors, MyStemKits has everything an educator needs to incorporate MimioSTEM products right away. Enhance STEM teaching and learning in any classroom environment with MimioSTEM.