

Educator's Voice



NYSUT'S JOURNAL OF BEST PRACTICES IN EDUCATION

VOLUME X, SPRING 2017

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Like Historians

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Engaging All Learners Through Content Area Instruction

In this issue ...

The work presented in this volume brings content area instruction to the fore. Authors share instructional practices designed to engage students by making them active partners in the learning process. Through classroom debate, guided inquiry, and project-based learning, the activities foster collaboration and capture students' interest by leveraging their input.

The authors describe practices across the curriculum, including in the arts and sciences, social studies and physical education. They infuse graphic arts in Career and Technical Education, present content integration in math and science, encourage young humanitarians to raise awareness for a cause, and use art as a platform to tackle bullying behaviors.

The practices presented here remind us that meaningful instruction has many different forms and contexts. Content instruction is a pivotal part of a balanced curriculum intended to nurture the whole child and to prepare aspiring minds to think, inquire, and engage.

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Dear Colleagues,

I am proud to present the 10th anniversary edition of *Educator's Voice* on Engaging All Learners Through Content Area Instruction. It has been my honor to work on this publication for the past three years. The journal was conceived by my predecessor, Maria Neira, who wanted to showcase the exciting work our members do every day in the classroom. Vice President Neira created this unique forum to enable practitioners to share their work with colleagues across the state. Past volumes have presented best practices in literacy instruction, assessment, technology integration, social-emotional learning, critical thinking and teaching English language learners. Each volume's theme is carefully chosen to reflect the most current developments in our field, and yet each volume offers an enduring collection of classroom activities that can be referenced again and again.

Today the new K-12 Social Studies Framework and the new P-12 Science Learning Standards are paving the way for content area instruction that is more inquiry-driven and student-centered. Classroom curriculum is becoming more akin to the language of the experts in the respective disciplines and students are becoming more engaged in their own learning. In history, students are thinking like historians, and using research to guide their investigations. In science, students probe through essential questions and teacher-facilitated inquiry. The school library is transformed into a makerspace and physical fitness and personal well-being takes on a new meaning in the gymnasium.

This collection demonstrates how content area instruction can become the core of daily practice with students front and center in the process. These practices emphasize the importance of meaningful content to guide students as they acquire the necessary skills and knowledge to succeed.

With special thanks to all of the authors who have contributed to *Educator's Voice* over the past 10 years, including those published in this current volume, we invite each of you to consider sharing your work with the NYSUT community in the future.

Sincerely,



Catalina Fortino,
Vice President, NYSUT

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Engaging All Learners Through Content Area Instruction

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Learning to Think, Read, and Write Like Historians

SUMMARY

Two social studies teachers with more than 35 years of combined experience share their three-fold approach to teaching literacy in the content areas. The authors use a flexible, mixed-bag of both generic literacy strategies and disciplinary literacy routines; collaborating across grade levels to scaffold and reinforce skills; and collaborating across subject areas with English teachers both to establish consistent expectations for students about reading and writing, and to highlight the distinctive literacy practices of history as a discipline.

“History can be thought of as an argument about what the past means based on a perplexing array of possible evidence for making claims ...”

VanSledright (2012, p. 213).

What is History?

At the beginning of every year, students respond in writing to the question, “What is history?” One student, Alexa, gave an answer that was short and to the point: “History is what happened a long time ago.” When asked to answer the same question again at the end of the year, her response was remarkably different.

“History is confusing ’cause whatever we learned could be wrong ’cause it’s not really facts. Maybe later on they find artifacts about different things that happened back then. Or they might have other ideas, but only if they can prove it.”

It’s feedback like this that inspires us to continue to ask, what does it mean to think historically? What does it have to do with literacy? Why does it matter? Perhaps most pressing of all, how do you teach it?

A plethora of scholarly research revolves around these complex questions, but for practicing social studies teachers, the questions are less theoretical than practical. Although there have been at least two decades of scholarly calls arguing for a “disciplinary literacy approach” to

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Carmela Gustafson, Connetquot Teachers Association
Mary McGonnell, Connetquot Teachers Association

integrating literacy instruction in the content areas, academic appeals are typically slow to reach practicing educators. Furthermore, despite the New York State Social Studies K-12 Framework that explicitly includes historical thinking as a skill students should develop (NYSSS Framework, 2014), and NYS Learning Standards for English Language Arts and Literacy that define literacy instruction as “a shared responsibility within the school” (NYSP12CC LSELA, 2010, p. 4), few resources exist to help teachers accomplish these goals.

In fact, institutional conditions often conspire against it. Working in the context of a content area like social studies, in which textbooks and curricula are typically arranged chronologically, and high-stakes assessments are mostly multiple choice (VanSledright, 2004), nuanced understandings of history and the thinking that constitutes literacy in the discipline often take a back seat to memorization of historical “facts.” Nonetheless, what social studies colleagues talk about, in addition to the constant pressure to “cover the curriculum,” is the often stressful responsibility of teaching literacy. But even defining literacy in the content areas can be complicated.

Content Literacy

Probably most familiar is the version of content literacy instruction as generic literacy strategies for both reading and writing that are applicable across subject areas. The idea is that students use these as tools to help them find, understand, and study information from content-area text (e.g., anticipation guides, vocabulary previews, graphic organizers like K-W-L charts, and study strategies like SQ3R). Research has shown that strategies like these, while not necessarily effective in all cases, can help students become more engaged in their reading and improve learning (Vacca, Vacca & Mraz, 2011). We’ve found these tools and others like them to have positive effects in our classrooms.

Less familiar perhaps, but strongly advocated over the past several decades by adolescent literacy scholars, is a disciplinary literacy approach. What this approach assumes is that each discipline is a kind of “discourse community of practice” (Gee, 2001, p. 719) with its own specialized language, text structure, and ways of negotiating and interpreting printed text (Draper, Broomhead, Jensen, Nokes, & Siebert, 2010; Moje, 2008; Shanahan & Shanahan, 2008). What it proposes is

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Given the complex, frequent, and abundant sources of information available to us today, the thinking, reading, and writing approaches practiced by historians seem broadly and significantly applicable.

that the focus of literacy instruction in content areas be on the so-called discursive literate practices of the discipline associated with those features (Moje, 2008; Shanahan & Shanahan, 2008). In practice, it means initiating students into the discourse community of the discipline by familiarizing them with the specific ways professionals in the field read, interpret, analyze, and critique text. It also means letting students in on the ways knowledge is produced, warranted, and communicated in the field (Moje, 2008; Wilson, 2011). Specifically for the discipline of history, texts are read closely with an eye toward sourcing — attending to the biases and perspectives of text authors; corroborating — substantiating claims across texts; and contextualizing — understanding texts in terms of when, where, for whom, and under what circumstances they were written (Wineburg, 1991a, 1991b). Thus, historical texts are understood to be inevitably value- and purpose-laden accounts of history with an intended audience, rather than as history itself (Moje, 2011; Wilson & Wineburg, 1993). And while historical knowledge can be constructed, supported, and enhanced through such texts, it is nonetheless understood as “slippery and elusive,” subject to evidentiary substantiation, but resistant to unequivocal conclusiveness (VanSledright, 2012).

Thus, as compared to a content area literacy approach that considers all reading more or less equally bound by generic reading strategies, a disciplinary perspective holds a more complex view of literacy. In doing so, it makes room for social studies pedagogy that moves beyond the simple transmission of historical facts. History, literacy, and the social studies classrooms in which they are taught, become less about strategies and more about critical thinking, less about details, and more about the arguments made about those details (Jetton & Shanhan, 2012; Leinhardt, Stainton, & Virji, et al., 1994; VanSledright, 2002). Rather than functioning as passive recipients of historical knowledge, students are apprenticed into the discourse community of the discipline (Greenleaf, Schoenbach, & Cziko, et al., 2001), and are positioned as active participants in the construction, evaluation, and defense of historical understandings. Given the complex, frequent, and abundant sources of information available to us today, the thinking, reading, and writing approaches practiced by historians — ones that can help evaluate the legitimacy of one argument over another — seem broadly and significantly applicable. Given that students often consider their social studies classes boring and irrelevant (Reisman, 2012a; Rosenzweig, 2000), a disciplinary literacy approach holds out the promise of improved student engagement and richer learning.

Theory and Practice — Bridging Literacy Divides

One problem is that these two approaches to literacy in the content areas — one based in generic strategies, and the other in disciplinary practices — are too often viewed as diametrically opposed and mutually exclusive (Brozo, Moorman & Meyer, et al., 2013). Theoretical discussions abound in scholarly circles about the advantages of one approach over another, but these are largely irrelevant in classrooms alive with a diversity of students whose literacy and learning needs cry out to be met. Most importantly, reading in a content area like history requires the ability to discern both explicit and inferential meanings, and doing so inevitably draws both on more generally applicable English language arts skills, and on discipline-specific ones as well. For example, in order to successfully read and think historically, students must become adept at using context clues to define new vocabulary, identifying the main idea and supporting details, and distinguishing fact from opinion. Without these skills, students have no foundation upon which to build those more complex disciplinary approaches like sourcing, contextualizing, corroborating, and close reading.

As sixth- and seventh-grade social studies teachers with more than 35 years of experience between us, we've found that what often works with students may not fit neatly into one or another theoretical perspective. On the one hand, we've found that sticking to generic reading skills shortchanges students on what it means to understand and appreciate history. On the other hand, when a lack of sufficient basic comprehension stymies students' ability to critically analyze and evaluate text, learning of any kind can be short-circuited. Like all teaching, what we do is a balancing act. In order to maintain that balance, we build and blend generic reading strategies into discipline-specific approaches, simultaneously leveraging the best advantages of each to promote student literacy learning. Our basic approach is three-fold:

- **Flexibility:** We use a flexible, mixed-bag of both generic literacy strategies and disciplinary literacy routines that work for our students in our teaching context. These may and do change from one unit or year to the next depending on what we determine is or isn't successful.
- **Collaborate across grade levels:** We collaborate across our grade levels to reinforce and more effectively and efficiently scaffold skills and approaches.

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In order to successfully read and think historically, students must become adept at using context clues to define new vocabulary, identifying the main idea and supporting details, and distinguishing fact from opinion.

Learning to Think, Read, and Write Like Historians

Sample 1

Name _____		Period _____	
How I Think and Act Like a _____			
Things I say:		Things I do:	
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
Objects, tools, or equipment I use:		Where I do this:	
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
People involved who I can see:		People involved who I can't see:	
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
Things I notice or pay attention to:		How I learn(ed) to do this:	
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Collaborate across subject areas: We collaborate across subject areas, in our case with the English teachers on our respective teams. We have three interrelated goals for this collaboration: to establish consistent expectations for students about reading and writing; to stress similarities that exist between the thinking, reading, and writing across content areas; and to use those similarities as a springboard from which we can apprentice them into our disciplinary discourse community by featuring the thinking, reading, and writing that are particular to the discipline of history.

What follows is a sampling of some of the ways we put these ideas into practice. One important caveat: By no means are we suggesting that all of what we describe inevitably works perfectly in every instance. In fact, sometimes, and despite our best efforts, we freely admit that it doesn't. Context, conditions, and human nature itself retain authority over how any teaching or learning ultimately transpires. As educators, it is our job to recognize those limitations, and in the face of them, continue to create and re-create our own "best practices."

Introducing the Concept of Discourse Communities – sixth grade

As a sixth-grade social studies teacher, I am keenly aware that my students have probably never been exposed to the idea that different disciplines have different ways of thinking, reading and writing, or ways of practicing literacy. And it's almost certain that they've never heard of discourse communities, although it's likely that they are already members of more than one. To introduce them to the concept of disciplinary literacy, early in the school year I use an activity I've developed called "Thinking Like a _____." (See Sample 1 and Sample 2)

To begin the lesson, I ask students about the different activities in which they are involved outside of school. Students typically mention things like organized sports, playing with friends, music lessons and rehearsals, and religious instruction and services. Keeping a running list of these on the board, I then open a discussion by asking students to consider the ways they think, talk, and act when they participate in these activities. I pose questions like, "Is your behavior, your language, your thinking all the same in these situations?" "In what ways are they similar or different?" "Why do you think this is so?" "In what ways does that behavior/language/thinking show that you are a _____ (soccer player/trombonist/ video game player)?"

Sample 2

Throughout the discussion I work to elicit an understanding that part of what distinguishes different activities is the thinking, behavior, and language that they use. I then ask students to select an activity in which they are involved and, working in a group with others involved in the same or similar activity, complete the “Thinking Like a _____” worksheet. They then create a butcher-paper display of their findings, which are shared with the whole class.

Introducing what it means to “Think like a Historian” – sixth Grade

Having established this background understanding, I’m ready in the following lesson to take the next step in disciplinary literacy by helping students begin to learn and experience what it means to “think like a historian.” Using introductory elements based on the Reading Like a Historian curriculum (found at <https://sheg.stanford.edu/intro-materials>), I typically explain that just like soccer players, trombonists, and video game players, for example, historians also have their own special ways of acting, thinking, and speaking. I go on to explain that because history is about things that may have happened many years ago, some of the things historians do when they think, read, and write about the past are similar to the kinds of things detectives do when they try to solve a mystery.

The Stanford History Education Group (SHEG) introductory lesson *Lunchroom Fight* capitalizes on these similarities by engaging students in what usually proves to be a high-interest investigation of who started a fictional fight in the school cafeteria. The scenario provides students with opportunities to work with different sources of evidence and grapple with evaluating and interpreting that evidence in ways that emulate what historians do when they engage in sourcing. Because the goal of the lesson is for students to begin to understand this disciplinary literacy practice by experiencing it, most likely for the first time, I’ve found that rather than being done in pairs as suggested, the lesson is most successful as a guided, whole class inquiry. This approach also allows me to model the processes involved.

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How I Think and Act Like a Lacrosse player


Things I say: * "Here, I'm open!" * "Pass it to _____!" * "Middi back!" * "You can shoot!"	Things I do: * run * catch * pass * shoot
Objects, tools, or equipment I use: * my lacrosse stick * ball * The goal * uniform/cleats	Where I do this: * on a field (obms fields) * turf * indoors (field) sports complex
People involved who I can see: * my team * the other team * the goalie * my coaches (the referee)	People involved who I can't see: * organizers * announcers * people who wrote the rules
Things I notice or pay attention to: * the ball * the goal * the defensemen (other team)	How I learn(ed) to do this: * practice * coaches * family * watching games * friends

Learning to Think, Read, and Write Like Historians

Sample 3

Name _____ Per _____

Learning to Think Like a Historian: Lunchroom Fight Part I



“Historical” situation:
YOU are the principal of a school and you just found out that there was a fight in the cafeteria during lunch. You’ve asked many people who witnessed the fight what they saw so you can figure out who started it. Unfortunately, you’ve gotten many different stories that sometimes disagree about how and when it started and who was involved.

Think about the following questions...

1. Who are the DIFFERENT PEOPLE who might have seen this fight?

2. How could there be different stories of the event? *For the purposes of this activity, we will assume that **NO ONE IS LYING!**

3. Whose story might be MORE BELIEVABLE than another person’s? EXPLAIN.

4. Whose story might be LESS BELIEVABLE than another person’s? EXPLAIN.

After introducing the activity and reading the scenario aloud to students, I distribute my own modified version of SHEG’s student handout (see Sample 3). I begin the inquiry with the question, “Who are the people who might have witnessed the fight?”

Although I eliminate the “hints” provided in the SHEG version, I do include a picture of a typical middle school cafeteria scene to provide support to students who might have difficulty getting started. Students first brainstorm ideas independently, and then turn and talk to a neighbor to share ideas before, as a class, we list all the possible witnesses on chart paper. Because it is crucial to building an understanding of how to evaluate the reliability of sources, the second question, “What makes one person’s version of the events more believable than another person’s?” usually works best as a whole class discussion. Students often are quick to reference the loyalty of friends and the ulterior motives of enemies, a perfect opportunity to introduce the concept of bias. While my sixth graders may be familiar with the term as a way of referring to unfair treatment of people based on irrelevant characteristics, they generally don’t know its rhetorical use. Because identifying bias is an essential part of sourcing documents, I keep the definition, consistent with the one Mary McGonnell uses with her seventh graders, posted in my room and refer to it often.

The third question, “How could there be different stories of the event *if no one is lying?*” usually proves to be the most difficult one to tackle. Typical of students of this age (VanSledright, 2002a, 2002b), not only does the caveat “no one is lying” strike students as unrealistic, but it leaves them struggling to find alternate explanations for the different versions of the events. This commitment to untruthfulness as the only explanation for disparate versions of the past hinders students’ ability to meaningfully evaluate sources. I therefore find it essential to use this introductory scenario to facilitate at least a nascent understanding of the influence of perspective on how events are represented.

From a disciplinary literacy perspective, role-playing ... can help students interpret text from an empathetic framework.

To accomplish this goal, at this point I generally arrange a reenactment of the lunchroom fight scenario. Unsurprisingly, reenactments, simulations, and role-playing are popular with students. They are also strategies McGonnell uses extensively with her seventh graders, and through our collaborations, they've become a more significant part of what I do with my sixth graders as well. As means to an end, embodied representations like these can serve both traditional content-area literacy and disciplinary literacy goals. For example, in my own classroom, I use simulations to help preview meanings of key social studies terms like inflation, which students then add to their personal key terms dictionary. Used alongside completing flow-chart notes, reenactments are useful in helping give students access to complex content, like the Silk Road economics of a middleman system of distribution of goods. From a disciplinary literacy perspective, role-playing assembly line working conditions, for example, can help students learn to interpret text from an empathetic framework (Wilson & Chavez, 2014) at the same time that they access the required content. In each case, a blend of generic and disciplinary strategies is supported.

For this reenactment of the lunchroom fight, I designate an area of the room where the fight takes place, and a few

(responsible) students to stage an argument. I also select several students to stand in the imaginary lunch line with their backs to the area where the fight begins, and send one or two others outside of the room, instructing them only to enter when I give the signal. The rest of the class functions as observers. Running through the scenario several times, students become aware of the effects of time and location on their perspectives, and therefore on the version of the event they might produce. Prepared in this way, a foundation is established from which students can begin to consider reasons other than intentional duplicity for varying versions of past events. For example, students recognize possibilities such as:

“Someone who saw the fight from start to finish might have a different version from someone who came to lunch late because they didn't see it all.”

“People who were right next to where the fight happened and people who were far away. That could be different because of different point of views [sic].”

“People who were in the fight themselves [sic]. They could be right or wrong too because maybe they don't want to get into trouble or they only saw one part.”

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Guided classroom discussions are key to expanding student thinking, and to helping students understand that rather than rejecting one source in favor of another, historians actually use multiple sources to help them piece together a picture of the past.

Building on understandings like these, students are better prepared to begin making deliberated evaluations of the relative believability of one historical source over another. At the same time, they become more open to, even if not necessarily comfortable with, ambiguity. Admittedly, the process takes time — often more than one period for the lunchroom fight activity alone — but it is time well spent on meaningful social studies and literacy learning.

Working with Sources – sixth grade

As a follow-up to *Lunchroom Fight*, I give students their first opportunity to apply sourcing to some simulated historical documents. I do this by using a worksheet called Evaluating Sources (Sample 4), a modified version of one found at the Stanford History Education Group website. In it, historical questions are followed by a set of potential sources of information from which the question might be answered. Students are asked to determine which source is most and least believable, and to explain their reasoning. By first modeling the thinking involved in determining the relative believability of each of the sources, students gradually become more adept at discerning what might potentially add to and detract from reliability. Again, the process takes time, both because these approaches are generally new to

sixth graders, and because I intentionally include examples in which the believability of one source over another is not clear-cut.

For example, Historical Question No. 2 is, “What was it like to be a slave in South Carolina before the Civil War?” Three sources are suggested: An interview with a former slave in 1936 (the Emancipation Proclamation abolished slavery in the U.S. in 1865); a textbook chapter on slavery; and a diary written by a slave.

My students generally grasp the drawbacks of using a textbook chapter to, as one student put it, “get the feeling of slavery” because “textbooks weren’t there experiencing it.” More difficult, however, is the question of whether the diary or the interview provides more reliable information. Initially, students often consider a diary less reliable because “the handwriting might be bad,” or “pages might be torn out,” or “it might be in a different language.” Like the tendency of students to turn to lying as the reason one source might be in disagreement with another, students also tend to seek out concrete reasons why one source is less believable than another.

Guided classroom discussions are key to expanding student thinking, and to helping students understand that rather than rejecting one source in favor of another, historians actually use

Sample 4

multiple sources to help them piece together a picture of the past. By the time students take their first chapter test on which they are asked to evaluate the reliability of sources, most display more nuanced reasoning.

For example, one student explained that, “A diary could be good and bad. Good because it’s what the person was experiencing right then. But bad because maybe they were afraid to get caught so they wouldn’t want to tell everything or not have time.” Another student, describing the reliability of the interview wrote, “There’s a problem because he’s pretty old then and people start to forget things, but it was really bad being a slave and probably you don’t forget those things. That’s why I think this is more believable, but the diary too because it was when it was happening.” Responses like these demonstrate growth not only in historical thinking, but also in the kind of critical thinking that is applicable across content areas.

By the final quarter of the school year, students have been given multiple opportunities to work with and evaluate sources in various contexts. Although I use primary source documents as often as possible, the textbook is also useful for teaching students to interrogate claims. For example, reading that despite the danger, slaves in Egypt willingly built pyramids because of their strong religious beliefs, we question from whose perspective this was written and consider alternate stories that could be told. By later in the school year we’ve also used artifacts to prove that Mohenjo-Daro was civilized, evaluated the system of justice represented by excerpts from Code of Hammurabi, and compared evidence of democratic governance in the United States with that of ancient Greece.

In each of these units, I use a variety of strategies and approaches to help students read, understand, evaluate and write about often difficult text. Some of these include elements from a generic literacy approach like completing K-W-L charts, answering questions about texts, annotating, guided note-taking, and outlining. Many reflect a disciplinary literacy

Name _____ Per. _____

Evaluating Sources

Directions: For each historical question below, circle the source you think is more believable. Explain your choice in at least one complete sentence.

1. **Historical Question:** Who was present at the signing of the Declaration of Independence?

Source 1: A Hollywood movie from 2001 about the American Revolution.

Source 2: A book written in 1999 by a famous historian who is an expert on the American Revolution.

I think Source _____ is more believable because _____

3. **Historical Question:** What did the city of Pompeii look like before it was destroyed by the eruption of Mt. Vesuvius in AD 79?

Source 1: A map of the city drawn by archaeologists who excavated (dug up) the site of the ancient city.

Source 2: A painting of Pompeii found by archaeologists at the site.

Source 3: A description of Pompeii written by a historian from Rome in AD 1452.

4. **Historical Question:** What happened at the Battle of Lexington?

