

When the Clowns Take Over the Classroom: Notes from the Circus Arts Conservatory in Sarasota, Florida

by Alison Russell

The Circus is evolving but we are at the forefront of that, allowing education to be a part of that.

—Karen Bell
Education and Outreach Manager
Circus Arts Conservatory



“Five, four, three, two, one...” A crowd of eager young faces counts down together, orchestrated by two enthusiastic clowns, Karen Bell and Robin Eurich. As they get to “one,” Bell releases the softball on a string, causing it to unwind from a medium pole in increasingly larger concentric circles, moving faster as the circles get wider. The ball hits a brightly colored block, causing a domino effect, and the whole Marvelous, Miraculous Circus Machine is set into motion.

The Marvelous, Miraculous Circus Machine is one of six structured lesson sequences that the [Circus Arts Conservatory](#) (CAC) in Sarasota, Florida, designed to use the local circus culture to improve STEAM (science, technology, engineering, arts, mathematics) education in nearby schools. The CAC is one of several circus troupes and academies in the city, which has a hundred-year history with this unique part of American culture. Recently, the CAC has been looking to expand engagement with the local circus culture by connecting directly with the formal school curriculum, particularly the growing educational emphasis on science and math curriculum. Led by formally trained clowns Karen Bell and Robin Eurich, the Circus Science Program has brought the tradition of the circus into classrooms, and classrooms to the circus in and around Sarasota, while teaching principles of science and engineering.

Circus Science was created, at first informally, through classroom outreach on behalf of the CAC. It started with a show for the Ringling Brothers Museum, during which a clown dressed as a professor taught the intricacies of the trapeze. Trapeze is one of the many artistic disciplines of the circus passed down through generations as part of the occupational knowledge of circus performance and tradition (Davis 2002: 21). This performance, however, was more than just the “what,” it was the “how.” The educational value of this performance sparked an idea. Teachers at Electa A. Lee Magnet Middle School in Sarasota County contacted the CAC. Rebekka Stasny, a teacher at Lee, and her team were looking for this type of curricular hook to enhance their interdisciplinary curriculum. For Stasny, the circus was a part of her life in Florida and something she and her students could share.

At Stasny's request, Karen Bell went to Lee and the two groups developed the daylong program together for 8th graders. A partnership between social studies and science expanded as Stasny discovered this was a creative way to teach science and help students meet Florida education standards. Over the intervening years, Bell worked with Stasny and other local teachers to develop a science and arts curriculum. Five years ago, when the CAC acquired the traditional circus school Sailor Circus, Robin Eurich also came on board. As someone with both a degree in physical sciences and experience teaching at Ringling Brothers, Eurich combines the informal transmission of circus skills in a folk tradition with formal pedagogy of STEM education. Together with a recent alliance with the University of South Florida's Partnership for Arts Integrated Teaching (PAInT), Circus Science has developed a full, standards-based curriculum that demonstrates the efficacy of place-based education and project-based learning in STEAM instruction.

One ongoing development is to take the already strong pedagogy and match it to standards and practices of the Florida school system. Bell and Eurich began to formalize their teaching in 2007 with arts integration workshops from the Kennedy Center Education Division, which taught art and theater educators how to go beyond enrichment and become a more integral part of the curriculum. Since then, they have followed the Kennedy Center Arts Integration Protocol, an approach enhanced by the partnership with PAInT. Denise Davis Cotton, the PAInT Coordinator, sees her role as adding to the rhythm and momentum of activities, partially by bringing codified arts and standards expertise to the project. The Florida Board of Education has worked to extend the focus on STEAM statewide and "strive to increase the number of students enrolled, with emphasis on students from underrepresented subpopulations as well as those who may be struggling" (Davis Cotton 2018). Davis Cotton says that they have a growing body of work that proves that this type of program helps students' STEAM knowledge, as well as their knowledge of community circus culture, as observed through pre- and post-assessment data.



A balancing clown.

Photo by Alison Russell.

The first layer of success is in implementation. Bell compares telling kids, typically ages 8 through 13, that they are learning physics to telling them they need to eat broccoli. It is easier if you show them that it is something that can be fun and doable before you introduce the fact that it is broccoli. This is achieved partially by the connection to the circus, which is exciting to a wide range of students (Sugarman 2002), especially when connected to the circus down the street.

Bell and Stasny both say they start with a simple question like "How does a tightrope walker balance?" or "How does a trapeze artist swing into the ring?" These open-ended questions create both more possibility and more buy-in. "Kids like to think outside the box," Stasny explains. "They learn a lot, and we learn a lot about how kids think" from posing these questions. Davis Cotton adds that it gives students ownership from the beginning of the lesson.

