There’s a struggle among middle school students with which many teachers can identify.

More than wanting to do well academically, more than wanting to pass from one grade to the next, kids just want to feel like they belong. For many kids in CPS, they desperately need a positive place where they can relax and be themselves. Families often struggle to provide this place.

When Science Club came along, Mike Kennedy was very clear he wanted to develop an intellectually safe academic environment where kids were free to pursue their scientific interests. I referred my students to this new program – students of all aptitude levels. For many of them, they were exposed to inquiry-based science for the first time in their lives. Science Club was just the place many kids had been searching for.

As a result, something amazing happened. Their practice with asking questions and being adventurous with their learning transferred to the CPS science classroom – and began to spread. Other kids started taking chances and learning
from these kids, some of whom had never been seen as leaders up to this point. They wanted to learn. They were asking why. And how. They were thinking critically about scientific processes.

Not long after Science Club partnered with my school, the once doubtful and incredulous teachers began to look at their own science instruction and ask what they could do differently, now that kids were getting assistance outside of the classroom. Inspired by the Science Club kids, the teachers were more willing to take on more challenging, inquiry-based lessons. They were putting away their textbook-based curricula in exchange for SEPUP labs and IES workshops. They were learning in tandem with the kids, experimenting with different techniques and feeding off of each other’s excitement for learning - something many of the teachers hadn’t experienced in some time. Prior to Science Club, it was widely believed in our school that because the students were less knowledgeable in science, they “couldn’t handle” an inquiry based curriculum. Because they’d never had “real” science labs before, they could only handle learning science from reading a textbook. As soon as the teachers saw the kids thriving in a lab-based environment at Science Club, they realized labs could be utilized in the every-day science classroom.

Now that the kids weren’t so woefully under prepared for a science lab, what changes could be made to how content was presented?

Science Club leaders and mentors were eager to offer assistance with that question. This was definitely NOT a “run of the mill” partnership where researchers are more interested in their needs, not the needs of the school. For example, partnerships with other organizations and programs in the past had consisted of short meetings at the beginning and end of the program; once for the research team to drop off supplies for teachers to complete, and then again to pick them up once the data had been collected.

That’s not all Science Club helped the teachers realize. Could all students complete an in-depth scientific inquiry project to submit for the school science fair? Science Club answered, “Yes. And we’ll help however many kids you send us.” Can we update the judging process for our science fair so that student outcomes are more accurately assessed by real scientists? Science Club answered, “Yes. Let’s get 25 Northwestern graduate students to your school to judge the projects.” Can we possibly partner up with other schools so that when our highly transient population moves to other schools in the area, they can still attend Science Club? Science Club answered, “Yes. Let’s get in touch with the
principals in the area to discuss transportation options.”

Science Club breathed new life into the science culture at our school by providing a safe place for students to experiment with learning, and for teachers to experiment with pedagogy. Year after year, Science Club reaches more and more young learners, providing a home and place of solace not only for the children, but for the scientists charged with the awesome task of being their science mentors as well.

Science Club’s Benefits In and Out of School

Jennifer Lewin, middle school science lead at Coonley Elementary (formerly at Graeme Stewart Elementary), Chicago Public Schools, Chicago, IL

Science Club is a collection of highly trained individuals dedicated to fostering the learning of students in urban multicultural education. As a teacher who participated in the program, I can say that this was one of the most enriching afterschool programs I have ever brought to my students. There are many reasons that helped me come to this conclusion.

First and most important to me as an educator was the enthusiasm the students had for Science Club. I attended many sessions to help my students settle into the club’s dynamic. Although it didn’t take long for them to jump right in, I continued attending because I was also having fun exploring with them. They were nervous at first, but the Boys & Girls Club was a familiar location that was welcoming and the students were surrounded by their peers from other schools. The mentors provided engaging and positive ways for the students to collaborate and share the group responsibilities.

The small group sizes allowed students to receive the 1:1 attention that they crave from knowledgeable individuals. Each mentor was selected according to student personalities and ability levels. Mike [Kennedy, program director]
and Rebecca [Daugherty, postdoctoral fellow] knew each child individually and tried to match them with mentors that truly were mentors in every sense of the word. When thinking about student social emotional learning, the mentors really did build a personal bond with the students. The many needs that lie outside academic content including gender, culture, race, socioeconomic status, etc. are important factors when working with youth from underserved communities.

The human condition was always taken into consideration during Science Club. Mike was affectionately referred to as “Dr. Mike” by many of the students and he always made himself available to anyone whether it be students, teachers, Boys & Girls Club staff, or parents. The kids felt special to know such an accomplished person who also knew how to smile, laugh, and joke around with the kids. Rebecca was also patient and caring with the students and their weekly presence showed the students how invested they were in the opportunities Science Club provided.

Many of these students were living in a harsh neighborhood and surrounded by negativity. At Science Club, all of that could go away for a short time and the students felt they were important and essential to the program’s success. Parents were concerned about student travel to and from the club, but Science Club provided buses to help students get to the club from school. They also provided mentors to help walk the kids from those schools that were close enough.

The club was able to provide meaningful learning opportunities that not only deepened our classroom instruction, but provided authentic learning opportunities that I couldn’t provide with the limited resources at my school. For instance, every year the burden of science fair is a stressful time for students and teachers. The Club took classroom instruction to a new level by providing a platform to deepen ideas that we covered in the classroom, but provide real world research opportunities connected to cutting edge research. Students had the support to develop their own projects with mentors, receiving individualized
instruction on their work and collaborating with peers to deepen their learning progressions.

My Science Club students – even those who were struggling in school – brought these experiences back to the classroom and became mentors to their classmates. I could see an increase in their science skills, confidence level, and even leadership skills. When I was forming instructional groups, I could pair them with struggling students and they would emulate what they experienced with their mentors. They would use terminology and skills they learned in Science Club to provide examples of authentic research practices. Other students would look up to them, and younger students would count down the days until they were old enough to join the club. It was so heartwarming as a teacher to see this transformation unfold in and out of school.