Source 1: A middle school textbook written in 1985.

Source 2: A newspaper story from the day after the battle in April, 1775.

5. **Historical Question:** Why were Japanese Americans put in internment camps during World War II?

Source 1: A film made by the US government during WWII explaining to other Americans why this was happening.

Source 2: A classified (secret) government report on Japanese internment written during World War II that was later released to the public (no longer secret).

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Learning to Think, Read, and Write Like Historians

Sample 5

NAME _____		DOCUMENT ANALYZER				PERIOD _____	
#	DATE WRITTEN OR CREATED	AUTHOR & Occupation	DOCUMENT PURPOSE To inform? honor? discredit?	VIEW OF ALEXANDER THE GREAT Generally Positive or Negative?	EVIDENCE Details from the document that support the positive or negative view	RELIABILITY What bias is revealed? Why might the author have this bias? Is this a reliable source?	

approach like asking students to identify bias (sourcing), to recognize the rhetorical devices that reveal that bias (close reading), and to use multiple sources to gain a broader understanding of historical events (corroboration). Although the particular mix of strategies and approaches may vary, what remains consistent is the sequence of activities that over the course of the year helps students build their capacity to tackle complex primary and secondary source documents (Reisman, 2012a, 2013b). These activities, based on Reisman’s (2012a, 2012b) Document-Based

Lesson sequence, have four predictable

phases. First, I build background knowledge through a combination of lecture, textbook passages, video clips, PowerPoint presentations, or newspaper and magazine articles; each of these is often supplemented by one of the generic literacy strategies described above. Working into historical inquiry, I then model the procedure for reading and analyzing documents with the help of a guided graphic organizer; students complete the inquiry in small groups or in some cases independently. Third, we debrief our findings through class discussion. And finally, in a step that expands on Reisman’s model, students produce a piece of guided writing that is based on the documents and defends a historical claim.

Our unit on Alexander the Great is the culminating activity that maintains this activity structure, and ties together many of the generic and disciplinary literacy approaches that I scaffold throughout the year, and that McGonnell continues to build upon with her seventh graders. Although prior to this, students have regularly practiced sourcing and contextualization, their experience with corroboration is limited to documents that are in relative agreement. In this unit, students must use their skills in sourcing and contextualization, and independently evaluate conflicting evidence to select and defend a historical claim.

Six print and picture documents about Alexander the Great are first analyzed in small groups. A graphic organizer helps students with note-taking (Sample 5), the format of which is consistent with what students use in English for character analysis. The first two columns simply ask students to extract information from the

Sample 6

documents (date, author, occupation). In the third, again consistent with expectations in their English classes, and based in a generic literacy skills approach, students are asked to evaluate the intended purpose of the documents (to inform? to persuade? to entertain?). The last two columns require students to work from a disciplinary perspective: Does the document present a generally positive or negative view of Alexander? What evidence suggests this? How reliable is this source?

To begin the analysis, I select two documents that present opposing views of Alexander, and use these as the basis for a reenactment. One describes Alexander's bravery and his generosity to his soldiers; the other portrays him and his army as murderous plunderers. Two separate groups are assigned to develop a short skit from the information contained in the text they are given. These reenactments provide a perfect springboard from which to discuss the perspectives presented by the documents. The discussion, in turn, creates an ideal opportunity to model the process of analyzing these two historical texts using the document analyzer. On this graphic organizer students record the date, author, and purpose of the document. Using this information, as well evidence from close reading of the text, students determine whether the document provides a generally positive or negative view of Alexander. Finally, in the last column, they evaluate the reliability of the source; specifically, they are asked to think about what bias is revealed in the document, and why the author might have this bias.

The process of modeling is essential because students are still novices at what it means to think historically, but also because documents relevant to the sixth-grade curriculum pose a particular challenge. Written mostly thousands of years ago and requiring translation into English, they often contain difficult vocabulary and complex sentence structure. At the same time, they offer opportunity in that they represent the kind of complex texts the NYS K-12 Social Studies Framework expects students to read. In an effort to make these documents inviting, rather than intimidating (Reisman & Wineburg, 2012), I use

continued on following page

REPORT CARD FOR: ALEXANDER III OF MACEDONIA		
CHARACTERISTIC	GRADE	DOCUMENT EVIDENCE
Positive attitude		
Fair		
Decisive, but open to ideas		
Sets reasonable goals		
Persuasive		
Powerful		
Deserves to be called... ALEXANDER THE GREAT		

Comments: Beginning with a claim/thesis statement, explain why you think he should or should not be called Alexander the Great.

Sample 7

What Makes a Paragraph Successful?

****Think of structure, audience and purpose.****

- A topic sentence that hooks the reader and introduces the topic.
- At least three supporting details that elaborate about the topic sentence and engage the reader.
- Transitional words or phrases that create a flow and link ideas together.
- A concluding sentence that sums up/ties the details together in a meaningful way.
- Correct spelling, capitalization, and punctuation.

several strategies that primarily serve to simplify and focus the texts (Wineburg & Martin, 2009). These provide opportunities both for an expansion of students' language abilities, and for rigorous and meaningful engagement with primary source documents (Reisman & Wineburg, 2012). Depending upon the difficulty of the text I may first, alongside the text of the document, provide definitions of what I anticipate will be unfamiliar words. Next, to create clarity, I may modify or paraphrase the wording of the document, being careful to sustain a tone consistent with the original. And finally, rather than using entire documents, I may use relevant excerpts that maintain the integrity of the document as a whole. Supports like these, which I scaffold during the year, help prevent the language of the text from imposing roadblocks to com-

prehension that impede analysis.

After modeling analysis of the first two documents in the Alexander unit, the remaining ones are analyzed in small groups, followed by a whole-class debriefing. During this stage, students are encouraged to offer additional or counter-evidence for the image and reliability sections of the document analyzer. Presenting the overarching question about whether Alexander deserves to be called "the Great" often generates some rather heated debates. By this point in the school year, students have generally become more comfortable with the idea that history does not always produce complete or clearly defined truths, but they are eager to defend their positions. Although the tendency persists to revert to blaming duplicity for disagreement between sources, my sixth graders become increasingly adept at recognizing more historically and critically productive analyses.

That critical analysis is put to work in the historical claim essay writing that constitutes the culminating activity of the unit. (For students who require modifications, the activity takes the form of Alexander's Report Card – see Sample 6). Students are provided with a detailed outline (sample attached) that guides them through the requirements. Similar to the format of a historical claim essay that McGonnell assigns at the beginning of the year to

her seventh graders (described below), my sixth graders write four paragraphs, are provided with two sample claim/thesis statements (both I and the English teachers on my team use both of these terms with students) from which to choose, depending on the historical claim they wish to make, and are asked to briefly recognize the opposing viewpoint. Unlike the seventh-grade version, I also give my students a mentor text, which we read and analyze as a group while we go over the essay requirements. Although the mentor text and detailed outline undoubtedly suggest a formulaic approach to essay writing, they provide the kind of supports most sixth graders need to be initiated into the way historians construct and warrant knowledge. The modeled writing, including the programmed claim/thesis statement, also give students access to language and sentence structure that has the potential to expand their linguistic abilities. To help maintain cross-disciplinary consistency, I also borrow charts the English teachers on my team use in their classrooms to summarize focused writing lessons. One outlines the features of a good paragraph (Sample 7), another lists transition words (Sample 8), and a third reminds students how to effectively use conjunctions to combine sentences (Sample 9). Provided with sufficient resources and guidance, students are generally able to produce

remarkably sophisticated essays.

While not all students demonstrate a high level of historical thinking through their writing, by the end of the year most students are comfortable enough with the process to be able to use appropriate documentary evidence to support their claim, and to recognize that in many historical cases, opposing claims might also be defensible.

Working with Sources – seventh grade

Confident that students coming into my seventh-grade social studies classroom have been provided with a foundational understanding of “thinking like historians,” I can begin the year by building on those skills. Like Carmela Gustafson, I follow a predictable activity sequence in my units (Reisman, 2012a, 2012b) that follows the general format described for the sixth grade. The additions and modifications that I make reflect the increased expectations of seventh grade and are described below.

continued on following page

Sample 8

Argument Transitions

- for example
 - for instance
 - obviously
 - of course
 - likewise
 - additionally
 - furthermore
 - not to mention
 - for this reason
 - another key piece of evidence
 - most compelling evidence
 - to summarize
 - all in all
 - as has been noted
 - without a doubt
- } use AFTER your first example/evidence

Sample 9

Conjunctions

To combine two sentences into one, use:

- F**or
- A**nd
- N**or
- B**ut
- O**r
- Y**et
- S**o

I went to the park and had a terrific picnic lunch.

Insisting that students defend a position other than what they might otherwise have selected can help ... motivate [them] to stretch [their] critical thinking to a new level.

The first full inquiry in which my students engage involves making a historical claim about whether Columbus was a villain or a hero. While this inquiry closely parallels what Gustafson does with her sixth graders in their Alexander writing, it also expands on it. For example, while she asks her students to analyze six documents, this inquiry involves a total of nine. These include a passage from a textbook other than our own, excerpts from a picture book about Columbus, two contemporary newspaper articles, and several extracts from Christopher Columbus's journal. Where the sixth-grade documents are all under 250 words, the ones for this inquiry range from 100 to more than 600 words; while each of the Alexander documents represent one clear-cut view of Alexander, the documents about Columbus are sometimes more ambiguous; and finally, while we both provide programmed claim/thesis statements, Gustafson allows her students to select the position they want to defend, whereas I assign them.

My rationale for doing this stems first from another less obvious way in which this inquiry forces students to stretch their critical disciplinary thinking skills. Since most sixth graders have little or no prior knowledge of Alexander the Great, they have no preconceived notion of him as a historical figure; whether or not he deserves to be called "great" involves no emotional

baggage. The opposite is true of Columbus. In addition to having been exposed since an early age to the lore of Christopher Columbus through both books and music, students are keenly aware of our celebration of Columbus Day. The first document we analyze for this inquiry, entitled *Columbus: Debunking Some Myths*, inevitably creates in students emphatically expressed feelings of disappointment, betrayal, and even anger. Why, they ask, would we celebrate the birth of someone who did all of these horrible things? Why didn't we learn about this sooner? As a result, despite other documents in the inquiry that highlight the accomplishments of Columbus, students are so horrified by this newly discovered perspective that few come away from the analysis willing to defend him as a hero.

My other rationale for assigning a claim/thesis statement to students is based in more strictly pedagogical concerns. When students have free choice in which historical claim to defend, their reasoning for making that choice may not be clear. Have they made the choice because they've been convinced by what they see as stronger arguments in the documents, or because they already had their minds made up? Perhaps it was because one position just struck them as an easier way to complete the assignment. Or, might they have chosen it because documents defending the other view were,

despite the reading and analysis supports I provided, still too difficult for them to understand? By sometimes insisting that students defend a position other than what they might otherwise have selected, I can help a student whose difficulties might have gone unnoticed, provide impetus to a student with work habits less developed than her abilities, or motivate a student to stretch his critical thinking to a new level. To help support this approach, I also include a debate as an additional step in the activity sequence of this unit.

After establishing background knowledge through a combination of a K-W-L chart, textbook passages, and class discussions, we tackle the document *Columbus: Debunking Some Myths*. Depending on ability, students read the passage independently or in pairs and, in keeping with a generic literacy approach, complete a set of true or false statements. As they read and complete the statements, they are required to annotate the text.

Consistent with the English teacher on my team, as well as with the generic literacy skills taught in sixth grade across subject areas, students annotate by finding evidence in the text for their answer, underlining it, and then numbering it. We then go over and discuss the answers. This sequence continues until students have progressed through all nine documents, each of which has

either a guided note-taking page, or a set of questions associated with it. In order to parallel similar work they do with narrative text, answers to the questions may be either directly evident in the text, or may have to be inferred. Students are in some cases also asked to determine the author's purpose, or to summarize the text. In all cases, students must annotate, and answer all open-ended questions in complete sentences. Again, this is a procedure consistent with the expectations both in sixth grade, and in their seventh-grade English classes.

After all of the documents have been analyzed and discussed, students are ready to prepare for their first formal, but somewhat modified, debate. I see this as a natural progression from the informal debates that sometimes emerge through class discussions, and although the entire process generally takes two full class periods to complete, it is a meaningful and enjoyable learning experience. Particularly relevant during an election year like this one, introducing the concept of a debate produces important content knowledge, and allows students to engage in the defense of a (historical) claim in both oral and written forms. Students are assigned sides (Columbus as Hero vs. Columbus as Villain), and use the documents and associated notes to independently write opening statements with the sentence starter, "I
continued on following page

What we consider essential to effective teaching and meaningful learning is not any one set of practices, but rather an ongoing commitment to examining and enriching our pedagogy.

believe that Columbus was a hero/villain because...”

After several from each side have been shared, students then write rebuttals, again with the help of a sentence starter, “I disagree with my opponents when they said...because...” In the final stage, students write and then share a closing statement explaining why they think the evidence on their side of the issue is stronger than that of their opponents. While challenging at first, it’s not uncommon for students to ask to do more debates later in the school year.

Well-prepared by these preliminary steps, and particularly supported by the debate activity, students move to the writing portion of the activity sequence. In keeping with Gustafson’s approach with her students, I also provide students with an outline, but it is somewhat more open-ended than the sixth-grade version. For example, in the introduction, students write a lead, or “bait” sentence, and select a programmed claim/thesis statement, but are also required to include historical context consisting of any general relevant statement about the Age of Exploration gleaned from the background knowledge segment of this and other units. Perhaps most significantly, rather than mentioning the opposing viewpoint in the conclusion as Gustafson has her students do, my

seventh graders do this immediately after they present the primary evidence supporting their claim in the first body paragraph. This is a significant difference because it requires students to be able to maintain focus both on their own and the opposite argument at the same time. Subtle differences in approach like these, combined with thoughtful pedagogical reflection, and perhaps most important in our view, our collaborative efforts, help us create powerful learning experiences for our students.

Conclusion

Our purpose in this article has been to summarize some of the ways we incorporate a flexible range of disciplinary and generic literacy approaches into our respective sixth- and seventh-grade social studies curricula. Although we are proud of what our students often accomplish as a result, it is not to say that we believe that these approaches are in any way carved in stone. What we consider essential to effective teaching and meaningful learning is not any one set of practices, but rather an ongoing commitment to examining and enriching our pedagogy. What we feel most proud of is the collaboration that energizes us in that pursuit. What we are most encouraged by is the growth we see in our students.

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The School Library as a Makerspace

SUMMARY

In addition to the usual book talks, orientation lessons, project-based research and work on Internet safety and best practices, a junior high school librarian shares two different learning modalities she has incorporated with her students. These results-based activities have motivated students to read more, improved their literacy skills, increased their time on task and fostered more collaboration in and outside the Library Media Center.

Twenty-first century teachers are drawing from several methodologies to keep students engaged in classrooms and school libraries. School librarians are equal partners in this process. In many junior high schools and high schools, the school librarian works collaboratively with teachers in planning lessons and in facilitating the research process. They discuss research strategies and demonstrate the various print materials and online resources they have available. Project-based assignments are very appealing because many facets are involved, such as:

- Describing a topic and how it relates to the overall learning goal
- Brainstorming sub-topics
- Discussing the assessment rubrics
- Demonstrating relevant information resources from which to gather facts

- Showcasing presentation styles and formats (email, paper, PowerPoint, Prezi or weebly)
- Understanding plagiarism and the importance of proper citations (using Noodle-tools, MLA, or APA).

According to Bea Baaden (2011), *“the school librarian’s role is more important than ever. There’s no other teacher in the school who can more effectively teach the College and Career Readiness Standard of, Research to Build and Present Knowledge, for K-12th graders.”* Based on the results shown in the structural equation models developed by Radlick and Steff-Mabry (2015), school librarians are shown to have a statistically significant impact on school achievement in English language arts.

Well-equipped school libraries bridge the digital divide and make it possible for students to hone their computer

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**Alice Robinson,
West Babylon Teachers Association**

science and literacy skills so that they can be on the cutting edge of 21st century knowledge. Sometimes the school librarian is the sole instructor and is responsible for lesson creation, lesson delivery, and assessing students. Consequently, he or she has to create lessons that are sufficiently rigorous, while at the same time engaging, to all students.

Utilizing Makerspace Resources

In West Babylon, the junior high school librarian has embraced the Makerspace Movement as a way to make the library more user-friendly and relevant to students' needs. Several years ago many school libraries and some public libraries carved out spaces where students could interact with resources in a safe manner under the watchful eyes of librarians or other facilitators. The idea of creating makerspaces has since expanded nationwide. The products and/or activities have also expanded based on the needs of students and financial outlays of districts.

Makerspace application was given a huge boost because the activities are in keeping with some of the NYS ELA Learning Standards: of Listening, Speaking, Reading, Writing and Research to Build Knowledge. Students work together collaboratively to create, experiment, explore and they build up stamina through failing, persevering, accomplishing, and reflecting on what they did.

The different activities are designed not only to engage students, but also to increase the speaking, listening and comprehension skills of the growing population of English language learners. This is in keeping with the NYS English Language Arts Standards:

- Anchor Standard, Integration of Knowledge and Ideas, RI. 6.7.

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Community Dynamics

West Babylon is a community of about 43,200 residents located in Suffolk County on Long Island. The estimated median household income in 2013 was \$79,954. Nearly 70 percent of households identify as white; nearly 16 percent as Latino; and more than 9 percent as Black. The area has a growing foreign-born population.

The seven-school West Babylon district comprises a high school, a junior high school, and five elementary schools. The total school population is 3,865. Each elementary school has a full-time school librarian and a part-time aide. Both the junior high and high school have library aides throughout the school day, as well as a full-time librarian.

While English is the predominant language spoken in the district, in the past three years, the district has seen an increase in students whose first language is not English.

“Everybody in this country should learn how to code because it teaches you how to think.”
— Steve Jobs

“Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.”

- Standard SL. 6.6. “Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate.”
- Anchor Standard, Comprehension and Collaboration, SL. 6.1. “Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts and issues, building on other’s ideas and expressing their own clearly.”

Makerspace resources to supplement direct classroom instruction were purchased with school and grant funds. Some of these were: Brain Quests for grades six and seven; I Never Forget a Face (memory game); Intermediate Math Games; Name that State (U.S. geography game); Play-Stix (building structures); Hot Dots (reading comprehension cards); Talking Telescope (featuring NASA images); Octego (checkers/chess games) and Forensic Science Detective’s Toolkit. Other resources include Ozobots, Legos, Cyber-boxing Robots, Craft projects, Teach and Talk Tablet – bilingual (Spanish/English), Firefly Light

Constellation Projection, Minecraft and DK Coding workbooks.

For two weeks each semester, sixth-grade students were encouraged to interact with the resources in pairs or in small groups. The librarian observed the interactions and gauged students’ understanding of the tasks.

Makerspace tasks involve students selecting a partner and together they decide on which resource they want to use. They have to follow the directions and then play the game. At the end they write a brief statement as to how they enjoyed the resource and sometimes leave a helpful hint to another user. Students voted on which card to attach to the game. Students blossomed during these activities and many took on leadership roles in their small groups. Six students returned to the library on their lunch hour to continue their activities and two borrowed games to take home.

Basic Computer Coding

Another teaching approach that exceeded expectations, was participating in the Hour of Code each December and throughout the school year. The Hour of Code, sponsored by Code.org, promotes an introduction to coding. The event takes place each year during Computer Science Education Week, but schools can host an Hour of Code all year round.

Code.org is a non-profit organization that aims to encourage students, and others, to learn computer science. It is geared for students in kindergarten through fifth grade.

To generate interest in coding and to activate students' prior knowledge, the librarian asked students to discuss the ways in which technology impacts society. For example: the use of credit or debit cards has sped up purchases. E-Z pass drivers can pass through toll-booths without stopping, freeing up valuable travel time. Devices found in many homes, such as baby monitors and security cameras, link to smart devices. Facilitating complex medical operations using Google glasses and robots, as well as medical scanning instruments for examining patients are invaluable tools.

Technology (texting, tweeting, emailing, Skyping, and reading e-books) has also changed the way people communicate. Teachers are using smart boards and other technology to deliver instruction. Students soon realize that technology plays a big role in all our lives and there are people behind the scenes (programmers) who write computer codes that make it all possible.

Next, students learned specific computer terminology that they would encounter online, such as: algorithms, commands, debug, pixels, program, scratch, unplug, workspace, driver and navigator, and paired programming.

October 2018
West Babylon JHS
5th Grade Students (88)
Engaging with Makerspace
Resources in the
JHS Library

Ellen (Ellie) & Trista w/ car they made from PlayStix pieces (in class).

"We designed (Trista and I) an awesome car. The one in the book was dull and weird, so we made it better."
Advice to others: "Be Smart & use your imagination."

After school: Ellie and her friend Delaney taking apart a watch and a calculator

Ellie totally concentrating on the task

MAKER SPACE

After engaging in a comprehension quiz, students progressed to the introductory videos on www.code.org. The inspirational videos demonstrated the importance of knowing how to code. Many famous personalities and inventors were featured, including President Barack Obama, Nobel Peace Prize winner Malala Yousafzai, professional basketball player Chris Bosh, singer and songwriter Will-I-Am, Microsoft co-founder Bill Gates, Facebook CEO Mark Zuckerberg, Facebook COO Sheryl Sandberg and Dropbox

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The School Library as a Makerspace

When students are given opportunities to create, lead, and collaborate, they will rise to the occasion.

co-founder Drew Houston. Ruchi Sanghvi, the first female engineer hired at Facebook, and Clothia.com founder Elena Silenok were also featured.

Students discussed the messages the videos conveyed. The primary message was that coding is fun and that students should consider it as one of their career choices. As Steve Jobs states (2013), *“Everybody in this country should learn how to code because it teaches you how to think.”*

The librarian also encouraged students to borrow biography or nonfiction books from a nearby display. The display highlighted books on careers in Information Technology, coding, computer basics, developing Web applications and programming. Several students took up the offer and borrowed books from the display and from the regular shelves.

All of the coding activities were multidisciplinary and involved elements from English language arts, social studies, science and technology. Assuming that this was their first coding instruction, the librarian demonstrated the Elementary Level ~ Course 2, Stage 6: Maze: Loops. After the first three exercises, volunteers shared coding tips, which were enlarged on the smart board. Students were instructed to finish all 14 activities in the sequence before moving on. Within a day or two, several students progressed to

Course 4. Some students utilized the videos and hints if they encountered problems. They also asked the librarian or their classmates for help. It was touching to see how willing students were to assist each other. Through perseverance and teamwork, students learned to think critically and became effective problem solvers.

