

## Co-Teaching in the Science Classroom

By *Laureen Avery*

The New York State Department of Education issued updated regulations<sup>1</sup> in 2015 requiring English Learners receive at least a part of their ENL instruction in an integrated, or push-in, model. In practice, this has resulted in ENL teachers and content area teachers working side by side in the same classroom. Sleepy Hollow Middle School co-teachers Mike Garguilo (science) and Andrea Calabrese (ENL) shared their recipe for successful co-teaching, communication and organization, with colleagues at the November 2016 NYS TESOL conference in Syracuse, NY.

Sleepy Hollow Middle School is a *Project ExcEL* school, and partners with second language development experts from UCLA. ExcEL schools promote improved academic outcomes for students learning English in public schools through the use of data to monitor student progress and adjust instruction and the creation of accessible school structures that ensure every student engages in personalized planning and goal setting. At ExcEL schools community partners to provide wrap around services and supports for students and their families. During the 2015-16 school year, UCLA coaches worked intensively with co-teachers at Sleepy Hollow Middle School as they implemented and strengthened their co-teaching skills, strategies, and materials.

Mike and Andrea were willing to start from scratch and re-examine everything they thought they knew. As they put it, *“Bye science curriculum, years spent making you, but you’re no longer effective for ESL.”* By working as a team and being open to new ideas, this co-teaching powerhouse has begun to assemble an approach that is demonstrably fostering student success. After more than a year of working together, ENL specialist Andrea Calabrese suggested some guiding principles for the ENL teacher:

**A Different Role:** The purpose of the class is to understand and apply the content, and so our roles are not really to teach English, rather to use strategies and scaffolds to make the content accessible, even with limited English skills.

**Language Objectives:** The most important language objective is that students use (read, write, listen and speak) academic vocabulary appropriately. When students get to a place of ownership of these Tier 3 words, they are able to use them to engage with the content in meaningful ways.

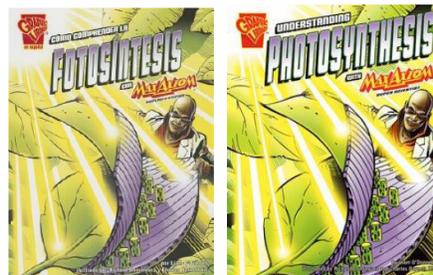
**Communication is Key:** Many times, even with stated content objectives, I need to ask my co-teacher what the “bottom line” of the lesson is. Together we review the modifications to ensure I didn’t inadvertently remove or misinterpret a key concept.

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<sup>1</sup> The full set of Commissioner’s Regulations, ‘Part 154’, is available online at <http://www.nysed.gov/bilingual-ed/regulations/english-language-learnermultilingual-learner-regulations-compliance>. Part 154 of the Commissioner's Regulations holds all school districts accountable for identifying and serving English Language Learners (ELLs). Districts are required to adopt a policy on the education of ELLs, plan and provide appropriate services for them, and evaluate and report their academic achievement.

**Time Commitment:** There is a large time commitment embedded in the co-teaching relationship. Often I spend 2 or 3 hours (or more!) adapting a 45-minute lesson for our ELLs. I can only do that because my co-teacher has a well-laid out, detailed curriculum map that is updated at least a week ahead of time. These modifications cannot simply be done “on the fly”.

Like many typical science classrooms, Mike and Andrea’s room has desks clustered in the front and lab spaces in the rear. In the integrated classroom, beginning English speakers are clustered together near the front so they can benefit from Spanish verbal translation during the class. A growing science word wall contains content words (mass, atom) and procedural words (determine, record) in English and Spanish, along with short definitions and/or graphic representations. Classroom resources are available in Spanish and English. A student and teacher favorite is Capstone’s *Graphic Science* series.



Andrea and Mike have worked together to rework every aspect of their 7th grade living environment curriculum and make sure *English Learners* can access the material and are successful. Each will tell you it’s been a journey filled with their own professional experimentation and learning along the way. For every topic introduced, they plan 3 student support activities. Students are engaged in experiential learning and are 'doing something' every day. Annotated, personalized note-taking sheets are provided, highlighting vocabulary in two languages and drawing heavily on visual cues. Frequent pauses to check for understanding are integrated into the daily routines. Hands-on, discovery learning is stressed, including a heavy reliance on sorting activities to build comprehension and understanding for English Learners.

These talented co-teachers stress the importance of co-planning and finding the time it takes. Mike and Andrea’s class moves at a rapid pace, and they will tell you there is no such thing as *over planning* for an integrated classroom. Google classroom helps them collaborate with one another and students.



They know it is working - in the spring of 2016 83% of their middle school students passed the Living Environment Regents. In the words of these talented co-teachers: *When students have the opportunity to take learning into their own hands, such as during sorting activities, they become proud and motivated to continue to grow and learn. This is why we find that providing students in our classroom with lessons that let them become active learners allows them to become motivated and to work harder to meet high expectations.*

Their full presentation is available at [projectexcel.net](http://projectexcel.net) - and it is filled with practical, usable strategies to use in any classroom. You can reach Mike and Andrea by email at [mgarguilo@tufsd.org](mailto:mgarguilo@tufsd.org) or [acalabrese@tufsd.org](mailto:acalabrese@tufsd.org).

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