From there, Bell, Eurich, and the classroom teacher lead students through the experiment. The offering that most excites students is the Marvelous, Miraculous Circus Machine, the Rube Goldberg creation for which students must create at least three “cause-and-effect reactions” throughout the contraption (Bell 2017). The opening question is “How can students use Newton’s three laws of motion to create a grand circus entrance?” Students are given blocks, ramps, balls, string, and other small materials to create a version of the Machine in miniature. Once they have tried their own creations, it is time to head to the Big Top, to see it play out on a human-sized scale, making the CAC an integral part of the lesson’s implementation. Although it is possible to complete the activity in the classroom, the materials and space of the circus tent allow learning to be more authentic, occurring in the community rather than the classroom. The Big Top setting also ties the process to the physical space as well as the knowledge of the circus. Circus performers are able to be part of the action as the large Machine is set off, showing the connection between the showmanship of the visual circus display and the principles of physics that allow them to work.

Students who participate in Circus Science programs often work in teams, practicing the collaborative efforts that are essential to working circuses and increasingly recognized by pedagogical experts as [21st-Century Skills](#). As Stasny points out, today’s students will need those skills such as problem solving and collaboration because many jobs that students will pursue haven’t been invented yet. The improvisation of the circus is ideal for this type of learning and for Bell and Eurich’s ability to bond with the students. Elementary and middle-school students, Bell claims, are able to take more risks with the two performers in clown costumes than in a more formal setting. Both Bell and Eurich emphasize in the performance the acceptability of mistakes. In an era of rigorous testing, Circus Science emphasizes skills as well as content knowledge that promote a healthier learning environment.

That is why place-based education is so essential here as a reason to bring together science and arts education. Students are often required by the curriculum to use either their language skills or their math skills, their art skills or their science skills. Rarely is a curriculum integrated enough to do both. By combining the local culture of the circus, and the artistry involved in that tradition, with the more precise engineering of STEAM lessons, the whole brain, right and left, is engaged in learning, explains Davis Cotton. She speaks about a time when she attended a lesson and students were speaking the language of circus and science, while also enjoying the aesthetic experience of the circus performances. For her, it was an effortless opportunity to capture both sides of that experience.

Stasny sees the multiple levels of learning in the classroom as well. Early on in implementing the program she had a student who struggled with a learning disability and was largely unmotivated to participate. The creativity in the unit really excited the student about learning. He went home and built a potato launcher with his father, using some principles of physics taught by the CAC educators. When he brought it in, he was the star of the class. Stasny believes that moment was pivotal because he could show his learning in his own way, he could feel smart in his own way. Students who experience the program see that there are many different ways to approach learning, especially with physics.

Sarasota is becoming increasingly diverse, with many people who are not originally from the area entering the schools. With new populations coming in, Bell notes that they do not realize the

history of town. Part of the program is letting young people know about the place where they live, helping them take ownership of their area as well as the curriculum. Stasny feels as though many students did not understand or appreciate where they were living until the program began, tying them to their community. Sarasota is an arts-rich community, Davis Cotton explains. With Circus Science, students can optimize and create a strong sense of how it fits into American history and culture. The success of the program in Sarasota comes from its connection to the circus culture, even for those students who have never been to the circus before.



Ultimately, the largest testament to the success of this program is its growth and scope. From the collaboration with Stasny and Lee Middle School, Circus Science is now in 30 elementary and middle schools in Sarasota and Manatee County. Over 4,000 students have participated in Circus Science this year (Florida Department of Education). For those students, teachers have seen a 39- to 43-percent learning gain from the Circus Science and Marvelous Machine units based on a pre- and post-assessment of Florida STEM standards. These strides speak to the efficacy of the program in combining local history, STEM and STEAM education, and community folklife.

More importantly, students enjoy the outreach into their community. Bell mentions that students particularly like to visit at the end of the program, coming to the Big Top or the Ringling Circus Museum. They love to surprise docents with their knowledge when they see a circus artifact. Students are also able to speak knowledgeably with the CAC performers who take part in the fieldtrip experience. For example, they have an idea of just how difficult it is to gain the momentum and calculate the angle of the trapeze jump and have a greater appreciation for the effort. As Davis Cotton puts it, “they are able to speak the language.” Being the experts makes the learning more rewarding for students, particularly when they can use that knowledge in their community.

Alison Russell teaches high school history and government in Silver Spring, Maryland. She holds a BA in History and a BS in Secondary Education from Boston University and a MA in Public History from American University. In 2017 she interned at the Smithsonian Center for Folklife and Cultural Heritage, helping with the Circus Science Program of the Smithsonian Folklife Festival on the National Mall.

URLs

Circus Arts Conservatory: <https://circusarts.org>

21st-Century Skills: <http://www.p21.org/our-work/p21-framework>

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