The final segment involved logging on to the Hour of Code activities. These were, Minecraft Hour of Code, Star Wars Building a Galaxy with Code, Code with Anna and Elsa, Classic Maze, Make a Flappy Game, Infinity Play Lab, Play Lab and Artist. After students completed each activity, they printed out certificates, which were displayed in the hallways adjacent to the computer lab. Students often stopped by and proudly showed their certificates to teachers and friends and to parents during the school’s open house.

Each morning, during the nationwide Hour of Code week, the librarian submitted a question during the announcements. The teacher or student who submitted the correct answer received a certificate and a small prize. The school’s website and local publications featured their photos. Consequently, many teachers allowed their students to engage in coding activities, on the computer, when they completed their class assignments.

Conclusions and Future Goals

Both the Makerspace and the Hour of Code activities demonstrated that children learn in various ways and at their own pace. When students are given opportunities to create, lead, and collaborate, they will rise to the occasion. Many librarians are providing spaces in their school libraries for students to create and tinker with products. Public librarians have followed suit. No one size fits every one and the maker resources are as different as the colors of the rainbow. So too, are the computer coding activities. It is always gratifying to see a student who had difficulties with writing or reading, or one who never collaborated before, suddenly come alive and help classmates who needed assistance.

For the future, the librarian is planning to have students work with electronic kits, Legos, Rubik's Cubes, and robots; assemble and disassemble products; and create and animate storyboards and videos. By using multiple, self-differentiating modalities to engage students, school librarians are re-defining their roles and truly becoming "agents of change."

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Teaching through Entrepreneurship

SUMMARY

What ingredients make a good unit great? In this article, fourth-grade teachers share how they elevate and engage their students' learning through an entrepreneur unit that combines collaborative planning, service learning, and integrates the state learning standards.

“Doing good deeds feels good.”

— Fourth-grade student

In a society with access to advanced technologies, many would think we are now more connected than ever. It is ironic that in reality, many of our children are in fact feeling more disconnected and disengaged. Over the last few years, students and teachers have been in crisis and are overwhelmed. An overreaching accountability system for teachers and an emphasis on test scores has created a great deal of anxiety causing educators

to be reluctant to innovate. In some cases this focus has resulted in teaching isolated skills to prepare for tests.

Despite this climate, there are stories of courageous innovative teachers in every district. Here is how teachers in the Niskayuna Central School District inspired their colleagues and motivated their students by teaching an integrated, service learning unit for an authentic audience; hosting an Entrepreneur and Humanitarian Fair, where friends and family could buy products; and forwarding all profits to help change the world.

Annette Romano, a member of the Niskayuna Teachers Association, is currently a teacher on special assignment (TOSA) from the Niskayuna Central School District, where she has taught for more than 25 years. Romano shares her time as a professional development specialist in Niskayuna and the director of the National Board Council of New York Network. She is a member of the Professional Standards and Practices Board (PSPB) at the New York State Education Department.

Carol Herrington is a veteran teacher with 26 years of experience, 21 of them at grade 4. She is a graduate of the Niskayuna School system, teaching at the same elementary school she attended as a child. A member of the Niskayuna TA and the National Council of Teachers of Mathematics, Herrington frequently brings new ideas and strategies to her colleagues.

Chris Lasher is in his ninth year of teaching fourth grade. A member of the Niskayuna TA and a district leader, Lasher adapted the NYS math modules to include guided notes, which he shared with his colleagues. Additionally, he has created integrated curriculum to bridge Niskayuna Standards with the new Common Core.

Annette Romano, Niskayuna Teachers Association
Carol Herrington, Niskayuna Teachers Association
Chris Lasher, Niskayuna Teachers Association

Entrepreneur and Humanitarian Fair

It was early June, I had so much to do as I was finishing up the school year, but I was curious to see the culmination of a new district unit: the first annual Entrepreneur and Humanitarian Fair for all of Niskayuna's fourth graders. As I was walking with streams of children and parents to the high school, I noticed a preschooler clutching two dollars in his hand. He and his grandmother were walking quickly and as I spoke to them I realized I knew this grandmother. I taught her daughter in first grade many years ago. Niskayuna is a suburban community, near Schenectady, New York. It's a place where families stay. The families and educators' commitment and support for education is critical to the district's success.

Within the high school gymnasium, more than 400 fourth graders and teachers had set up their business booths. Prior to this event, students designed marketing materials, budgeted their expenses and set a cost for their products in order to determine their profit margin. Throughout this well-planned unit, these students needed to collaborate as a team and work together.

As I walked around and asked what the students liked most about this project, the majority said it was because they were selling their products for a good cause. "It makes me feel good to make money to help children." "Even though we are only children, we still can do something big." These students were raising money to donate to charity.

So what did the kids and teachers learn doing this project? I heard one student say, "I have learned partner work can be confusing, but when you work hard and work together, you can strengthen friendships." In one year, their project scaled from just one school to the whole district (all five elementary schools) changing the world for a common cause!

This came about because during the 2015–16 school year, the Niskayuna Central School District had a renewed commitment, investment, and focus on curriculum by providing nine release days for teacher leaders to develop Understanding by Design units in English language arts and mathematics. The Entrepreneur and Humanitarian unit became a focus of the fourth-grade curriculum design team through intensive collaboration with colleagues.

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Service learning is a teaching and learning strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities.

Teachers began with many instructional materials focused on social studies, but the goal was to integrate reading, writing, social studies, and math for a completely comprehensive unit.

Fourth-grade teachers from *all* five elementary schools throughout the district met during the year to design integrated units that stayed true to Niskayuna values while addressing New York State Learning Standards. Fourth-grade teachers Carol Herrington and Chris Lasher brought a unit they wanted to enhance to three intensive days of collaboration with their grade level colleagues representing the other elementary schools.

I was fortunate to support this work in my new teacher leader role, in which I guided teachers through the Understanding by Design framework (Grant Wiggins and Jay McTighe, 2011) while also embedding the state's learning standards. This article presents the power of collaboration and empowering teachers to develop their district units by using a “backward design” process, which starts with where they wanted students to be at the end of the unit.

Follow their journey through this unit's creation.

This Is What You Do With An Idea **Unit Overview and Rationale:**

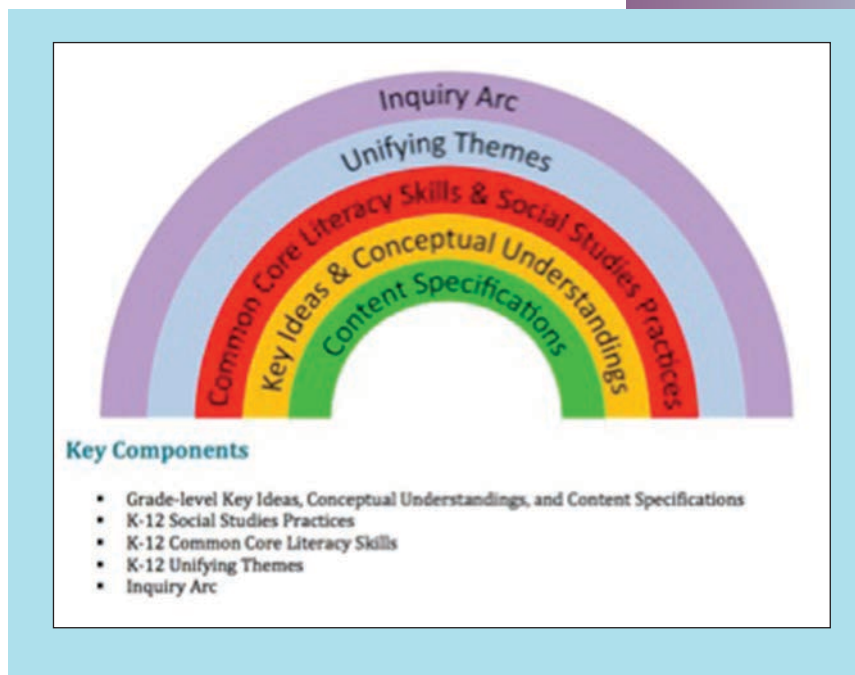
The question is asked and answered in Kobi Yamada's book, *What Do You Do with an Idea?* Our answer: You change the world. This book was selected as the hook to get students thinking. It is the story of an idea and a child who shares it with the world. Throughout the story as the child's confidence grows so does the idea and then one day something amazing happens.

While developing the Entrepreneur and Humanitarian unit, teachers realized the new state learning standards aim to prepare students for “college and career readiness.” As educators, we believe in teaching the whole child through service learning opportunities; fostering academic, social and emotional growth. Service learning is a teaching and learning strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities (Learn and Serve America National Service Learning Clearinghouse). This project took the standards one step further by preparing our students for college, career, and *citizenship* readiness. We guide students to reflect on their role in society. The children question what can they do in order to make the world a better place? What strengths do they bring to the task?

This unit incorporated positive psychology. The traditional character education program prescribes what students “should” do to be good or improve themselves, i.e. responsibility, kindness, respect, etc. However, current research shows that applying personal character strengths that children already have has a tremendous positive impact on a child’s quality of life. Therefore, they are building upon their individual strengths, rather than trying to take on a few prescribed traits. In a resume, the children identify the character strengths that make them unique, and use those strengths to form balanced business partnerships.

“The C3 Framework (The College, Career and Civic Life), is centered on an Inquiry Arc — a set of interlocking and mutually supportive ideas that frame the ways students learn social studies content. By focusing on inquiry, the framework emphasizes the disciplinary concepts and practices that support students as they develop the capacity to know, analyze, explain, and argue about interdisciplinary challenges in our social world (NCSS, p.6, 2013).”

The purpose of the unit is to find a charity to support in both a monetary and active way. The children are focused on finding a way to help change the world. Children in all five schools are given a list of several



choices and vote on their favorite one. The data is compiled and the top vote getter is chosen. Next children create businesses and market products to sell, raising money to donate to charity.

In order to connect with our community, teachers invited the founders of Jack’s Place into each of the schools to tell their story. The organization was formed after the tragic death of Jack Falvo III. At his memorial service, Jack’s mother heard stories of how he connected with children and helped others in need; stories that she had not known about before his passing. The goal of Jack’s Place is to provide a “home” for the families of out of town patients of our area hospitals and long term care facilities while their loved ones are rehabilitating.

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Planning with the end in mind results in more explicit goals, authentic performance tasks, and more effective teaching.

Jack's mother explained to the fourth graders that in order to move forward she had to create something positive out of her devastation. She shared that she is getting through life without her son by giving back.

The children were silent as they listened and connected to the emotions in the room. Hearing her story catapulted the students into action.

As students collaborated with their self-selected team members, they came to consensus around a business idea/product, and created a business name, slogan and emblem. They then conducted a market survey to determine the feasibility of their product. The data gathered from the survey was graphed and analyzed for patterns. Following plan approval, students determined an appropriate cost for their product and made a plan for production. Advertising techniques and strategies were taught and utilized to promote products. Each business created TV commercials (iMovies) in collaboration with the school's media specialist in the library, radio commercials (morning announcements), fliers in art class to hang in the hallway, business cards, etc. They did anything possible to get the word out.

Teachers modeled persuasive writing techniques and students wrote letters to consumers to persuade them to buy their product.

The unit also focused on economics and how businesses are established and run. The children built resumes, received letters of recommendations, and matched individual student skills with long-term goals/products as they thought about how they might use their talents later in life. These real-world experiences have created pint-sized entrepreneurs and civic-minded youth, some of whom now run their own websites and continue to give back to charities of their choice.

The Curriculum Design Process: Understanding by Design (UbD)

With the end in mind, the team began to craft the unit utilizing the Understanding by Design (UbD) framework by Grant Wiggins and Jay McTighe (2011). This is a three-stage backward design process for curriculum planning, which starts with what they wanted the students to know and be able to do by the end of the unit. Planning with the end in mind results in more explicit goals, authentic performance tasks, and more effective teaching. It's like knowing where you are going when you take a road trip.

The culminating activity of the unit became the Entrepreneur and Humanitarian Fair with the entire district's fourth-grade students shouting out, "We can change the world!"

Students very easily could have independently set up a traditional lemonade stand to earn a few bucks to pass on to charity; however, there was so much more collaborative, authentic and interdisciplinary learning throughout this unit.

“It’s an honor to be an entrepreneur, especially when you can help change the world!”

— Fourth-grade student

UbD Stage 1 – Identify Desired Results:

In Stage 1, we reviewed standards and established goals. *“What should students know, understand, and be able to do? What content is worthy of understanding? What ‘enduring’ understandings are designed? What essential questions will be explored?”* (2006, Tomlinson & McTighe, p. 27).”

To prepare for the unit design process, teachers used a professional learning day. The stacks and bags of instructional materials educators began with focused on social studies and writing. Since the New York State Social Studies framework was released in January of 2015, they realized that our district curriculum didn’t address the social studies practices of Economics and Economics Systems and Civic Participation. They also saw this as an opportunity to revamp this

unit in a more authentic way and to prepare students for the real world through service learning. It was also a district goal to embed reading and math standards and explicitly teach the skills in a meaningful way. Out of these issues the team developed their Entrepreneur and Humanitarian unit.

During Stage 1, the district’s fourth-grade team began to think about the Enduring Understandings *“What do you want students to remember about this learning experience that will stick with them throughout their lives?”* We wanted our students to be proficient in the economics and civic participation strands of the New York State Social Studies Framework. The predominant economic enduring understanding in our unit is to explain why and how individuals and businesses specialize in trade. The predominant civic participation enduring understanding is to internalize the responsibility as a citizen of a community by identifying situations in which social actions are required; and participating to help solve a problem.

Then the educators began to develop thematic “essential” questions to guide students’ thinking and establish the inquiry: *“How do you use your strengths to change the world?”* Additional essential questions were designed to foster inquiry around persuasive writing and geometry.

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“It’s an honor to be an entrepreneur, especially when you can help change the world!”

— Fourth-grade student

“It takes effort
and complete
confidence
to succeed.”

— Fourth-grade student

Next, the team thoughtfully selected the appropriate student learning standards in English language arts, mathematics, and social studies to identify the concepts and skills (what students should know and be able to do).

NYS ELA standards and Literacy in History/Social Studies, and Technical Subjects under the Anchor Standards for Listening and Speaking:

- Presentation of Knowledge and Ideas:
- Present information, findings, and supporting evidence such that listeners can follow the line of reasoning, and the organization, development, and style are appropriate to task, purpose, and audience.
- Make strategic use of digital media and visual displays of data to express information and enhance understandings of presentations.
- Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.

“It takes effort and complete confidence to succeed.” — Fourth-grade student

Stage 2 – Determine Assessment Evidence:

“How will we know whether students have achieved the desired results? What will we accept as evidence of student understanding and proficiency?” (Tomlinson & McTighe, 2006, p.28).”

Before designing their lessons, teachers thought like assessors about how to collect data on student understanding. The evidence needs to align with the desired results in Stage 1. Therefore, when creating our assessment evidence, we considered the meanings of the word understanding. For our students to truly understand the concepts taught in the unit, we turned to Wiggins & McTighe’s *Six Facets of Understanding* (Tomlinson & McTighe, 2006) which serve as indicators of how understanding is demonstrated by our students.

Tomlinson and McTighe propose that when students truly understand they can explain, interpret, apply, have perspective, display empathy, and have self-knowledge — all of which are embedded in the authentic context of their Entrepreneur and Humanitarian unit. Further, the teachers utilized Tomlinson and McTighe’s **GRASPS** acronym to create an authentic unit. The unit includes a real-world **goal**, and meaningful **role** for the student, an authentic **audience**, a contextualized **situation** that involves real-world application, student-generated culminating

products, and consensus-driving performance **standards** (criteria) for judging success (Tomlinson & McTighe, 2006).

The team referred to the Rigor and Relevance Framework with the UbD lesson template to think about how students create and transfer learning across the content areas. This is the point where we hooked the students and made the learning memorable.

The performance task for this unit was designed to include all the elements required in the Entrepreneur and Humanitarian Fair booth, such as a tri-fold poster board, products on display, a graph of their market survey, letters of recommendation, and persuasive letters to potential consumers. The criteria were described in a rubric that was aligned to the NYS ELA standards and Literacy in History/Social Studies, and Technical Subjects [See appendix]. The criteria we selected were under the Anchor Standards for Listening and Speaking: Presentation of Knowledge and Ideas:

- Present information, findings, and supporting evidence such that listeners can follow the line of reasoning, and the organization, development, and style are appropriate to task, purpose, and audience.
- Make strategic use of digital media

and visual displays of data to express information and enhance understandings of presentations.

- Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.

“Trying hard is the main ingredient to success.” — Fourth-grade student

Stage 3 – Plan Learning Experiences and Instruction:

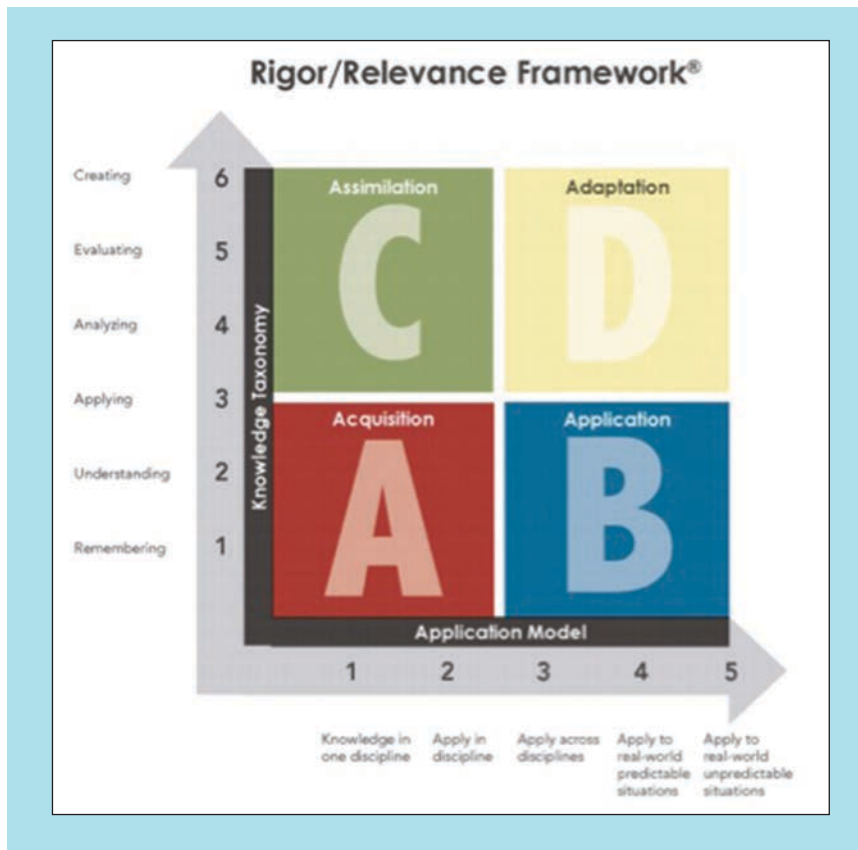
“What enabling knowledge and skills will students need to perform effectively and achieve desired results? What activities, sequence, and resources are best suited to accomplish our goals?” (Tomlinson & McTighe, 2006, p.28).”

The ability to transfer understanding is the long-term aim of all that we do with students. In order for transfer to be possible, teachers wanted students to “uncover” understandings rather than have their teacher’s “cover” them. Our students needed to own their learning (Wiggins & McTighe, 2011, p.15). Therefore, we utilized the A-M-T acronym for *acquisition, meaning, and transfer*. Our students acquired facts and skills through some direct instruction. (See Table of Learning Activities in the appendix.) To develop meaning, students made inferences, tested

The ability to transfer understanding is the ... aim of all that we do with students.

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theories, and looked for connections. Lastly, having accrued the knowledge and skills and gaining meaningful understandings, students applied and adapted their learning to new situations (Wiggins & McTighe, 2011).

In Stage 3, teachers determine how to arrive at desired results and evidence of learning. It is here that we used Tomlinson and McTighe's six facets to engage students in higher-order thinking along with the International Center for Leadership in Education's Rigor and Relevance Framework (2016) to generate and scaffold the learning activities.

Using Tomlinson and McTighe's **WHERE TO** framework, we guided students toward Quadrant D: Adaptation, in the Rigor and Relevance Framework (see appendix).

W = where, why, what: reminds teachers to communicate goals clearly and help students see relevance.

H = hook: how will students be engaged learners?

E = equip, experiences: what learning experiences will equip students so they are able to master the identified learning standards.

R = rethink, revision: encourage students to rethink and revise previous learning.

E = evaluation: promoting student self-evaluation. This is where we wanted to promote reflective learners in our classrooms.

T = tailor: all learning activities needed to be tailored to differentiation.

O = organized: this is the sequence of learning activities for best results.

The Entrepreneur Project is an opportunity for students of all abilities to be successful and to realize that there is a purpose to learning. The most profitable businesses are not necessarily those run by "straight-A" students. So as all the fourth-grade students, families and community members came together everyone could feel the positive energy in the gymnasium. This

is a place to see students motivated by purpose, autonomy and mastery, and where a love of learning is being fostered.

During Stage 3, we spent time scaffolding our learning activities. The Entrepreneur and Humanitarian Unit had a strong emphasis on social studies skills and content knowledge. However, through collaboration, teachers were able to also embed the ELA and math standards for the grade level and explicitly teach the skills needed for their students.

Because entrepreneurial profits were contributed to the local community, this unit taught students empathy and generosity. This is a project that no fourth grader will forget and has the potential to make a lasting impact. One fourth-grader reflected, “It’s an honor to be an entrepreneur, especially when you can help change the world!”

“It is fun knowing that all of our hard work is going to a good cause.”

— Fourth-grade student

Conclusion:

Supported by district leadership, resources and collaboration, classroom teachers Chris Lasher and Carol Herrington were able to transform a successful unit from their classrooms at one elementary school into a district-wide, integrated fourth-grade project where students raised \$9,000 for a local charity. Yet the work is not done. This idea “wants food,” “a lot of attention,” and continues to “grow and grow.” Students say they “feel more alive, like they could do anything” because of this project.

Throughout the 2016–17 school year, the school district has allotted two additional release days to continue this work. Creating an added focus on poetry, reading comprehension, and graphing, along with outreach to partner schools will all be considered.

As with any good idea, something amazing happened. “It changed right before their eyes spreading its wings, taking flight, and bursting into the world.”

That’s what you do with an idea, “You change the world.”

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RESOURCES RECOMMENDED BY THE AUTHORS

- http://www.niskayunaschools.org/news/2014-15/060815_Hillside_entrepreneurial_fair.frm
- <https://www.engageny.org/resource/new-york-state-k-12-social-studies-framework>
- <http://www.leadered.com/pdf/Rigor%20Relevance%20Framework%20White%20Paper%202016.pdf>
- <https://www.viacharacter.org/www/Character-Strengths/Character>

Appendix 1: Learning Activities

Day 1:

Unit Kickoff:

1. Read Aloud “What do you do with an Idea?” by Kobi Yamada.
2. Read and discuss what it means to be an entrepreneur.
3. Watch Thomas Edison video (see resources below)
4. Discuss economics and economic vocabulary that will be used within the unit.
5. Create background knowledge by reading and discussing business idea and partners worksheet.

Day 2:

Standard: Students will produce clear and coherent writing in which the development and organization is appropriate to task, purpose, and audience.

Complete Business Proposal (Form 1)

- Identify what you are good at
- Identify your product idea
- Identify your targeted market
- List the resources needed

Standard: Students will present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development and style are appropriate to task, purpose, and audience.

Create a resume (Form 2)

- Identify experience and skills which make you a good business partner
- Make groups

Day 3:

Create a business name/slogan/emblem (Form 3)

(Note: Form 4 is in assessments)

- Make a slogan
- Make an emblem
- Focus on portraying product and enticing buyers
- Emblem/logo should be noticeable yet simple
- Make a prototype (after Form 4)
- E-mail teachers to see when students can come to show off product to classes
- Use Activity sheet 9 to help familiarize students with symbols

Day 4:

Students will adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated and appropriate.

Decide on profitable product

- Present product idea to whole class
- Vote on six to seven classroom products
- Create business groups
- Create prototypes to use during market survey

Market Survey/Research/Letter of Recommendation

- Survey people to determine demand for product (Form 5)
- Market Survey Presentation Script
- Make a good impression on your audience, be prepared, have a prototype, share your letter of recommendation (Form 6)
- Find out size of market
- Find out percent of total market interested in your product
- Identify barriers of profitability such as high capital costs, high time per product
- Evaluate results — profitable? High consumer demand? Parental support?

Day 5:

Students will produce clear and coherent writing in which the development and organization is appropriate to task, purpose, and audience.

Business Plan

- Summarize what you are trying to do.
- Create a business description and clearly define your idea.
- Define goals
- Justify why this type of business was selected: sole proprietorship vs group
- Create management team, provide background
- Explain how to ensure a successful product, organize business, make decisions about pricing and create advertising
- Identify raw materials
- Describe the market opportunity
- Describe competitors and prove no direct competition
- Describe marketing/advertising strategy — write commercial script, choose brief part for morning announcement “radio” commercial.

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Investment

- Use Executive Summary sheet to clearly communicate your concept (Form 7)
- Prepare for questions investor might ask — raising the money is the most difficult part of starting your own business
- Persuade potential investors to loan you money to start up your business (Form 8)
- State clearly amount of money needed, precisely how you are going to use it, how the money will make business profitable

Day 6:

Students will conduct short research projects that build knowledge through investigation of different aspects of a topic.

Market Survey Summary

- Plan, study and analyze the data in the market survey and look at ideas critically
- Pitch ideas to potential investors and consumers
- Complete break-even analysis (Form 9) to ensure profit

Day 7–13:

Students will write opinion pieces on topics or texts, supporting an idea or point of view with reasons and information.

Persuasive Letter Form 10

- Identify audience
- Point of view
- Three reasons to convince
- Test quality of reasons
- Focus on leads — either summarize point of view or use a thought-provoking question
- Focus on closing, urge audience to change mind, end with a statement that links back to the issue, point of view or urges a call to action
- Use transition words to move writing along
- Revise/Edit writing using checklists given
- Example unit to review
- Persuasive Letter outline

Day 7:

Explain the following elements of persuasive text:

- The audience is the person or people you are trying to convince.
- The issue is the topic you are writing about.
- The evidence is the reasons you are using to frame your argument.

Read aloud sample letter *Choosing My Own Bedtime*

Record the audience, issue, and evidence on the *Mentor Text Elements of Persuasive Texts Organizer*

Business groups choose from the mentor texts to complete at least two other rows on the *Mentor Text Elements of Persuasive Texts Organizer*.

Review with whole class, and discuss answers.

Day 8:

Hand out graphic organizer, p.12 in Calkins unit. Have students write their own. Assign audience and issue. The audience: all possible consumers (students, parents, teachers, etc.). The issue: convince consumers to buy your product. Add these to the *Persuasive Letter organizer*.

Discuss *Testing the Quality of Reasons* page, p. 19 in Calkins unit.

On the reverse side evaluate the quality of your reasons. If you think it's a good reason add it to the "good" side. If it is a weaker reason add it to the "bad" side. Then, rewrite, eliminate, or create a new reason. You might want four to five good reasons when you are done.

Out of the good reasons, pick your top three, then put the top three in order of importance. Have a conversation about the reason for this. You want to begin with your second best reason, have your middle reason the weakest, and close with your strongest reason.

Make a class list of persuasive words. Examples: important, best, effective, strong reason, deserve, ready, perfect solution, If..., then...

Day 9–11:

Introduction: Review what students know about introduction paragraphs, apply to an opening sentence of the persuasive letter. An opening sentence must state the issue and point of view directly or ask a thought-provoking question followed by a sentence that states the issue and your point of view. Use transition words to begin each sentence that lays out your argument in the introduction. Review p. 23 with students.

Body: Review the letter. Show how the good reasons were used in paragraphs in the letter. Use the topic sentences from your numbered three good reasons. Students should take their good reasons and use the chart of transition words (p.23), to support them with evidence in body paragraphs.

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Conclusion: At the end of the letter you need a final plea. This should summarize your reasons, and serve as a final push to convince the reader. It does not provide new information. Review the final plea in the example letter. Also, discuss the *Final Plea Examples*.

Using p. 31 as a guide, start writing. Depending on time, continue the next day.

Day 12:

Refer to the *Persuasive Letter Revision/Editing Checklist*. Reread your writing carefully and check off as you complete each item. Once complete, choose one member of your business to do a second edit and discuss findings with you.

Day 13:

Write your final copy at home.

Day 14–23:

Students will make strategic use of digital media and digital displays of data to express information and enhance understanding of presentation.

PowerPoint advertising techniques

Complete Advertising Form 11 in class as a business

- Commercial — Do this during library time with librarian leading the teaching
- Flier — Do this during computer time
- Advertisement — Do this during art time with the art teacher leading the teaching
- Radio commercial (AM Announcements)
- Invitations — Do this during computer time
- Summary of graphing based on actual market survey results
- During computer time students will write a summary based on the actual results of the graphing activity using data from market survey results

Production

- Identify method of production
- Location of work fill out Form 13
- Use about a week in class and then continue to produce at home

Day 24–25:

Selling

- Set up preview day in school
- Fair held at Niskayuna High School in evening
- Summarize profit using Form 14

Day 26:

- Humanitarian effort
- Collect money made during fair
- Reimburse any loans
- Calculate the total amount made
- Make preparations to celebrate and donate monies to charity of choice



Argument Friday

SUMMARY

Argument is a proficiency that is critical to our students' future success as effective and informed citizens. In the following article, educators share how students in 11th grade inclusive classrooms worked on a weekly basis to not only adapt to standards around argument writing, but also understand the importance of crafting and presenting an argument as part of college and career readiness.

According to many colleges, the argument essay is the most common type of writing assignment that incoming students encounter throughout their academic careers, and the majority of youth are not prepared for it. This instructional shift from persuasive, creative, and opinion-based writing is affecting high school classrooms across the country. Argument writing helps students to focus on evidence and teaches them to support their opinions with clear rationales. It allows them to present their ideas with clarity and grounds their ideas in reasoning and logic.

While many students know what it means to verbally “argue” with someone, they are less skilled with the practices associated with researching and

drafting a well thought out argument. They are also less skilled at using evidence and rhetorical devices to back up their claims. In his article, “Reading, Writing, and Thinking for All” (2007) education expert Mike Schmoker discusses a conversation he had with Harvard president Derek Bok, who appeared on National Public Radio endorsing a liberal arts education, because a liberal arts education is “what employers are really asking for.”

“They feel that graduates don’t write well enough, they don’t think clearly enough, they don’t have a good enough ethical sense, they don’t understand the relationship of business to the larger social and public policy problems of the United States — they aren’t globally aware (Rehm, 2006, p. 63).”

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Anne Daviau is an English teacher at Nottingham High School in the Syracuse City School district. A member of the Syracuse TA, she currently works with grades 11 and 12.

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Anne Daviau, Syracuse Teachers Association

Learning to craft an argument is a proficiency that is critical to our students' future success as effective and informed citizens.

Crafting an argument is important across multiple disciplines. Schools can use argument as a cross curricular initiative, asking students to make an informed opinion and support it with evidence. Although assignments may vary across curricula, the overall principles that guide argument writing are the same; students must research a current issue.

In our school, living environment classes are arguing about stem cell research, while our humanities class is tackling the gun control debate. Students choose a side to defend, identify strong supporting evidence for their claim, concede to a counterclaim, and refute the opposition, all while presenting this information in a logical and scholarly manner.

In the summer of 2015, we sat in professional development thinking about

the instructional shifts that would be required to develop successful students in this new era of standards, and we realized that something was missing from our practice. We needed something special to get students' attention. We needed a structure and a procedure that they would engage in enthusiastically. We needed a way to reach every student within our diverse population. We needed to involve every student, regardless of language or abilities. We needed what every great author and lyricist knows; we needed a hook! This was the day we created what has become a cornerstone of our practice within our classroom. This was the birth of "Argument Friday."

In our Argument Friday lesson structure, our students have the chance to consider their personal feelings about a topic, to acknowledge the nature of an argument and get passionate; and then are challenged to channel their emotions into an explicit, concrete, and thorough writing piece, backed by evidence.

Learning to craft an argument is a proficiency that is critical to our students' future success as effective and informed citizens.

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School demographics

Nottingham High School, within the Syracuse City School District, is grounded in urban education and diversity.

School population: About 1,300 students

Student body makeup:

49% male, 51% female

78% of students are African-American

25–30% are identified as students with disabilities

25–30% are English language learners

Classrooms are inclusive; each section has an enrollment of about 30 students, with eight to 10 students identified as students with disabilities. Disabilities include mild to moderate learning disabilities, students with autism, and students with emotional disabilities, as well as other health impairments. Classes also average 10–12 English as a New Language (ENL) students from a variety of cultures and backgrounds.

What's the context?

One of the primary initiatives in our school is a humanities course in which teachers of English, social studies, special education, and English as a New Language work together to create lessons that are cross-curricular and grounded in skills needed to be successful after high school. I am fortunate enough to have been teamed with an amazing group of educators who have embraced adapting our practice to increase student-centered learning and engagement. In our space, we understand the importance of crafting and presenting an

argument as part of college and career readiness. Students engage in higher-order thinking where they compare and contrast perspectives, analyze and defend a position, and rank evidence from most to least significant to an informed claim, providing justification from texts. We know that writing, thinking, and speaking argumentatively promotes inquiry and deep discussion, and empowers students to become effective contributors to a civil society.

Within our new humanities class, we have made several instructional shifts in order to achieve our goals of college and career readiness, including increasing the amount and complexity of the nonfiction texts presented to our students and supporting them with close reading strategies to deepen their understanding and allowing them to pull evidence from these rich texts. We have created projects grounded in argument asking students to not only draft argument essays, but to hold academic debates grounded in reasoning vs. opinion.

Student groups became a construct of working with others with a shared viewpoint and similar claim versus working in homogeneous or heterogeneous groups based on skill level or academic need. Most critically, we had to shift our traditional content-based instructional methods to include deeper inquiry-based, student-centered lessons to increase the level of rigor.

“The move toward rigor places students squarely at the center of the classroom, where they will grapple with challenging content individually and collaboratively, and where they will be expected to actively demonstrate their learning (Marzano, 2014, p. 10).”

Through this process our students considered multiple sides of questions and issues. We feel that this type of inquiry supports the types of habits

needed to find resolutions to complex problems that will face them in school, and in life.

Our team spent time doing an analysis of critical skill sets required to be successful to various NYS Standards.

Social Studies Framework

Gathering, Interpreting, and Using Evidence:

(1) Define and frame questions about events and the world in which we live, form hypotheses as potential answers to these questions, use evidence to answer these questions, and consider and analyze counter-hypotheses;

(4) Describe, analyze, and evaluate arguments of others; and

(5) Make inferences and draw conclusions from evidence.

Civic Participation:

(1) Demonstrate respect for the rights of others in discussions and classroom debates; respectfully disagree with other viewpoints and provide evidence for a counter-argument;

(2) Participate in activities that focus on a classroom, school, community, state, or national issue or problem; and

(5) Participate in persuading, debating, negotiating, and compromising in the resolution of conflicts and differences.

Writing Standards:

(1) Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence. Explore and inquire into areas of interest to formulate an argument;

(4) Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience; and

(7) Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

College and Career Readiness Anchor Standards for Speaking and Listening:

(1) Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively;

(3) Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric; and

(4) Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.

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... writing, thinking, and speaking argumentatively promotes inquiry and deep discussion, as well as empowers students to become effective contributors to a civil society.

Students discovered that our influences are based on our experiences, and that our environment often drives our claims.

The need for instruction around argument writing was urgent, and the necessity to make it relevant and applicable seemed critical. As a team, we reread questions from prior Regents exams and practice tests, then discussed topics we felt students would apply to their own lives, and followed up by surveying a subset of students to discover issues they felt impacted their daily lives. These included homework policies, social media, drinking age, voting regulations, immigration laws, high-stakes testing, charter schools, and gender equity, among others. These issues guided us when creating argument questions, and prompted us to research and find articles to both support and oppose possible claims around these topics.

What does it look like?

We realized that consistent practice would be essential, and it needed to begin at the onset of the school year. We knew it would be a challenge, and expected students to disengage, so we worked to create a predictable, structured activity that would become ongoing, and through a series of scaffolding exercises be supportive, yet challenging. It had to spiral up to the year-end expectations, moving beyond doing well on an exam, but also give students a set of skills that would support them as they worked independently as seniors and in college.

On Argument Friday, students were given a topic to consider, and during the first five minutes of class they chose a side and drafted in their writer's notebooks about their rationale for choosing that side of the argument. Specific lessons for writing a claim were created, using consistent directions from the standards, to teach them how to turn a question into a claim statement, while adding their own author's voice; creating a procedure where students identify the question word and move it to the appropriate place in the line (*Should extinct species be brought back into existence?* = *Extinct species should / should not be brought back into existence.*)

Each week, we aligned the topic to current trends, and the class took a vote to see how they felt about the topic as a whole, with students weighing in on their reasoning. This set them up to defend their position. Next, the class compared their results to nationwide results found on debate.org. This allowed them to justify why our population might agree or defy the national outcomes. Each week results would vary. There were times when the class majority matched the majority of the nation, and times when our data did not align with national trends. This often prompted a discussion about why we felt differently. Students discovered that our influences are based on our experiences, and that our environment often drives our claims.

For example, our students overwhelmingly voted yes (78%), as compared to the national vote (34%), when asked, *Should shopping malls be allowed to institute teen curfews?* We were surprised at this result, as in our cold and wintery city students use the mall as a social outlet, and our local shopping centers do not allow children younger than 18 to be unaccompanied after 4 p.m. While a few students spoke about infringing on their personal rights, and that it punishes all for the behavior of some, more students talked about personal safety concerns as our mall has been the site of violent attacks on younger kids and the elderly by groups of teens. Many of our students also work at the mall and discussed shoplifting and fighting in stores by other teens.

We start the year with simple topics to increase student buy-in for the process: *Should schools run year round? Should students get paid to go to school? Should students in public schools wear uniforms?* As the year progresses, we increase the level of complexity of the argument topics to align with complexities of reading and societal conversations: *What role will robots play in our future? Do apps help you or hurt you? Should people be allowed to hide their true identity online? Are professional sports too dangerous?*

Next, students are provided with informational texts around a given topic, beginning with two texts at the beginning of the year, rising up to four texts by second semester. Students read each text with the argument question as their lens, and annotated texts through close reading, looking for evidence to back up their own claim, as well as acknowledging a counterclaim.

Each week we assume we know how students feel about topics and each week they surprise us. For example, we asked students: *Do violent video games make kids more aggressive?* We anticipated students would respond with “No way!” as we have many gamers in our student population. Surprisingly and interestingly, many students felt strongly that today’s games are too violent and while students do interact with them, they would be happier if they were not so graphic. They were also very adamant that they do not like their younger siblings exposed to such violence.

In fact, after reading “Violent video games and mass violence: A complex link” by Ryan Jaslow of CBS News (2013), one pair of students drafted a letter to send to Warner Brothers, publisher of the “Mortal Combat” game series, asking them to adapt the game and “turn down the graphics... Even if the law says it should not be sold to minors, that doesn’t mean that minors

Each week we assume we know how students feel about topics and each week they surprise us.

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It is imperative to teach students how to participate in civil discourse with others who have diverse opinions around a variety of subjects.

are not exposed to this violence as long as the games are in our homes... please think of our little brothers and sisters.”

Students read the articles and have these in-depth conversations grounded in evidence, and we watch as the opinions they had when they entered class are confirmed or swayed and they leave feeling empowered that they learned something and validated that they can support their ideas.

The most powerful moments occurred within the context of deep conversations around student-selected issues. We had specific reasons for selecting our topics each week — it fit into the themes of our curriculum, it supported rules and procedures of class / school / civic responsibility, it was connected to students’ personal lives, etc. What we had not anticipated, however, was the students’ overwhelming desire to choose their own argument topics. So, we decided to let them be the directors of their own learning from time to time.

We started an argument jar into which students could place topics of interest. On specific days throughout the week leading up to Argument Friday, we would use a strategy I named “scripted improv.” We would plan very specifically to look spontaneous in class. It is a strategy that we find works well to keep students engaged and to make

the content seem fresh and exciting. On those days we would “randomly” pick a topic from a jar, and let students debate their opinions, where the object was more aligned to promoting civic education.

We employed different devices to regulate voices so people were forced to listen to each other, rather than talk over one another. We found that using a ball that was tossed as a “talking stick” was a good way to regulate voices. Later in the year we added two podiums and developed a procedure where students were not allowed to share out unless they were “tapped” to approach. We believe it is imperative to teach students how to participate in civil discourse with others who have diverse opinions around a variety of subjects. In our age, and in this society, it has become critical to engage in this type of civility education.

What wasn’t working?

When we hit a stumbling block around teaching concession and refutation, we realized the reason students were not “getting it” was because it was out of their normal practice to acknowledge another perspective, yet rebut it with evidence. We struggled with how to teach this, as we knew it was an important skill — to be able to admit that someone else has a valid viewpoint, and to be able to prove that

same someone might be wrong about a given issue.

Students struggled with understanding that acknowledging the opposite side of an argument did not make them weak, it made them fair and reasonable. They had trouble realizing that they could still be “right,” still have more evidence, and still “win” the argument if they validated anything from the opposite side. They are not used to hearing arguments in a scholarly manner, and they certainly did not have a grasp of the rhetoric, or the transitions they could employ to create qualifiers and help them prove their claim.

Enter the game “Yeah, But” Ping Pong. Here students were placed in rows facing each other, separated by teams who took opposing sides of the issue. The students practiced conceding (yeah,) and refuting (but,) each other’s positions.

The game happened in three rounds. In round 1, students used their own rationale and outside information to rebut their opponents’ counterclaims. In round 2, students selected evidence from a short text while countering. This encouraged them to listen carefully to the refuting evidence and to locate the appropriate rebuttal. Round 3 also required evidence, but students used alternate counterclaim language taken from a brainstormed list of ways to

concede and refute, (*I see your point, nevertheless / I understand, however, etc.*). Each team received a point whenever they were able to volley the “ball” back to the other side.

As we moved through each round of the game, students began to hear the language used to acknowledge and rebut. They got more comfortable with using phrases that supported their agreement or disapproval. As opposed to using the volume of their voices to win an argument, they found the right transitions and qualifiers to shut down the opponents in a gentle but firm way. We were creating a class of citizens who could argue effectively and diplomatically without resorting to yelling, name calling, or anger.

Why does this work for all students?

To bring all these moving parts together, the culminating assignment was a written piece of work that addressed critical elements of argument writing, which began as a single paragraph, then advanced to three paragraphs, and then to five. Critical elements of the argument writing piece were gleaned from our standards analysis as well as our conversations with higher education partners. We are fortunate to have three institutions of higher learning in our area, and when inviting a group of professors in to discuss the readiness of our students, and what it

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Figure A

**In our own words – Student rubric review:
Grading the 5 Paragraph Argument Essay**

Paragraph 1: Introduction

- Overview – general statement about controversy
- Claim – present your side of the argument
- Things I know about the topic

Paragraph 2: Body (Support)

- At least 1 Citation from 1 text
- Your analysis (this means)
- Transition / linking words

Paragraph 3: Body (Support)

- At least 1 Citation from a different text
- Your analysis (this means)
- Transition / linking words

Paragraph 4: Body (Counterclaim – concession and refutation)

- At least 1 Citation from a different text that EITHER shows the other side or your rebuttal
- Acknowledges the other side (concession)
- Shuts down the opposition (refutation)
- Your analysis (this means)
- Transition / linking words

Paragraph 5: Conclusion

- Re-state your claim or position
 - Transition words
 - Call to action OR strong statement
- _____ / 15

Feedback:

would take to make them more successful entering college, they shared some fundamentals.

These essentials include:

- Introduce precise and knowledgeable claims;
- Establish significance of a claim;
- Distinguish the claim from alternate / opposing claims;
- Organize arguments logically;
- Analyze texts to select evidence that supports and refutes claims;
- Use words, phrases, and clauses to link the major sections;
- Establish and maintain a formal style and objective tone; and
- Provide a conclusion that supports the argument presented.

As the process grew, expectations became even more individualized, as students at more advanced proficiencies were writing two- to three-page papers grounded in self-selected research, and students with persistent difficulties in writing continued to develop their five-paragraph essays, giving them time to work on both argument writing as a genre, and mechanics and conventions with which they struggled.

We chose topics that were accessible enough that all students, regardless of ability or first language, could express an opinion. To increase motivation to participate in both oral and written activities around argument concepts, we thought about topics that were relevant and current, as well interesting to teens. We spent time selecting topics and locating text sets to support those topics, based on current trends in

Figure B

Topic / Question: _____
 Claim Statement: _____
 What do I already know about this topic before reading? _____

(ACCORDING TO...)

Text #	Line #	Evidence (Quote) that supports my claim	Analysis (In my own words)
		“	This means...
		“	
		“	This means...
		“	

(ACCORDING TO...)

General Analysis (In my own words)	Text #	Line #	Evidence (Quote) that <u>opposes</u> my claim
Some people say...			“
			“

Refutation: “However, this is not true because...”
 (Say why you are right, based on what you know or read) _____

Call to action: _____

societal issues that could be connected to key objectives within the curriculum units. For example, during our first marking period, we establish our rules and procedures and create a classroom culture. Therefore, some topics supported our end goals of promoting ownership of the learning environment: *Should schools get rid of grades and ranks? Should high schools start later? Are smartphones actually good for you?*

We also thought about how to ease students into the elements of writing an argument. We began the year with one well-developed paragraph that would include the fundamentals of argument writing as taken from the NYS Regents scoring rubric, which we dissected and re-wrote into a student-friendly protocol, getting student input after a rubric review (see Figure A). Students used the protocol to grade themselves, and then grade model papers while practicing giving non-numerical feedback as a way to assess their understanding of the task, and transfer their knowledge to their own writing.

A series of organizers were developed to support students with each step of higher expectations. Scaffolding began for everyone. As students grew proficient with

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Our goal was to create a space where crafting arguments became a part of a learning process where our students looked for answers without depending on us.

the single paragraph, scaffolding became an intervention for some, but not all (see Figure B). The structure of the organizer changed as the expectation changed. However, each time all students were provided with support, and it was gradually pulled away as they grew more independent and skilled with the task. By the end of the school year, both the assignment and the supports were tiered based on individual need, while preserving the essential outcomes of the task.

The structure of the varying facets of Argument Friday allows for more participation than traditional writing lesson structures, as it takes into account speaking, listening, reading, *and* writing through the variety of activities. It naturally embeds wait time as students have a chance to think and write about their own opinions before being asked to defend them (orally or in writing) with supporting evidence gained from engagement with complex texts. Even the text selection lends itself to differentiation, as tiered texts based on Lexile levels can be made available to students with reading challenges, while preserving the objectives of the activities. ENL teachers help locate texts in alternate first languages. We look for some texts with clearly defined features that lend themselves to locating key ideas and evidence.

For students who struggle with the written task, verbally defending their

ideas allows them to go through brainstorming and planning steps for the argument essay without the road blocks that typically occur when asked to plan for writing on demand. Varying the lengths of the final writing piece is a way to maintain the critical elements of the argument structure while meeting the students at their ability and gradually increasing the rigor on an individual basis.

Many students in our classes are identified with learning disabilities in reading, writing, and language, and they are able to work on their individualized education plan (IEP) goals within the context of the classroom, which is more inclusive in nature than progress monitoring based on secondary tasks unrelated to the class work of their peers.

What does the research say?

When teachers think about teaching argument writing, we turn to the work of George Hillocks Jr. In *Teaching Argument Writing* (2011), Michael W. Smith shares in the foreword, “George’s genius as a teacher is his ability to create contexts that push his students to do more serious and significant work than they thought possible — and to take pleasure in the doing” (p.ix).”

When we created Argument Friday we hoped it addressed the teaching portion of argument essays, but never

realized it would develop into part of our classroom culture, which did in fact push our students to engage and achieve in ways none of us knew possible.

Hillocks discusses the power of “environmental instruction, that is, a kind of instruction in which the students, teacher, and curricular materials are equally important as instructional resources,” rather than the more traditional model of teacher-centered instruction where students are “bored and apathetic observers of their teachers’ activity.” In a student-centered environment, the student as individual is the driving force of instruction, rather than the content where “the transmission of a body of knowledge is the primary focus (Clasen & Bowman, 1974, p. 9).”

Argument Friday offers student-centered instruction, where students are builders, not watchers. It is a gateway into project-based learning, where students are the constructors of their own knowledge base through research and collaboration, increasing their skills in literacy, written and oral communication, critical thinking, work ethic, and social responsibility. With this structure we were able to “immerse learners in rich experiences, using various tools, resources, and activities with which to augment or extend thinking (Hannafin, Hill, & Land, 1997, p. 97).” Our goal was to create a space where crafting arguments became a part of a learning

process where our students looked for answers without depending on us.

Another commonplace aspect in contemporary discussions of teaching writing is that the only way for a student to learn to write is to write. Like Hillocks, we found that students can also learn to write by “talking together while working through problems that provide rehearsals for the kind of thinking they will have to do when they are composing” an argument. We see the effects of these conversations as students get extended practice in doing particular kinds of thinking, and thus take ownership of their skills.

The Columbia University Writing Project discusses argument writing in its Research Base: “In Appendix A, theorist and critic Neil Postman is cited to demonstrate the importance of argument’s role in 21st century learning. He calls argument the ‘*soul of education*’ because when composing an argument, students need to read and think critically, evaluate multiple perspectives, in order to measure the strength of their own claim, and draw conclusions (p.24).” Argument Friday is where we tried to marry the entire facet of the ‘soul of education’ into a teachable, practical structure that produced results.

Newell, Beach, Smith, & VanDerHeide (2011) shared, “a successful reader or writer will be a person who can argue

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Purposeful collaborative planning, co-teaching, and reflecting have allowed us to think critically about the structures we use in the classroom, and to develop unique strategies to engage students.

Purposeful collaborative planning, co-teaching, and reflecting have allowed us to think critically about the structures we use in the classroom, and to develop unique strategies to engage students with college-and-career-ready skills that they find interesting and relevant to their lives, where our curriculum objectives are also being met.

effectively using rhetorical styles and structures to make his or her own ideational contributions to significant conversations within and across domains, and who can read thoughtfully and write with authority in ways that others will find interesting and convincing.” In mini-lessons embedded into Argument Friday our students learned about rhetorical devices used to win someone over to their side. We discussed Aristotle’s three appeals in depth:

“Ethos” (*an appeal to authority where the speaker has a strong reputation, and demonstrates that s/he is credible, trustworthy, and qualified*),

“Logos” (*an appeal that uses facts, data, and statistics to support the topic, where the speaker offers a clear, logical, and rational idea*), and

“Pathos” (*an appeal to emotions that evokes feelings, values, desires, hopes, fears and prejudices using figurative language, anecdotes, and imagery*).

We also practiced rhetorical questions, to ask a question of an audience to engage them without having a response from the audience, posed to create a dramatic effect. Next, in teams, students practiced creating appeals around given topics to see which team had the most convincing argument. These games taught the class how to better argue successfully and convincingly.

What makes this collaborative?

Our work is a collaboration of content area teachers and related service providers within our school community. Most strikingly, we have found that purposeful collaborative planning, co-teaching, and reflecting have allowed us to think critically about the structures we use in the classroom, and to develop unique strategies to engage students with college-and-career-ready skills that they find interesting and relevant to their lives, where our curriculum objectives are also being met. Once we created this structure and began to employ it, we reflected and adapted the concept. We then shared it with teachers across departments and had some conversations around how to take the premise of our Argument Friday and vertically align it from ninth grade to grade 11, in hopes of increasing the rigor and complexity going forward.

We have a few partners at Syracuse University, a local college that supports the work we do around co-teaching, collaboration, and inclusion. Our partners in the School of Education have visited and participated in various aspects of the Argument Friday lessons, speaking to our students about the importance of these strategies from the perspective of a college professor. They have also joined us for “Yeah, But” Ping Pong, and voted on some of our topics, just to engage in good conversations with

Students' research skills were strengthened, their overall writing mechanics improved, and they changed the way they manipulated language to help them prove a point.

students around current issues, and to encourage accountable academic talk in our classroom.

Moving forward, this year we are integrating our parents and community members into Argument Friday by publically posting our list of debate topics and inviting them to have conversations with students outside of school about their positions, as well as inviting them into the classroom to take part in student-led talks around current topics of interest.

What were the results?

As teachers, we were so pleased to see the effect of Argument Friday in multiple aspects of our class. Within a few weeks we began to hear questions, “Are we arguing tomorrow?” and “What are we arguing about this week?” or “Can we pick an argument topic?”

Engagement was heightened and excitement about learning grew. In our experience, students who struggle in school tend to take extended weekends, and traditionally, our Fridays had lower attendance than the rest of the week. However, by the end of the first marking period we realized that our attendance was actually higher on Fridays. Students enjoyed talking about their opinions. They liked to argue. They were good at it, and they knew it.

From a data perspective, as a school our 11th-graders attempted the Regents exam in January as a chance to get them some exposure to a test that was brand new to both staff and students. We were thrilled to see that, after only a half year of instruction, students that took part in Argument Friday produced over a 70% pass rate, where 43% of test points were earned through argument writing. Students' research skills were strengthened, their overall writing mechanics improved, and they changed the way they manipulated language to help them prove a point.

In considering the work of Costa and Kallick (2000), we feel that Argument Friday captures the essence of the *Habits of Mind*:

- Persisting,
- Thinking and communicating with clarity and precision,
- Managing impulsivity,
- Gathering data through all senses,
- Listening with understanding and empathy,
- Creating, imagining, innovating,
- Thinking about thinking (metacognition),
- Responding with wonderment and awe,
- Taking responsible risks,
- Striving for accuracy,
- Thinking flexibly,
- Finding humor,

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- Questioning and posing problems,
- Thinking interdependently,
- Applying past knowledge to new situations, and
- Remaining open to continuous learning.

Embedded into our structure is a combination of real-life, problem-solving skills required to promote strategic thinking and application.

From a social perspective, we felt empowered when we realized that, by the end of the year we had improved attendance, increased standardized tests scores, and we had developed a class of young adults who were talking about the issues of the world around them in informed and strategic ways. We were beginning to crack the difficult learning outcomes of civil discourse in the classroom, giving students the tools to turn unsupported opinions into coherent, evidence-based arguments and effectively challenge their opposition with rhetoric rather than reactions, such as name-calling, insults, or threats.

We were nurturing young adults who were learning to respect, tolerate, and welcome a different opinion, and saw it as an opportunity to disagree in a healthy way, where they felt validation when they could back up their claims. In these spaces there did not have to be a

“winner.” In this classroom students felt that they won if they could support their argument well, and could encourage someone else to acknowledge their side. This skill will serve them well in any forum in their lives.

Students came into school with ideas about topics they wanted to research and to discuss. They became the driving force in crafting the Argument Friday lessons. They began to bring in texts they found outside of school, unprompted, as they grew more interested in current events and decisions made by governments, businesses, and communities around the world.

Argument Friday has become the building block our humanities class strives to build upon to reach our ultimate goal: to develop thoughtful, creative, and logical readers, writers, speakers, and listeners. It is a structure that cultivates students who can actively engage in academic conversations with peers and adults in an effort to prepare them to be college and career ready, as well as effective contributors to our society.

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Enhancing Instruction through Content Integration

SUMMARY

What science skills do your students possess? Can they create a graph? Can they interpret data?

Can they recognize and describe a trend in the data? As students advance in science it is important not to assume that because they know many facts that they can interpret what those facts mean. Math and science skills become more integral as students advance in these subjects. The author shares three simple integrated math and science skill lessons for you to use in your class. Each one can be used as a formative assessment and can be completed within a 40-minute class period. Try them and see what your students can do.

There are more than 30 pages of standards, performance indicators and process skills in the NYS Intermediate Science curriculum that students in grades 5–8 are to master (University of the State of New York, 1996). When the ELA, math, and social studies syllabi are added (with health, art and other subjects), middle school becomes a time of congested information. Too often science instruction is lost because the focus is on teaching children science facts without connecting the facts to something meaningful (Griffin, 2014). The students become informational bulimics where they can give information back on tests but miss the essence of science. Science and math complement each other and can be taught together. As a veteran teacher, I have heard adults, as well as, students say, “I don’t do math” or “I don’t do fractions, but science is fun.” Science is doing; it is studying our world using

fundamental skills, and like math, if students are going to become successful in science, we have to move past accepting the idea of not doing math. In many instances, science is applying math concepts.

I am a middle school science teacher. When I am introduced as one, there is often an eye roll and a comment like, “Well, someone has to do it.” Some teachers shy away from the inherent variety of middle school, but middle school offers significant educational opportunities where great gains in a student’s confidence and abilities can be achieved (Balfanz, 2009). When students are presented with a curriculum that builds a strong foundation in basic science skills, it is easier for them to progress through the higher levels of science that follow (Maral, Oguz-Unver, & Yurumezoglu, 2012).

Teachers face heterogeneous populations, diverse learners and limited time

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Anita Stabrowski, Broadalbin-Perth Teachers Association

to orchestrate a classroom where higher-functioning students aren't bored, and challenged students can find success. Integrating math skills in science class can enhance instruction and improve the students' attitudes toward math skills because students view them in a different context. We all have our own way of avoiding something we don't want to do. Some students try to avoid math class. Middle school students can become inventive if they want to avoid a class. Ask any teacher, traveling to the water fountain, bathroom or their locker can become commonplace.

School can become more efficient, if teachers work in concert reinforcing the skills students are to master. When classes are taught independent of each other then they are limited. Teachers working together with integrated lessons reinforce each other's curriculum and help bridge the gap between material being *taught* by an educator and *mastered* by the students. With integrating skill work between subjects, students do the tasks, hear the

vocabulary used in different classes and it becomes more recognizable to the students (Willingham, 2015).

In order to differentiate lessons the design needs to address the different skill levels and learning styles. Keeping continuity within the lessons along with scaffolding the lessons aids in addressing heterogeneous groups. Ideally, the lessons created for a heterogeneously grouped classroom would have the higher-achieving students challenged (but could complete the work independently) and the students who need support would not be overwhelmed at the task. Working with the NYS grades 5–8 Science curriculum and NYS Math Learning Standards (National Governors Assoc. Center for Best Practices and the Council of Chief State School Offices, 2016), I have developed a series of lessons focused on specific skills called simply “Science Math Activities.” The purpose of these lessons is not primary instruction but to review what was already taught in both math and science classes. If one uses

continued on following page

Teachers working together with integrated lessons reinforce each other's curriculum and help bridge the gap between material being *taught* by an educator and *mastered* by the students.

The activities presented here are in essence simple formative assessments that can generate information to assist the teacher in determining the future lessons of the class.

these lessons in class, the discrepancies in what the student understands and what they can do becomes apparent. Teachers are familiar with students saying, “I know how to do this” and then when the teachers ask the students to show what they know there is a bombardment of rudimentary questions. I regard these lessons as simple checks on what students think they know and what they can actually do.

The activities presented here are in essence simple formative assessments that can generate information to assist the teacher in determining the future lessons of the class. Each activity can be completed in about 40 minutes and reviews specific vocabulary introduced in a previous class. By observing students doing their work the teacher can address the student’s misconceptions and difficulties immediately within the class period.

The goals of these activities are:

- (1) to have students participate in an activity in my class where I can interact with them and glean information on their abilities;
- (2) to have the activity take place in one class period so that there is no disruption in the progression of the lesson;
- (3) to have the activity require different levels of abilities so I can assess where the difficulties lie.

As their teacher, I want a snapshot to see what the students can do so I can plan and possibly change the next lesson. I will also conference with the math teacher after the lesson and compare our outcomes and evaluations of students’ abilities. This will help me decide the course of action, whether I reteach or move on.

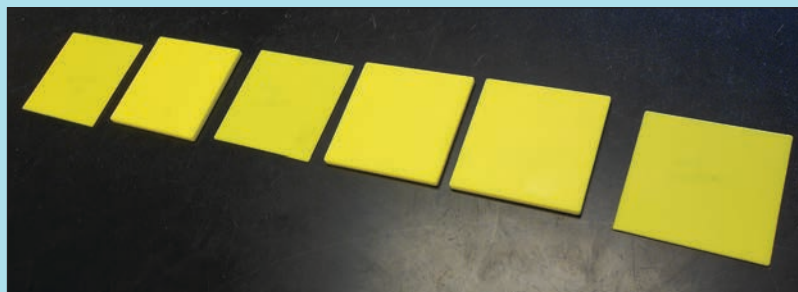
A requisite skill for middle school science students is for the students to calculate density. In order to calculate density, the students measure the mass of an object on a triple beam balance and divide that mass by the volume. If one wanted to calculate the density of a regular rectangular object, the mass would be found on the triple beam balance and the volume would be calculated using the formula $\text{Volume} = \text{Length} \times \text{Width} \times \text{Height}$. I find that measuring the sides of a regular rectangular object and calculating the volume can be challenging for some students. I often have students ask questions like, “Which side is the height?” or “If I turn it, does the length change?” Instead of pushing forward with the formula, $L \times W \times H$, I take a step back and review why we use the formula, but not with volume (three dimensions), I simplify it with area (two dimensions).

Picture 1 shows attribute blocks set up, six blocks in one row. I ask the students to tell me how many blocks there are. Of course, each student responds

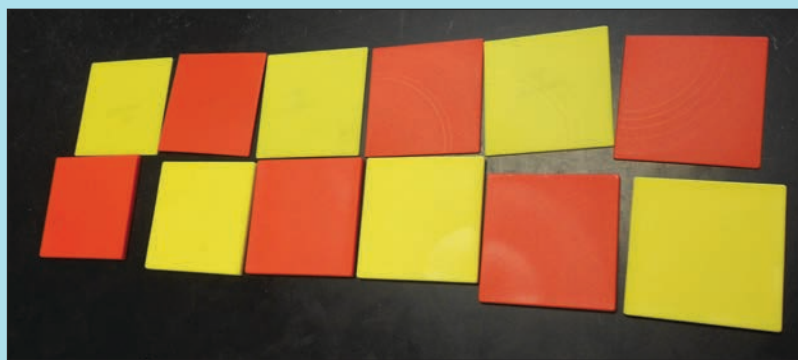
with the correct answer. I then ask them, how did they arrive at that answer? Did they count one block six times ($1+1+1+1+1+1$) or did they recognize that there is one row with six blocks in it (1×6)?

I then expand the blocks to two rows [Picture 2]. This is where students typically get an “Aha” moment. I ask the same question, how many blocks are there? Students do respond with the correct answer, 12. Again, I ask, how do you know? Did you count each one individually or did you recognize that there were two rows of six each. My goal for the lesson is not for them to just calculate area but to understand why we use the formula *Length x Width* to figure out how many blocks are *covering* an area. For finding area we are essentially just counting the blocks or whatever units (like centimeters) we measure in. This is the basis for explaining why we use *Length x Width x Height* to measure volume because it is the same concept of counting but with an added dimension. Middle school students have had previous experiences with measurement, calculating area and volume. I find that when I force the students to reexamine the way we calculate area and volume, their understanding and retention increases. The integration of these simple concepts improves student comprehension.

Picture 1



Picture 2



Overview of Lessons

Each one of the following lessons requires similar math and science process skills. Measuring, calculating, graphing and interpreting data are required skills in both math and science.

Lesson A: Students are to draw regular rectangles that are a specific square area.

Lesson B: Students are to estimate their location down the hallway to get to their next class on time. After creating the data students are asked to graph the data and answer simple questions about the graph.

continued on following page

Enhancing Instruction through Content Integration



Lesson C: Students are to identify variables, describe correlations and recognize outliers. Students complete this activity with graphing data and creating a best fit line.

In my eighth-grade science class we work mostly on general physical science (*New York State Intermediate*

Level Science Standard 4: The Physical Setting). Lesson A is a quick exercise I use after we have reviewed the concept of area. (See Graphic 1) An intermediate science skill is calculating the density of objects, which requires measuring the volume in cubic centimeters. I have found that a common mistake is that students do not fully understand the concept of an exponent when calculating volume (*NYS Math Learning Standards: Geometry and Expressions & Equations*).

Often times, if the side of a cube is 2 centimeters, students will calculate the volume at 6 cm instead of 8 cm because they see 2^3 as 2×3 rather than $2 \times 2 \times 2$. Instead of pushing forward with volume, I step back and focus first on length (distance), then area and finally volume. I challenge the students with reversing the calculation. In the preceding lesson, students measured the area of specific regular rectangles. In this lesson I ask the students to draw specific areas. Notice the numbers increase in what I call complication, they go from 25 (perfect square) to 7.5 cm^2 . The majority of students have difficulty with this exercise. They confuse perimeter with area and fail to understand that if they are given the area, they need to find two numbers multiplied together that form area. Again this is unsettling to many students because there are different correct answers.

Graphic 1: Lesson A

Length or **distance** is a one dimensional measurement. Let us say that the length of a line is 3.0 cm. The unit or label is centimeters. Because the measurement is just one dimension, and we use a linear device (a ruler) to arrive at the length of the line, there is just one unit. There are no calculations, just measurement. **Area** is a calculated two dimensional measurement. Area of a rectangle or square is the product (multiplication) of the two sides.

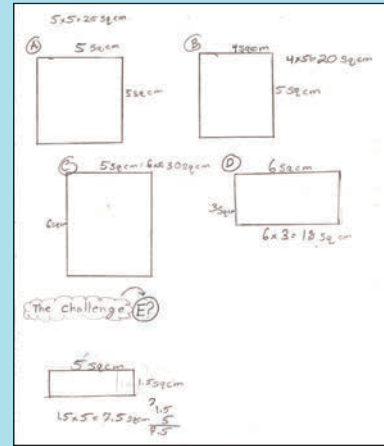
- On the back of this paper **DRAW** five shapes A, B, C, D and E.
- Shape A: Draw and label Shape A with an area of 25.0 cm^2
 - Shape B: Draw and label Shape B with an area of 20.0 cm^2
 - Shape C: Draw and label Shape C with an area of 30.0 cm^2
 - Shape D: Draw and label Shape D with an area of 18.0 cm^2
 - Shape E: Draw and label Shape E with an area of 7.5 cm^2

Pictures 3 and 4 (at right) are representative of two students in the same class. Picture 3 is Lesson A from a student who has grasped the idea of drawing a regular rectangle with a specific area, while Picture 4 is a sample from a student who has difficulty. For the student who did Picture 4, the student used the concept of attribute blocks (discussed previously) but when asked to calculate the area (7.5 cm^2) the student had difficulty. The student understands what area is but lacks number sense or familiarity. These are simple concepts that are taught, reviewed and learned in math classes all through middle school. But if the students are to use these skills in science for the foundation of more complex skills they need to be constantly reinforced.

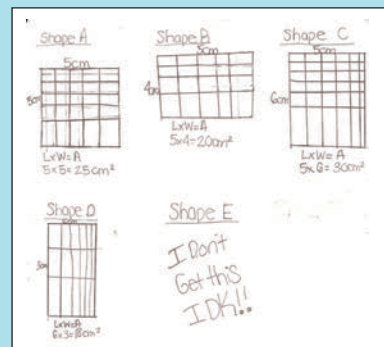
Revisiting that *area* really means a “region” or a “covering,” and that multiplying *length* times *width* shows us the size of the region helps portray the concept that area is not just a formula. The shapes of the areas can be different (squares or rectangles) but quantity is the same. Addressing students’ misconceptions in exponents, and reinforcing the concepts of area and perimeter make the next step of calculating volume easier. By working through these lessons I hope to improve the students’ familiarity with numbers, units, rulers and calculations.

In previous lessons to Lesson B (see Appendix 1) students have been introduced to speed and acceleration. Students have completed an activity where they have measured the rate of movement (*NYS IL Process Skills based on Standard 4*). My purpose for this activity is to have students move past the concrete measurement of an object moving a specific distance in a period of time. In this lesson, I give the students an *approximate* speed, with a distance and having them use a familiar setting (the school hallway) I ask them to create their own data that includes stopping at a locker for *about 40 seconds*. I then ask the students to graph their data following specific bulleted instructions. (See Graphic 2).

Picture 3



Picture 4



Graphic 2: Lesson B

Time and distance (changing distance during a specific amount of time) are often graphed using a **line graph**. An example of this would be how **you** travel through the hallways of the middle school. Follow the directions below to gather data and create a specific graph.

There are 3 minutes between classes. If there are 60 seconds in a minute, how many seconds are there between classes?

$$3 \text{ minutes} \times \frac{60 \text{ seconds}}{1 \text{ minute}} = ??? \text{ seconds}$$

Room 220 (your science room) is located at the end of the hallway. It is approximately 60 meters to your English class (room 210) and math class (room 209) with the Spanish room being approximately 75 meters away.

Your task is going to graph (line graph) your movement from science class to Spanish. You are going to stop at a locker on the way for *about 40 seconds*. A slow walk is 0.3 meters/second and a fast walk is 1.4 meters/second, let us **estimate** your walk is 1.0 meter/second.

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Enhancing Instruction through Content Integration

Today's middle school students have gone through earlier grades in school with the emphasis on high-stakes testing where they have been conditioned to identify the one correct answer.

Asking students to interpret data where variability is acceptable deviates from what they are used to. This activity challenges the high-achieving students because in middle school, these students become uneasy with the realization that there is more than one correct answer. The students are asked to estimate data about their own speed. Their data comes from a common experience because all of the students have moved to another class and stopped at a locker. This activity asks them to analyze that rate of movement. Once these students

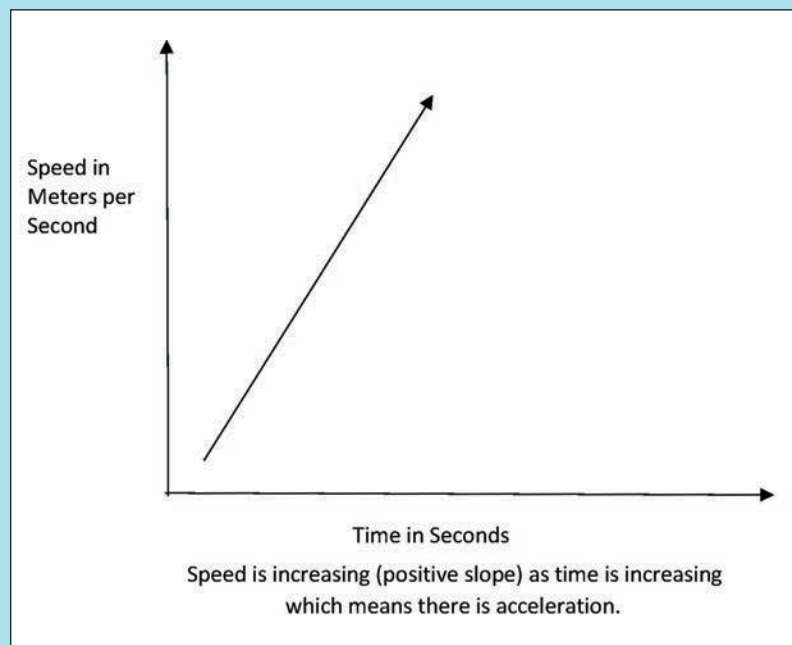
understand that they can create their own data, they find comfort in the concrete directions of creating the graph and answering questions.

Students who are not high achieving have difficulty with the data, and at different parts of this activity. I address this by actually having the students walk down the hall so they can relate to what the question is asking. If they cannot imagine themselves doing this familiar task, they can repeat it during class and report their data. These students also often find difficulty in having their data fit the graph using an appropriate scale and the students are using graph paper of different sizes. Many times students ask, "What should the interval be?"

Reviewing the vocabulary of range and dividing the range into even parts emphasizes basic math skills. I often refer to the axes as yardage marking on a football field. Remember, it is ten yards from 10 to 20, as well as, 40 to 50.

The questions at the end of Lesson B review the word **variable**, another concept students often find difficult. One common answer from students for "What is the variable on the horizontal axis" is "X." Typically students lump together "X," **horizontal** and **variable** without distinction. Understanding that a variable is anything that is liable to change, is often not retained. Students can write equations in math using variables but they often just see the variable as a quantitative solution not as a descriptive term.

Graphic 3



I know students can measure an object moving through a distance and calculate rate but I want to evaluate if they understand what speed means, the rate of movement, and whether they can represent it on a graph. (*NYS Math Learning Standards: Expressions & Equations and Statistics & Probability*). The goals for future lessons are to have students read a graph of “Time vs. Distance” and relate it to speed and then read a graph of “Time vs. Speed” and understand it is as acceleration as seen in Graphic 3. Creating graphs, reading the data off graphs and then drawing conclusions from the data shows students understand how things move in our world.

Lesson C (see Appendix 2) is a more challenging lesson that is completed toward the end of the school year. Students are asked to read and interpret graphs based partly on bacterial growth. This lesson is part of my genetics unit when we have finished learning about mitosis. Previously we did a lesson on counting how bacteria multiply through binary fission (2, 4, 8, 16, 32...) so the students are familiar with the idea of microbes multiplying. Having the students interpret graphs reinforces the idea of mitosis and binary fission. Understanding what a graph shows and being able to draw conclusions based on this data is a key skill (*NYS IL Process Skills based on Standard 4*). Questions in the activity include references to variables and

correlations (linear and non-linear). Students also interpret clusters and outliers. The end part of the activity has students create a graph and draw a best fit line (*NYS Math Learning Standards: Statistics and Probability*).

The subject matter is science; the skills cover both general science and middle school math. I again ask the students to identify variables on a graph (math and science concept), then to recognize a positive and negative slope (*NYS Math Learning Standards: Statistics and Probability*). The lesson refers to correlations and outliers, which are eighth-grade math concepts typically found mid-year. These concepts are somewhat sophisticated and the questions in the activity are purposefully designed to elicit discussion and the answers could vary based on different reasoning. A by-product of teaching has always been the unexpected answer. In science, students can be directed to a specific conclusion, but by leaving questions open for interpretation and allowing students to arrive at different conclusions educators promote good discussions and independent thinking. The end of Lesson C reviews a past activity of creating a line of best fit. The data is about weather. I changed the topic from bacteria to weather to reinforce the idea that graphs show the data and possibly a trend or correlation (*NYS Math Learning Standards: Statistics and Probability*).

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Enhancing Instruction through Content Integration

The higher-achieving students characteristically finish this entire lesson in one class period; however, they have difficulty with some of the more open-ended questions. High-achieving middle school students become unsettled when experimental data is not clean and uniform. They often ask, “Is this what is supposed to happen?” I always emphasize that whatever the data is, is true. The explanation comes after one has collected the data. Discussing outliers gives the students a way to accept strange occurrences in their data. The concept of outliers has also been discussed in previous lessons throughout the year when we were collecting data during other activities. Other students will usually need more examples and further clarification of correlation and outliers where I can refer back to previous experiments. These students usually need to finish the best fit line graph outside class.

This lesson is consistent with the unifying concept of constancy, change and measurement (Science Content Standards, 1996). I want my students to practice looking at patterns, rates of change and scales. The skill of identifying trends and being able to describe relationships in data is important. Math can measure the changes while characterizing and identifying the trends.

With scaffolding the lessons and monitoring a student’s progress I can determine their rate of success. If students

are going to master science skills, it is important to keep them engaged in class work. All too often, borderline students become overwhelmed while the high achievers can get bored. If the lessons are designed to start on a basic level and then become more sophisticated, outcomes can be monitored. Low-achieving students do become familiar with the vocabulary and develop a comfort in their recognition. High-achieving students can move through parts of the lessons quickly. I find that the high-achieving middle school students often lack the patience for quality detail work. Slowing down these students and emphasizing details synchronizes what they do and what I expect. The challenge with any classroom is recognizing what type of students you have and designing or differentiating accordingly. By middle school, students already have an opinion on what they can accomplish. In my classes I have the high-achieving students mixed in the same class with very low-achieving students so my lessons have a structure that can be utilized in different ways.

In Lesson A, the first page is a chart with the number 75 at the bottom where I ask students to create the data for the chart. When I introduced this lesson, some students immediately pulled out a calculator because they assumed if a chart and numbers were present, they would be required to add

something. The high-achieving students listened for the explanation and could imagine the data. Most of the other students struggled with this concept. I believe many were waiting for me to give them the answers to fill in. They often repeated, “I don’t get this.” For this lesson the concrete thinkers need to go and move to the hallway to help them imagine their movement.

Leana: “What am I supposed to write down?”

Me: “Let’s go in the hall, on the floor, imagine a ruler that extends from my room to the Spanish room. At each of these time intervals, write down where you are.”

Leana: “Yeah, but how do I know?”

Me: “Pretend. Pretend you are walking, I walk 10 meters, and how far did I travel from the room?”

Leana: “10 meters”

Me: “If you walk another 5 meters, how far are you?”

Leana: “15 meters”

Me: “If you, stop, how far are you from my room?”

Leana: “Zero”

Me: “Zero is the starting point at my room, you were at 15, how did I get back to zero?”

Leana: “I don’t know, I don’t know what you are asking.”

Meanwhile, I have students who have completed the data chart and want to know if they can proceed with the graph. I assure them that they can proceed but I want to check their scale on the graph before they plot their points. Back to Leana, who now has been joined with her friend, Raquel. They are both discussing movement in the hall. Raquel reassures Leana and they both seem to be able to understand what I am asking. They return to their seats, pull out their calculators, and divide 75 evenly so that one would travel evenly through each time period. The discussion then leads to the question, “Do we always walk at the same rate?” At this point, class ends.

My class would have gone easier if I gave Leana the numbers to graph. The actual discussion with her took about 15 minutes. During my discussion with her, other students were tuned in and offered different explanations. Afterward, I am not confident that she knew what I was asking her to do, but I am confident that she did think about measuring rates of movement and how that relates to distance and time. The next time we met, Leana was much more confident and did know what I was asking her to do and she did accomplish the task. I believe she just required more time to digest the concept.

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Sharing what we are teaching, offering suggestions and ideas while trying to find common threads in the instruction is vital and improves education.

Reflections on the three Lessons

When assessing these activities, I want the students to be able to master certain skills. The first skill is for them to be able to follow bulleted instructions. Breaking down the requirements into a list gives the students a device to learn how to complete a task. I work on this skill throughout the year. I find that structuring tasks in this way gives students an unambiguous way to review their own work, which is another skill I want them to develop. When graphing I want the students to decide on their own scale for each axis. This offers a chance for students to reinforce their own number sense.

Observing middle school students for a number of years I believe the readily available calculator has depleted common number sense from the population. The more students work with numbers in graphing the more confident they become recognizing and determining scale. I always like to place questions at the end of these activities for a general review. I want all my students to be familiar and recognize the variables that are graphed. Comparing the variables (what is changing in the activity) in a graph is a way to understand the relationship between those variables, which is, in essence, describing the world around us.

All three of these activities are based in general science but utilize math skills. If teachers embrace an integration of math skill work then we can work to avoid the math phobia in middle school (Strategies for Reducing Math Anxiety, 2011). I have found that students do become familiar with the math vocabulary and can relate to it in science class. Often times they do recognize, “We just did this in math class!”

Having the students complete these activities independently in class allows me to evaluate the progress of students. Reflecting on where the strengths and weaknesses are with students and comparing these notes with my colleagues takes time. I am fortunate to work on a core team (math, science, ELA, social studies and Spanish) and we have team time during the school day where we are able to do some common planning. Sharing what we are teaching, offering suggestions and ideas while trying to find common threads in the instruction is vital and improves education (Hackmann & Valentine, 1998).

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Glossary

Variable: something that is liable to change. Most middle schoolers will say: The variable on the horizontal axis is “x” and on the vertical is “y”. Ask the question, what is changing on the horizontal axis, the reply is, “the numbers”. Ask what do those changing numbers represent? That is the variable.

Slope (positive and negative): A slope is how steep and in what direction the line moves. Low numbers are “bunny hills” and big numbers are steeper. Positive slopes go up or increase; negative slopes go down or decrease.

Outlier: something that is on the outside of a group. When looking at data points, this would be a point that does not follow the trend. The odd one out.

Cluster: A close-knit group. A group of data points that are close together.

Correlation (linear, non-linear, strong and weak): This is the relationship between two things (usually called variables). Linear correlations are straight lines while non-linear correlations tend to be curvy type lines. Strong correlations are nice neat lines and weak correlations are kind of scattered.

Best fit line or **Line of best fit:** An advanced topic in middle school but one that always elicits good discussion. This is the “trend” line, the path the data is taking when presented with a scatter plot (lots of data points all over the place). An excellent tool when discussing what “probably” will happen. I always associate with animal tracks in the snow. Where is the animal headed? The animal may change direction, but chances are, it is headed in one direction.

Appendix 1: Lesson B

Time Interval (seconds)	Distance from the science room (meters)
Science class is over! 0-19	
20-39	
40-59	
60-79	
80-99	
100-119	
120-139	
140-159	
160-179	
180 (Need to be in class!)	75

PLOT THIS DATA ON A LINE GRAPH

Directions for graph:

- Use graph paper
- Draw a horizontal and vertical axis with about a 2.0 cm margin
- Label the horizontal axis (x-axis) "Time Interval (seconds)"
- Label the vertical axis (y-axis) "Distance from Science Room (meters)"
- Choose an appropriate scale that uses most of the graph paper
- Remember **all of the data** must fit on the graph
- The **origin** (0,0) will be in the bottom left corner
- Make sure to put your **name**, a **title** and the **date** your graph
- Always use a straightedge to draw a line

ANSWER THESE QUESTIONS:

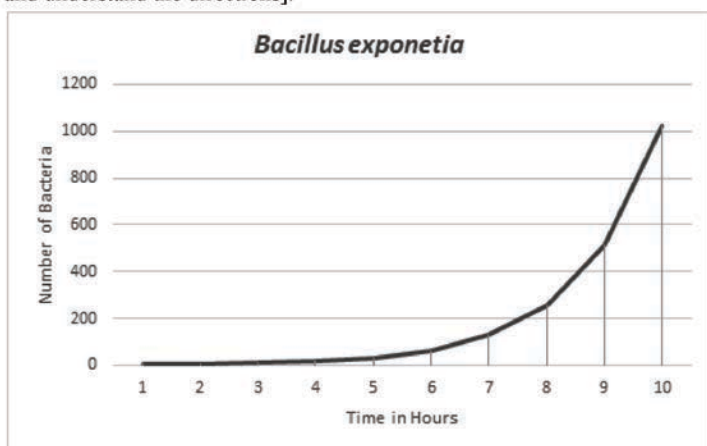
1. What is the variable on the horizontal axis?
2. What is the variable on the vertical axis?
3. How many meters in one kilometer?
4. How many meters in five kilometers?
5. How many centimeters in one meter?

****STAPLE TO YOUR GRAPH AND HAND IN****

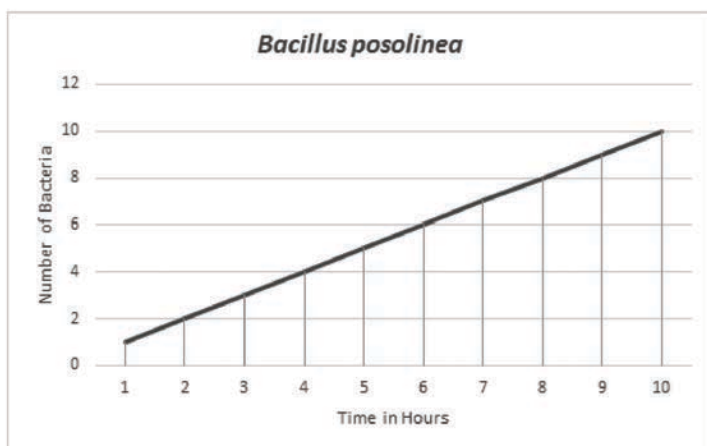
Appendix 2: Lesson C

Bacteria reproduce by mitosis. Bacteria are named for their shape. *Bacillus* is a rod-shaped bacteria. Bacteria can grow at different rates based on the environment they are introduced into. When antibiotics or other solutions are present the growth rate can be diminished or stopped.

Study the following 5 graphs and answer the questions **and** complete **all** the tasks [read and understand the directions].

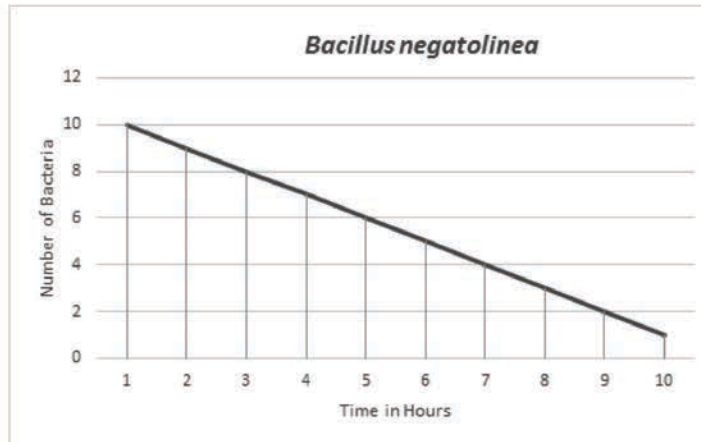


1. In the above graph, what are the variables?
2. What happens to the number of bacteria as the time increases?
3. How does the growth of *Bacillus exponetia* differ from the growth of *Bacillus posolinea*? [write a sentence that refers to BOTH number of bacteria and time]



4. In the graph above, what is the label of the x-axis?
5. In the graph above, what is the label of the y-axis?

Appendix 2: Lesson C (continued)



6. How does the growth of *Bacillus posolinea* differ from the growth of *Bacillus negatolinea*? [write a sentence that refers to BOTH number of bacteria and time]

A **correlation** is the mutual relationship or connection between two variables. It is also the relationship of a **function**. A **linear correlation** is a straight line. A **non-linear correlation** is a curvy line. The correlation is said to be “strong” with a tight line and “weak” when points are scattered. A linear correlation is said to be **positive**, when both increase [positive slope] and **negative**, when one goes up and the other down [negative slope].

7. **Circle** the correct words that describe each graph’s correlation.

Bacillus exponetia

linear non-linear positive negative strong weak

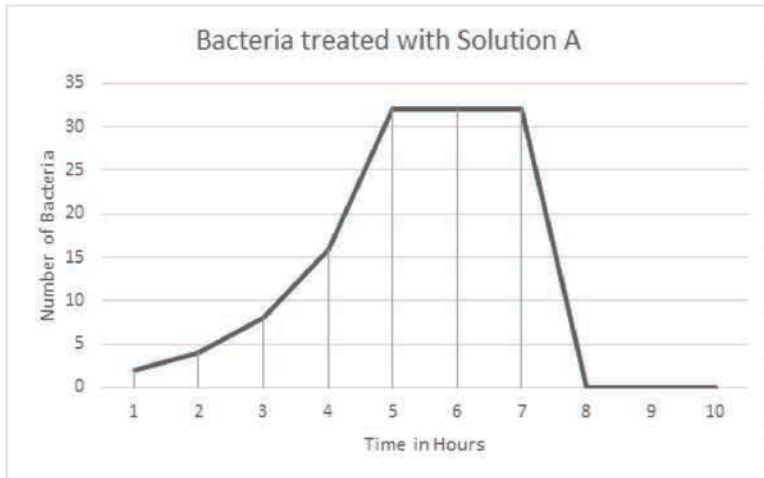
Bacillus posolinea

linear non-linear positive negative strong weak

Bacillus negatolinea

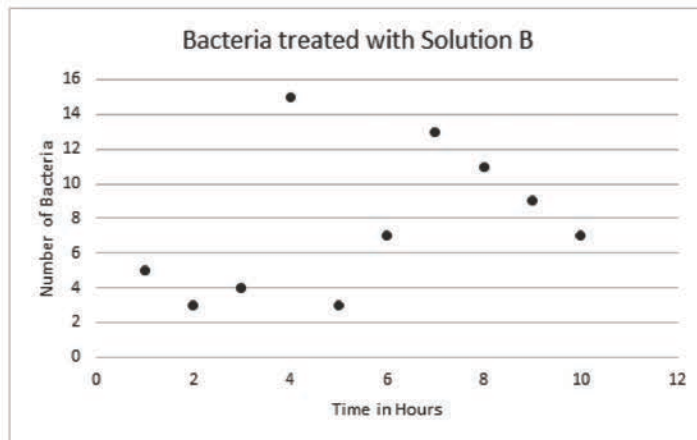
linear non-linear positive negative strong weak

Appendix 2: Lesson C (continued)



8. **Solution A** is found to kill bacteria.
 - a. At what time did the bacteria stop growing?
 - b. For how long was the population not changing?
 - c. At what time was the population zero?
 - d. What is the name of this bacteria?

Appendix 2: Lesson C (continued)



There are situations when there is no correlation with the defined variables. In the graph above Solution B was introduced into the population of bacteria and the solution had varying effects of it. In a **scatter plot** (where there is no correlation-like the above graph) there are certain data points that are close to each other (called **clusters**) and those that are far removed from the group (called **outliers**).

9. For the graph above:
- o **Circle** the cluster
 - o **Star (*)** the outlier(s)

Appendix 2: Lesson C (continued)

The previous graphs were about the growth of bacteria, the following data are the average high temperatures (°F) in cities around New York.

Graph the data below, follow the directions and answer the questions:

Month	Gloversville	Saratoga	Albany	Plattsburgh
January	28	31	31	26
February	31	35	35	29
March	41	45	44	39
April	55	60	58	53
May	68	72	69	66
June	76	80	78	75
July	80	83	82	80

- Label the x-axis “Month”
- Label the y-axis “Average High Temperature °F”
- Use a different color to represent each cities data points
- Draw a **best fit line**
- Attach your graph to this packet and hand in
- Answer the questions below

Questions

1. What are the two variables for the above graph?

2. Is there a correlation between the variables? If yes, describe it. (linear, non-linear, positive, negative, strong, weak)



Learning to Collaborate, Collaborating to Learn

SUMMARY

Two speech-language pathologists describe the language interventions they provide to special education students to support academic achievement. Through collaboration with each other and with classroom and special education teachers, speech-language therapy supports classroom instruction and addresses underpinning foundational vocabulary, concepts and grammatical structures that are challenging for many middle school students.

All students should be taught to reach high academic standards that will prepare them to succeed in college and careers. Many students face particular challenges in accessing the information presented within their content area classes. Fang (2012) describes the varied lexical and grammatical patterns that are typical of the written texts and spoken language students encounter within specific disciplines. For example, the vocabulary and the way language is organized in social studies is different from the language used in science. Social studies often presents history using text structures to describe a sequence of events with words and clauses such as: the following winter, at the turn of the century, etc. Historical events are presented as a point of view within a

larger context or period. Science texts and lectures use distinctive grammatical features to describe methods, procedures, results and findings. Fang describes use of specialized vocabulary, acronyms and extensive use of long noun phrases in scientific research texts.

Students may struggle as academic demands require that they employ increasingly sophisticated and subject-specific language skills. Scott (2014) describes the increasingly sophisticated and complex sentences older students must navigate in their expository texts and the critical need for support and instruction in both decoding and encoding these types of complex sentences. Students with language learning challenges often encounter difficulty with the vocabulary and the sentence structures of academic

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language used in both oral and written texts. These students may have an Individualized Education Plan (IEP) that classifies them as a student with a learning disability (LD) or speech language impairment (SLI) and qualifies them for special education services, including the provision of speech-language therapy.

School-based speech-language pathologists (SLPs) bring a focus and expertise in language acquisition and use to instructional teams (Ehren, Murza, & Malani, 2012). ESSA (2015) describes an increasing role for SLPs in receiving and providing high quality professional development and coordinated involvement in language and literacy initiatives and programs in schools. As SLPs within a middle school, we design language interventions for students in grades six, seven, and eight to support and develop their academic language skills, and provide them with the tools to better comprehend the curriculum. Our speech-language therapy is informed by our knowledge of the curriculum demands and academic content through collaboration with other teachers.

Our students demonstrate improvement in their listening, speaking, reading and writing in a variety of ways including: increased participation in classroom discussions, identifying connections between curriculum content and therapeutic activities, achievement of their IEP goals, and improvement on standardized assessment instruments as well as teacher-designed tests and quizzes.

Objective measures of student achievement include performance measures such as classroom assessments, standardized measures of language knowledge and student progress toward IEP goals. Subjective measures such as improved participation in classroom discussion, self-monitoring of strategy use and reflection on presentations are all indicators of student success. Additional outcome measures include a reduction in the need for special education support and increased confidence and self-advocacy.

At the beginning of the school year, we review students' IEP goals with them and put the goals into language the students are able to understand. In therapy, students complete a goal log sheet which includes the learning

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School-based speech-language pathologists bring a focus and expertise in language acquisition and use to instructional teams.

More than a list of vocabulary words, academic language is how students are taught curriculum content and how students are expected to demonstrate their knowledge.

activity and goals for each session. At the end of class the students reflect on how well they have met their goal for the day. These self-reflections help the students monitor their progress toward their individual IEP goals.

Language Learning Challenges

Bethlehem Central Middle School is in a suburban district located in the Capital Region of upstate New York with a population of approximately 1,200 students. Two speech-language pathologists provide therapy, consultation and evaluation of students who present with academic challenges. The American Speech-Language-Hearing Association (ASHA) outlines the roles and responsibilities of school-based SLPs, including robust involvement in addressing students' educational achievement by supporting curriculum mastery. Speech-language pathologists work to address what the ASHA (2010) calls "the linguistic and meta-linguistic foundations of curriculum learning for students with disabilities, as well as other learners who are at risk for school failure, or those who struggle in school settings (Providing Unique Contributions to Curriculum, para.1)." Collaboration between SLPs and general education teachers is essential to facilitate student success (ESSA, 2015).

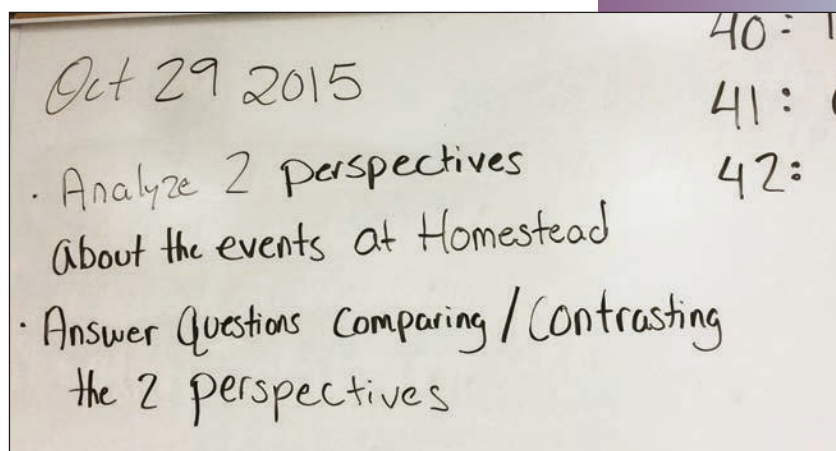
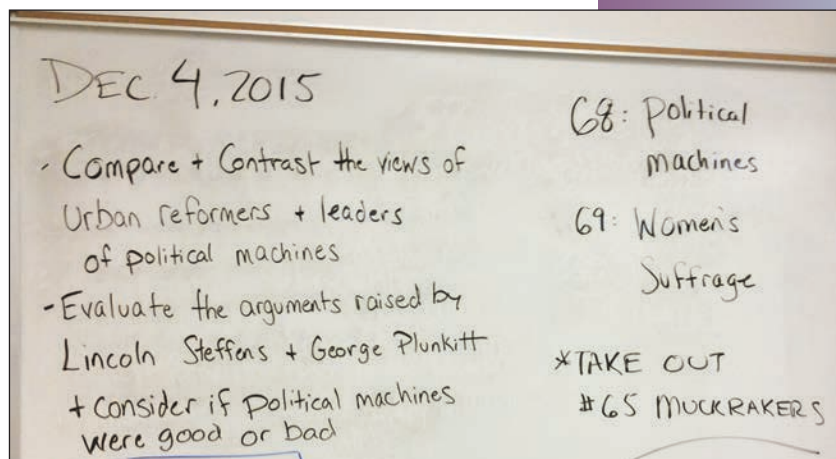
The students described in this article are in general education classes. Some attend resource rooms and some receive speech-language therapy as their only special education service. Our students struggle to comprehend the curriculum for a variety of reasons. The curriculum requires students to understand and use increasingly complex and sophisticated language. Our students demonstrate difficulty making sense of what they hear, read, or watch and need support to discuss, question, explain and write about what they are learning. These students tend to be concrete thinkers with limited vocabularies. They have difficulty understanding and using complex syntactic structures, understanding abstract figurative language and multiple meaning words and explaining relationships. They may lack foundational skills such as questioning, understanding text structures, inferring, and using background knowledge. They often have poorly developed literacy skills.

As speech-language pathologists, we recognized the need for our students with language learning and use challenges to be able to use academic language, the language of the classroom. More than a list of vocabulary words, academic language is how students are taught curriculum content and how students are expected to demonstrate their knowledge. These skills are often assumed or implied, and not explicitly taught.

Academic language includes many verbs that students are expected to understand such as: explain, analyze, compare, describe. As described by Zwiars (2006), academic language is not only the vocabulary words or “bricks” used to describe complex concepts, higher order thinking and abstract ideas, but also includes the “mortar” or smaller connecting words and phrases that link words into sentences (p. 39). It is also, importantly, a particular way of using language, a social register that is familiar for some students and less familiar and perhaps less comfortable for others.

Content area literacy often refers to basic reading comprehension skills and processing strategies such as predicting, summarizing, monitoring comprehension, etc., as well as general learning strategies such as highlighting, note taking and concept mapping (Fang, 2012). These skills and strategies assist students to learn and remember content area information and can be used across a variety of texts, (Jaworski & Coupland, 2006, p .6) including printed material, digital print, graphics, videos, oral discussion, lectures, etc.

Disciplinary literacy encompasses an even broader range of language skills and mastery of specific codes or ways language is used within specific disciplines (Fang, 2012). The challenge of disciplinary literacy includes not only specific vocabulary but also the language patterns. As students progress through



The images above show typical homework or classroom assignments using academic language that students are expected to understand.

school, the language demands become more complex, abstract and specialized. Within specific disciplines, language use and the purpose of language differs. Building foundational as well as sophisticated language skills empowers our students to engage more fully and participate more completely.

Word study programs that explicitly teach students necessary skills while engaging their interest in how words are

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Learning to Collaborate, Collaborating to Learn

related to each other is described as a vital component of literacy in *Words Their Way* (Bear, Invernizzi, Templeton, & Johnston, 2008). Middle school students benefit from hands-on activities such as word sorts to delve deeply into Latin and Greek root words and word relationships. It is also important to be able to say or pronounce the words in their many derivations e.g. analysis, analyze,

analyst, analytical. The study of morphemic aspects or meaningful word parts such as prefixes, roots and suffixes adds to metalinguistic knowledge and skills. Improvement of these skills can improve understanding of seemingly arbitrary rules of spelling.

Learning to Collaborate

We started collaborating regarding speech-language service delivery, and shared students. We began to talk about our students' needs in the classroom, and how we could best support their language development. Matching therapy activities to the curriculum demands was a top priority. We were afforded opportunities for curriculum development through our school district. We aligned the Common Core requirements with the language based skills the students needed at each grade level. We examined academic vocabulary, cognitive constructs, syntax and classroom discussion skills, and paired them with main themes in science and social studies. Through analysis of grade-level curriculum and text structures, we developed a spiraling curriculum for students receiving speech-language therapy across three grades of middle school.

In addition to the lessons in word study and grammatical structures, students are taught to listen to and acknowledge each other for shared

Scope and Sequence of Speech-Language Curricula for Grades 6, 7, 8

Grade	Word Work:	Syntax, sentence structures	Academic Conversations:
Expressive language skills	word study skills, parts of speech	complex sentence structures	make relevant contributions to classroom discussions
6th: respond thoughtfully and make relevant comments	geo astro auto cycle cent chron luna sub struct	Compare/contrast "The ___ and ___ are the same/different because..." "The ___ is ___, and/but, however...." Chronology and time related signal words: at first, earlier, before, finally, century, decade	commenting linking to others' comments asking questions
7th: word choices are more nuanced understand and reflect other's perspective	in, a (without) bio archy circu body crat poly sect trans circum	Cause and effect "If.... then...." "Based on ___, I infer that...." Signal words: because of, due to, since, consequently, therefore, as a result, then, lead to....	thinking critically introducing and acknowledging counterpoints using analogies, metaphors and similes
8th: learning is more self-directed sentences are varied and can be elaborated	tech equi phys post thermo graph/gram mal micro	problem, solution, evaluation Signal words: another possibility, even though, except, as an example, for this reason, on the other hand, in contrast, above all, for instance, including" knowledge and use of a variety of grammatical forms including clauses	referencing what has been said to "jump off" or "piggyback" to a new related discussion thread - Using "That reminded me of" or "Now I'm thinking that..." Metacognitive and metalinguistic skill building to notice and name changes in thinking. "I used to think... but now"

knowledge building. We continue to add to and refine our curriculum throughout the year. The remediation and focused attention provided in the speech language therapy room provides the skill and practice to position students with language learning challenges to participate more fully within their general education classrooms. (See curricula graphic at left.)

Collaborating to learn

Classroom teachers cover the essential vocabulary or “tier three words” (Beck, McKeown, & Kucan, 2002) in class, and the resource room teachers may provide additional practice and review. Tier three words are often subject specific, low frequency and best learned as needed in content area instruction. These terms that are “on the test” may include words such as: mitosis, hieroglyphics, metaphor.

In speech-language therapy we address the underpinning language and the language structures needed to learn and understand these abstract concepts. Therapeutic activities explore the foundational vocabulary and concepts needed for understanding the academic vocabulary. For example, in order to understand mitosis a student needs to know: process, reproduce, copy, align. These foundational or “tier two” words (Beck, McKeown, & Kucan, 2002) are

chosen for their utility and applicability. They are essential parts of the definitions within this subject and are likely to be encountered often.

Teaching foundational concepts and the skills needed to interpret words supports understanding and use of the curriculum content. Morphemic awareness or an understanding of base words and their derivations (e.g. reproduce, reproduced, reproduction) is another critical component of word learning for academic success. These words are taught in a variety of ways all of which emphasize active engagement and challenge students to think about, compare, pronounce, and use the words.

Words may also have subject-specific meanings, for example, “mass” in science is very different than “mass media,” “huddled masses yearning to breathe free,” or Sunday Mass. Similarly, while students may be aware of the noun “mushroom,” they may need explicit instruction and practice to determine what “mushrooming populations” and “mushroom cloud” convey.

An early collaboration was fostered by a summer curriculum development opportunity. Working together with a seventh-grade science teacher, we jointly developed an online vocabulary resource that all students could access for pre-teaching, review or additional support of the specialized curriculum vocabulary.

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Providing struggling language learners with opportunities to sort, generate and discuss words has practical application back in the classroom.

The science teacher, Mrs. Lisa Wood, identified critical vocabulary within specific units in her course. Together we also identified the essential information students need to know about the terms and the definitions. For example, within the “Bacteria and Viruses” unit of her Life Science class, terms such as: antibiotic, genetic disease, microorganism, and infectious were defined and flash cards were created using the online resource Quizlet. This collaboration increased awareness of the highly specialized and challenging curriculum content seventh-grade students must navigate. Our work together combined the expertise of both the science specialist and the language specialist.

In speech-language therapy, students explore the use of affixes to find “clues” to word meaning. Words and parts of words, for example, “bio” meaning life (biology, biography, antibiotic, etc.) are investigated. Students sort words, develop lists of related words and practice pronouncing these words and using them in sentences and conversations. Active participation, engaged discussion, and shared knowledge building help students to internalize word features and improve automaticity in their reading, writing, speaking, and spelling. Providing struggling language learners with opportunities to sort, generate and discuss words has practical application back in the classroom, where students

encounter these general knowledge words in all kinds of texts.

Using words from the academic curriculum within speech and language remediation sessions anchors the purpose of our word study activities and illustrates connections between curriculum and therapy. Giving students ownership and practice with a variety of word options, and supported practice in using academic language has a big payoff for academic success (Jacobs, 2013). As students become more adept at these types of discussions, we find them reporting back to us regarding connections between what they are learning in speech, and the language they encounter in the classroom. This provides evidence of improved language awareness and metalinguistic skills.

In speech-language therapy, curriculum-linked texts are examined to identify syntactic structures such as clauses, phrases that signal relationships such as cause and effect, sequence of events, or fact versus opinion. Recognizing and using these types of text structures is a critical skill for students working with readings from their content area teachers. For example, students in eighth-grade social studies classes learn about the chronology of events during the post-Civil War reconstruction period. In speech-language therapy, these same students delve deeply into a text describing the history of candy making

in America. Signal words and phrases such as: “thus,” “finally,” “over the next several decades,” and “at the turn of the century” that indicate the passage of time and sequence of events are noticed, discussed and added to the world wall or chart.

This naming, noticing, and guided practice in using these types of grammatical structures supports students as they independently navigate their assignments from class.

Communication between the speech-language pathologist and both the classroom teacher and resource room teacher reinforces the connections between skills and success as these teachers are able to reference the signal words in class texts and encourage students to use these words in their writing. Collaboration between various teachers can lead to increased recognition of the need for supporting language development of students and demonstrate the connection between language learning and academic success.

In our district’s eighth-grade Direct Consultant Teacher (DCT) program, for example, a special education teacher works within the grade-level, general education content area classes. Collaboration opportunities include in-room speech-language services, when both the speech language pathologist and resource room teacher teach together. Based on the demands

of the curriculum, the resource room teacher, Mr. Robbie Nichols, and the speech-language pathologist decided the students needed to develop better short answer responses. This skill was explicitly taught within the resource room with additional instruction and practice provided in the speech-language therapy room. Some students were able to develop oral responses but required scaffolding to transcribe their ideas into written language. Mr. Nichols was able to support the students’ emerging skills by reminding them to “flip the question” or restate the question stem as part of their answers for classroom assignments. Students complete a rubric to evaluate their short answer responses and to analyze, change, and track their improvement over time.

Weekly check-ins with Mr. Nichols, with teacher Web pages and with the students and their assignment books allow the SLPs to stay informed about instructional units. Mr. Nichols is able to provide specific examples of academic challenges. For example, during an eighth-grade social studies unit on economics, he noticed our students were struggling with understanding many of the foundational concepts. We provided an overview by having the students watch a BrainPop on economics. We brainstormed vocabulary words they encountered and included related words and wrote them on the

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A mutual goal is to provide the students with the skills they need to be more successful accessing the curriculum in the classroom.

board. Mr. Nichols prompted the discussion and activated prior knowledge, referring back to what the students had discussed in class. The students paired off with iPads and completed a variety of activities for additional practice in using the vernacular of economics.

In a followup speech-language therapy session, we sorted words related to money such as: currency, buck, interest, scarcity, surplus, etc. Mr. Nichols' hands-on experience in the classroom was invaluable in identifying essential curriculum concepts which required more discussion, review and development. With this extra attention to challenging material, the students were able to demonstrate mastery of the curriculum vocabulary and essential concepts on classroom tests, quizzes and on-demand writing tasks.

During the social studies unit on civil rights, we read a play in the resource room about events in the 1960's. The students practiced reading fluently and with frequent pauses for comprehension checks and discussion. During speech-language therapy, the students worked on using target vocabulary as well as words and text structures that signal cause and effect (this led to..., since, caused by, as a result, etc.) The students wrote sentences related to civil rights in their notebooks, using a variety of words to indicate cause and effect relationships. As a group, we read the sentences aloud, revised, and

discussed, leading to more sophisticated and elaborate vocabulary and sentences.

When Mr. Nichols suggests that students need to study for upcoming tests or quizzes, the SLP uses the vocabulary list from Quizlet, and leads activities designed to facilitate connections between the vocabulary words and the major concepts of the unit. These activities are based upon popular games such as *Apples to Apples* or *Pictionary*. Some activities include an art component. For example, in studying for the quiz on Westward Expansion, the students were dealt three cards with a vocabulary word on each one. The "judge" puts out one card and explains the meaning of the word. One at a time, the students present the word they feel "goes with" the target word, and explain why. Another popular activity has the student drawing the vocabulary target word on a white board, with students guessing what the word is. We discuss what details in the picture were important to our understanding, and what could be added to the picture to more effectively convey the idea. In all activities, the students are encouraged to use their target syntactic structures to express the relationships.

Not all collaboration is formal, scheduled, or face to face. A more casual collaboration developed between the eighth-grade social studies teacher,

Mrs. Annie Baker, and SLP Mary Landry, the homeroom teacher in her classroom. Each day, the goal of Mrs. Baker's lesson is written on the board, along with the homework assignments and any upcoming tests or quizzes. Class readings are kept on top of the cabinet with extra copies available for the SLP to take and discuss with shared students later. Mrs. Baker and the SLP frequently talk about the activities they are doing and how to best support shared students. A mutual goal is to provide the students with the skills they need to be more successful accessing the curriculum in the classroom. The combination of skill practice in the therapy room with carryover in the resource room and classroom provides the students with more opportunities to discuss the unit of study using target vocabulary with more grammatically complex language. We often hear our students say "I know it in my head." Our combined efforts give these students time and support to practice putting those thoughts into words.

In addition to word study and syntactic structures, the third piece of our spiraling speech-language curriculum includes practice using the academic language skills in collaborative conversations (Fisher & Frey, 2013). Students with language impairments often have difficulty contributing to academic discussions, lacking vocabulary and/or the syntax to organize their

thinking. To build discourse skills, our students are taught scripts for entering academic discussions, making and linking comments, agreeing and disagreeing with peers, and justifying their thinking with relevant evidence. We use model scripts and sentence starters to develop responses for discussion topics and to respond to peer comments. These sentence starters provide a familiar grammatical

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Academic Conversation Starters	
Grade	Focus
6th	<p>Commenting</p> <p>I think ____ I believe ____ I notice ____</p> <p>Questioning</p> <p>I don't understand ____ I wonder ____ Why?</p> <p>Linking</p> <p>I'm not sure about ____ That reminds me of ____.</p>
7th	<p>Agree</p> <p>I agree with you because ____ I like what you said because ____ I see what you mean. Now I understand your point of view.</p> <p>Disagree</p> <p>I disagree with you because ____ I'm not sure I agree with what you said because ____ I have a different point of view.</p> <p>Clarification</p> <p>Repeat that please. Explain that more. What is your evidence?</p>
8th	<p>Extension</p> <p>I found further evidence of what you said ____ I was thinking about what ____ said, and I was wondering if ____ So what you're saying is ____ What do you think? What if ____? In other words, ____</p>

Speech-language pathologists have a valuable role in developing and supporting the academic language of students. Collaboration with teachers grounds the therapeutic activities in the language used in classrooms and illuminates the language demands of various subject areas.

structure that scaffolds a student's attempt to develop his or her responses. In the safe space and small group configuration of speech language therapy sessions, students practice responding to each other by restating what another student has said and then piggybacking or adding-on their own perspective. Students are provided with their own printed version of the sentence starters. A larger version is posted on the board. The SLP may support students by providing a model to imitate, or by breaking the complex sentence into smaller phrases and clauses. Students are supported through encouragement and restating as they attempt to put their thinking into words. These conversation skills are practiced in the therapy room and put to use in the classroom. Feedback from teachers about student participation and communication skills informs our therapeutic interventions. (See "Academic Conversation Starters" on previous page.)

Conclusion

Many students struggle with the language demands of their academic classes including the vocabulary, text structures and ways of talking that are increasingly important and particularly challenging as students advance through school. Although the speech language remediation we describe was designed for special education students receiving speech-language therapy, the instruction, materials, approach and philosophy can help support all students in their classrooms. Speech-language pathologists have a valuable role in developing and supporting the academic language of students. Collaboration with teachers grounds the therapeutic activities in the language used in classrooms and illuminates the language demands of various subject areas.

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Co-Creating an Arts Curriculum in Career and Technical Education

SUMMARY

This article explores the practice of integrating English language arts into a Career and Technical Education program. The authors explain three projects that actively incorporate student interests and feedback while meeting core academic and technical standards.

Student engagement is a fickle holy grail

— what “works” so well once or twice or year after year, sometimes suddenly doesn’t. Although we may craft our lessons with students in mind, our interpretation of their motivations and challenges is often framed through the educator’s lens. Of course we have many barometers to gauge student insight, such as assessments and work samples, but to get to what engages our students, sometimes we simply need to ask.

Career and Technical Education (CTE) begins with student interest. Students self-select their program of study from what is available in their districts. Research indicates that students at risk of dropping out find school more engaging and relevant if

they participate in a CTE program combined with core academics (Plank, Deluca, & Estacion, 2005).

According to The American Institute for Research (Brand, Valent, & Browning, 2013), a high quality CTE program delivers instruction in industry-specific technical skills, core academic skills — such as ELA, math, and science — and employability skills, including teamwork, communication, and problem-solving. A high quality program also provides “real-world” work experience, opportunities for local business people to provide insight, articulation agreements with postsecondary institutions, and opportunities for students to participate in youth leadership organizations. Given all of these objectives, it is necessary that the curriculum be flexible — CTE instructors have to

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combine sometimes disparate seeming content into a unified whole. Project-based learning allows CTE instructors this flexibility when designing lessons to align with the curriculum.

In New York State, CTE classes are often provided at a regional Board of Cooperative Educational Services (BOCES). A BOCES is an organization that provides services to component schools in order to maximize educational resources to the benefit of students and districts. There are 37 BOCES across New York State. The Delaware-Chenango-Madison-Otsego BOCES in Norwich, N.Y., offers core academic credits to eligible CTE students to allow them to meet graduation requirements and fit a CTE class into their schedule. The way in which core academic credits are allocated is favorable to flexible curriculum design. The integrated ELA credit, for example, corresponds with English 12 and is earned over two years. Thus, it is possible to devote time to long-term projects in which students can explore their interests in-depth.

It is from the CTE vantage point that we have sought to expand on the notion that student interest plays a

significant role in academic engagement. In our teaching practice, we have found that inviting students to co-create curriculum has allowed for deeper, more sustained thinking and learning. In fact, we have experienced learning outcomes that we would not have arrived at had it not been for student feedback.

The Visual Communications and Graphic Design Program (known as VisCom) is one of 12 programs offering integrated ELA credit for high school juniors and seniors and adults at the DCMO BOCES. Integration allows students to earn ELA credit within their Career and Technical Education program, so instructors look to design projects that address both the technical and ELA NYS Learning Standards. The most successful projects have been those in which students and instructors collaborate to develop curriculum.

Handing over control to the students is a gradual process. Initially, a project begins as a way to achieve a specific learning outcome. For example, the instructors may be concerned that students are not demonstrating proficiency in a particular area. Using the

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Students at risk of dropping out find school more engaging and relevant if they participate in a CTE program combined with core academics.

Students met and exceeded expectations for design skills and presentation skills, but we knew that we could deepen this experience.

content standards as a blueprint, students and instructors build instruction around student interests, creating a dynamic and engaging learning environment. Ultimately, students take control of the content delivery, demonstrating higher order thinking skills. In this article, we will discuss three projects that have been successful in the visual communications classroom: a short story contest, art critiques, and design challenges.

Short-Story Contest

The short-story project began as a work experience opportunity that we used to capitalize on multiple standards. Work experience is an important component of Career and Technical Education as it prepares students to apply their technical skills to the workplace. In this particular case, our school librarian wanted to promote the book collection. In collaboration with the librarian, we decided to have students work in small groups to pitch a book to an audience. Students selected a book, redesigned the cover, and prepared an ad campaign, which included a mock-up of the cover, social media promotions, Web banners, fliers, and magazine advertisements which they presented to an audience of peers and faculty. This project addressed several technical standards for VisCom: using the

design process, creating engaging presentations, and designing for a target audience, as well as the ELA speaking and listening standards within the NYS Learning Standards.

Even though this project achieved its goals — garnering more attention for the library media center’s holdings and addressing curricular standards — we felt that there was something missing. Due to time constraints, most students had only skimmed through the books; they were not intimately connected with the text, so they were not as invested in the presentations as they could have been. Many of the “re-designed” covers offered only a slight variation on the original or had little to do with the content of the book.

Students met and exceeded expectations for design skills and presentation skills, but we knew that we could deepen this experience. We saw that if we could have students engage more deeply with a text we could easily incorporate numerous ELA skills in literary analysis. However, the text would have to be short to fit into the already packed curriculum. We felt that students should design a cover to suit something that they had read, but we wanted them to create something that didn’t already exist; we wanted them to truly interpret what they had read, not just reinterpret an existing cover. We wondered, what if students

had to market original content for an undiscovered author? Thus, we decided to run a short-story contest to generate the content.

We knew how we wanted to challenge students, and we knew what standards we wanted to address, but we left many of the particulars open. We brought the concept to students and worked as a class to determine guidelines for the contest, including publication and promotional strategies. Students decided that Facebook would be the medium for promotion; users would vote for which stories they liked best based on the advertising campaign. Five stories would be selected for publication; the winner's cover art would be featured in color on the front of the book.

This project developed in many stages. Students designed fliers and newspaper ads to promote the contest. Using a collaborative Google Doc, the class created a rubric by which to evaluate the story submissions. Once the pile had been narrowed down to the top 15 stories or so, we assigned them to small groups. As the students read through their stories, we were impressed with their analytical discussions. Groups were eager to share their stories with one another, arguing literary merit by referring to specific uses of literary devices. In more traditional literature classrooms it can be difficult to move students from summary to

analysis. Here, they were naturally engaging in it. In terms of the NYS Learning Standards, they were:

“Analyze[ing] the impact of the author's choices regarding how to develop and relate elements of a story... and analyze[ing] how an author's choices concerning how to structure specific parts of a text...contribute to its overall structure and meaning as well as its aesthetic impact (National Governors Association Center for Best Practices, Council of Chief State School Officers, 2010, pg. 50).”

Moving the discussion away from plot summary into literary analysis was aided by the fact that some of the plots were quite similar. To “sell” the story, groups needed to convey something other than plot to audiences. They had to ask questions like, “what is compelling about this particular iteration of *Twilight* fan fiction?” In addition, the purpose was very clear — convince others to vote up the story for publication. It didn't matter if the groups liked the stories that they were working on; it mattered if others did.

Next, we began to design covers for the top 15 stories. The students felt empowered by having participated in the voting process and they began to furiously design covers. During the promotion phase, students were able

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In more traditional literature classes it can be difficult to move students from summary to analysis. Here, they were naturally engaging in it.

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Throughout this process, students were given the authority to manage their workflow — autonomy which is one essential component for productive collaboration.

to meet deadlines — missing deadlines meant less exposure and a diminished chance of being published. The students determined the measure of success and worked to satisfy themselves, not a teacher's agenda. The completed covers were posted on the class Facebook page along with teaser copy about each story. Each group managed their own social media campaign with minimal teacher influence. Instructors merely checked posts for grammar and appropriateness.

The small group work during this project resulted in what Darling-Hammond, et al. refer to as “productive collaboration” (2008, p. 26–27). Students were accountable to one another as individuals. Since the task required multiple components to be successful, students worked to their individual strengths. For example, one student might take to the role of social media expert and orchestrate the online campaign, whereas another student might have more expertise with page layout.

Since the design of the cover art was left up to each group, students played to their strengths with this as well. Ultimately, we had covers that were hand-drawn illustrations, photographs, Photo-shopped images, computer drawn-illustrations; essentially, students felt free to pull from the many techniques that they had learned in the VisCom classroom. Further, group

members were not just accountable to themselves but to the author whom they represented. The goal for all students was the same, but they had myriad ways to get to the goal. The covers had to be representative of a specific story, encouraging each group to produce a unique work. Throughout this process, students were given the authority to manage their workflow — autonomy which is one essential component for productive collaboration (Darling-Hammond, et al., 2008).

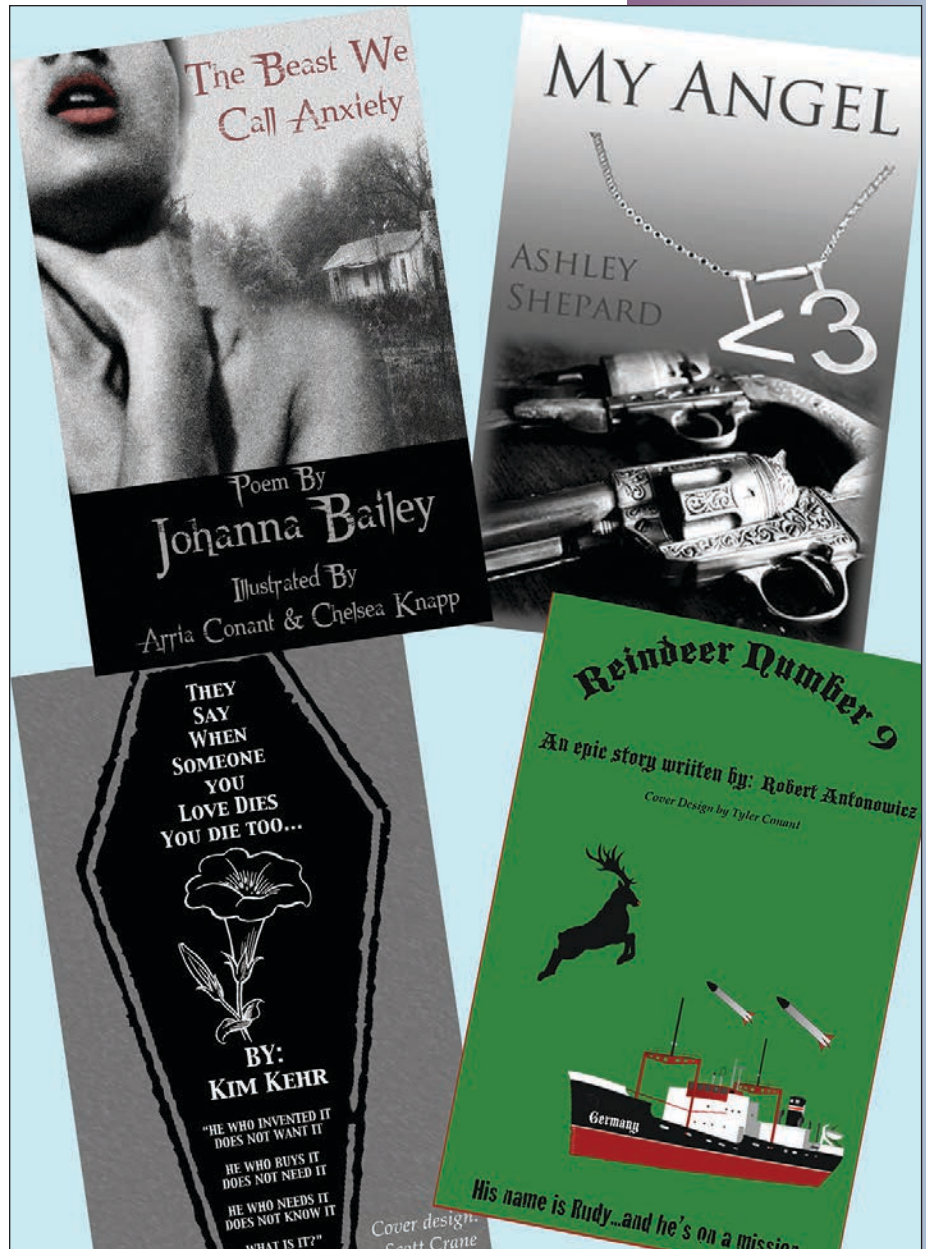
Once the voting process ended, we had five stories for publication. The illustration for the winning story was featured on the anthology cover. Every student writer who made it into the top 15 received a certificate of participation. Winners received two copies of the anthology, one for themselves and one for their school library. Even after the contest ended, the visual communications students found ways to branch out from the original project. Several students included their cover art in their portfolios and critiqued their own work during portfolio review (portfolio review is part of the mid-term exam in this course). Some students entered their artwork in the DCMO BOCES Media Festival and placed. One student saw the anthologies as a potential class fundraiser and offered copies for a donation at our open house. Choosing to share their work with the broader school community is evidence that students felt an attachment to their school;

they were invested in their education, an important factor in overall school success (Plank, Deluca, & Estacion, 2005).

This project was rich with learning opportunities. Each student had thoroughly read 10–15 short stories without even seeming to realize that they were reading. They compared and contrasted stories to find the ones with which they most connected. They had heated debates of critical analysis. (One student even reported reading stories over the phone to her boyfriend to get his take.) They designed artwork that spoke to the thematic impressions of the stories. All of these activities happened with very little intervention from the instructors — we put the project in their laps and stepped back. We asked guiding questions as much to deepen the conversation as to share in the excitement about the project. We served as mentors and provided students with relevant resources to help them succeed in this project, another key factor in productive collaboration (Darling-Hammond, et al., 2008).

Art Critiques

Art critiques are another example of beginning with a standards-based framework filled in by the students. Being a designer means having a working understanding of design principles such as balance, rhythm, emphasis and unity, as well as being able to



Short-story collage

maximize those principles to meet a customer's vision.

Many of our high school students draw what they like, and a declaration of "I like it" is where analysis ends. However, a careful critique of

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technique can allow designers to grow as artists. In a more concrete sense, the vocabulary for design principles and elements is also a part of the formal assessment in the class, the National Occupational Competency Testing Institute (NOCTI) exam, as well as a key part of Standard 3 of the NYS Learning Standards for Visual Art.

We began our lesson by walking students step-by-step through a critique: description, formal analysis, reflection. We found a comprehensive lesson on the ArtsEdge website which used works from the Museum of Modern Art, and modified it for our class. The grade band on the original lesson was fifth through eighth grade, but we found that our high school students were unfamiliar with key vocabulary in the lesson and found the writing challenging. Using whole group instruction, we walked students through each section of the critique. Within each section, students worked in smaller groups to complete a chunk of the bigger lesson.

For example, in the descriptive part of the activity, the students are asked to list parts of speech that come to mind when they view the artwork. We found that students needed a refresher on verbs, nouns, adjectives, and adverbs. After a brief mini-lesson on parts of speech, we assigned small groups to concentrate on one part of speech, providing this information to the entire class through discussion. The

culminating activity for this structured lesson was a three-paragraph critique, pulling together information that we had generated as a class. During the lesson, students were able to apply technical vocabulary to a discussion of the topic.

The next step in this process was to give students a chance to practice analysis independently. We provided them with a picture of a famous painting and asked them to perform the same process as they had done in the full class — description, formal analysis, reflection. The resulting assignment was worlds away from the full class activity. Most students completed one or two of the steps; very few did all three. Despite having written a paragraph for the guided lesson, many students skipped this requirement as well, simply jotting down words and phrases.

The assignment for the independent practice did not vary from the guided practice, so we had to ask ourselves why students found the assignment so difficult. We felt that engagement was the issue — students just did not seem interested in these famous works of art. Perhaps they were even alienated by them. Knowing that students created art based on their own internal motivations and moods, we decided to focus instead on student-generated work such as sketches that the students had hand drawn or created in a program like Illustrator. We hoped that

focusing internally first would help students to focus outwardly later.

We implemented weekly student critique. We invited a student to select a piece that he or she wanted to share with the group. We projected the artwork at the front of the room and asked the class to complete a critique — using the same process that had been previously taught. Students who were in the spotlight were also exempt from writing the critique for that day — this fact turned out to be an incentive for many. Once students wrote their critiques, volunteers shared their ideas. Finally, the artist explained the piece from his or her own perspective. After the instructors reviewed the critiques, they were passed back to the artist for inclusion in his or her portfolio. By the end of the school year, we critiqued at least one piece from every student.

At the beginning of the peer critique process, we had to frequently guide students, reminding them of design vocabulary and prompting them on the next section of the review. They might ask questions like, “What is unity again?” “What do you mean by reflection?” Even, “How long does this have to be?” Over time, students began to take control of the discussion, and we were able to observe their process, engaging in the discussion as fellow art critics only. Students were using design vocabulary fluently and purposefully. They were effortlessly

meeting Standard 3 of the NYS Learning Standards for Visual Arts by “reflect[ing] on, interpret[ing], and evaluat[ing] works of art, using the language of art criticism” (University of the State of New York—New York State Education Department, 2009, Standard 3 section, para. 5).

Students were also building on their reflections — sometimes trying to be as outrageous as possible to get a laugh from their peers. No one balked at writing the reviews or sharing their observations. Most notably, a student in the class who had tests read and often needed classroom assignments scribed, wanted to write the critiques independently and share them with the class. Students were clamoring to be the next person to have work reviewed. In fact, once we had gotten through all students, we were able to begin a second go-round. The writing also began to improve as students demonstrated thinking on a deeper level. The following samples are excerpts from one student’s first critique and his last.

Sample 1:

“The use of lines makes it look like she’s blushing. they (sic) are squigly (sic) in her hair, makes it move, shaded lines under her chin, emphasis is used definitaley (sic). She is smiling.

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<p>Name: _____ VisCom _____</p> <p style="text-align: center;">Writing a Critique</p> <p>Description: Describe the work without using value words like "ugly" or "beautiful." Begin by stating the title and artist(s) then turn two or more of the following into complete sentences:</p> <ul style="list-style-type: none"> • What is the written description on the label or in the program about the work? • When and where was the work created? • Describe the elements of the work (i.e., line movement, light, space). • Describe the technical qualities of the work (i.e., tools, materials, instruments). • Describe the subject matter. What is it all about? Are there recognizable images? <p>Description:</p>	<p>Name: _____ VisCom _____</p> <p style="text-align: center;">Writing a Critique</p> <p>Interpretation: Describe how the work makes you think or feel. Write complete sentences to answer two or more of the following questions:</p> <ul style="list-style-type: none"> • Describe the expressive qualities you find in the work. What expressive language would you use to describe the qualities (i.e., tragic, ugly, funny)? • Does the work remind you of other things you have experienced (i.e., analogy or metaphor)? • How does the work relate to other ideas or events in the world and/or in your other studies? <p>Interpretation:</p>
<p>Put it together: Use your sentences from above to write a unified, cohesive paragraph. At the end of the paragraph, you may also include your evaluation of the work by answering one of the following questions:</p> <ul style="list-style-type: none"> • What qualities of the work make you feel it is a success or failure? • Compare it with similar works that you think are good or bad. • What criteria can you list to help others judge this work? • How original is the work? Why do you feel this work is original or not original? 	
<p>Analysis: Describe how the work is organized as a complete composition. Write complete sentences to answer two or more of the following questions.</p> <ul style="list-style-type: none"> • How is the work constructed or planned (i.e. lines, shapes)? • Identify some of the similarities throughout the work (i.e., repetition of lines, shapes, colors) • Identify some of the points of emphasis in the work (i.e., specific scene, figure, focal point). • If the work has subjects or characters, what are the relationships between or among them? <p>Analysis:</p>	<p>Analysis paragraph:</p>

Source: <https://artsedge.kennedy-center.org/educators/how-to/tipsheets/student-critique.asp>



Critique collage

Sample 2:

This art piece, in my opinion, shows that haters have no face. Some people don't know, or think that they don't know any haters. Even though they could be haters themselves, or they could have

hater friends. It [the artwork] shows a deep perception on life because some people love/like haters, thinking that they motivate. Where as (sic) people that always go through that and always get bullied might see it diferently. (sic).

As seen in these samples, this student's sentence structure improved. He was demonstrating abstract thought about the meaning of the picture beyond stating a preference — that he "liked it" or that it was "cool." It should also be noted that students were not graded on the mechanics of English for this assignment — students became better writers by writing more often.

Students were able to review artwork created by their peers, but would they be able to translate their analytical skills to work outside of their sphere? The test came when we took the students on a field trip to the Corning Museum of Glass. After a formal tour, students worked in groups of two or three using iPads to videotape themselves critiquing their favorite piece of art. When we returned to class the next day, we screened the videos. The critiques demonstrated the analytical skills that we had been trying to foster all along. We were also quite surprised at the quality of critiques from the second year students because they had not been a part of our new and improved critiquing strategy using student work. The first year students

were able to successfully teach the concept and expectations to the older group! Perhaps our proudest moment came when one of the tour guides told us that she was impressed with the students' use of art vocabulary as they toured the exhibits.

Our theory seemed to hold true — students needed to apply analysis to artwork with which they felt comfortable before they could talk about more complex art outside of their experience. We had been trying to introduce two new concepts at the same time — the language of art critique and the appreciation of classic works of art. When we introduce this topic again, we will begin right away with student work and come back to the samples from the Museum of Modern Art and compare results.

Design Challenges

Graphic designers have to be able to communicate with customers, to understand the vision of the client and to effectively pitch ideas. High school students in this class often design for themselves and have limited experience designing for someone else. The design challenge is a way for students to think creatively on their feet while practicing valuable presentation skills, two areas that will prove critical in establishing a career in the field of graphic design.

This assignment is another example of being able to meet the VisCom technical standards, ELA standards, and Visual Art Standards at the same time. The technical standards include: developing appropriate presentation skills, creating engaging presentations, applying appropriate sales techniques based on clients, and developing the ability to think quickly and adapt. In addition, design challenges address Standard 2 of the Visual Arts Standards as students role-play an art vocation. Finally, students are demonstrating all of their skills through the ELA NYS Learning Standards for Speaking and Listening. We cover a lot of curricular mileage with this activity and students always have fun with it.

The design challenge is dynamic, in that the specific activity is geared toward the needs of the unique group of students that is in front of us in any given year. The basic structure is simple — students are given a limited amount of time (often 30–40 minutes) to complete a design based on particular specifications. When time is up, they “pitch” their design to an audience. Students work in small groups, with each group completing a different design. Each group sets up their display in a section of the room and delivers a three-minute presentation to an audience. The audience is also broken up into smaller groups, with audience groups rotating around to each

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The design challenge is a way for students to think creatively on their feet while practicing valuable presentation skills.

Students are able
to rise to these
new challenges
because they feel
confident.

presentation. The presenting groups become more polished as they deliver their pitch multiple times. This structure also eases students into public presentation; they may be presenting to a large group by the end of the activity, but initially they are only speaking with four to five people at any given time.

One example of a design challenge that we have used many times is the “Failed Product.” This activity is a fitting application of instruction on truth in advertising. For this design challenge, students are given a product that was considered a failure at the time of its release, such as *Nintendo’s Virtual Boy* gaming system. This product did not catch on because gamers developed horrendous headaches while using the virtual reality goggles. Students are tasked with creating an ad campaign that gives the flaw a positive spin. The results of this task are often quite hilarious. In the past, students have created mock Virtual Boys out of construction paper, acting out the gaming experience. They pitched the headache feature to parents as a way to minimize kids’ screen time.

In every design challenge, we add a “twist” that addresses an aspect of public speaking or work ethic that we feel students need to practice. For example, students might be asked to work with a different partner or partners; an audience member might be

asked to “heckle” the presenters; a member of the group might suddenly be asked to be a part of the audience, leaving the rest of the group to present without a member. At the end of the challenge, we reconvene as a class to debrief. We discuss the twist — what it was like to work with someone new, how to handle a difficult customer, what happens when a member of the team is absent or not doing his share of the work.


Another important aspect of the twist is to gradually ease students out of their comfort zones. As they get into the habit of the design challenge and feel more comfortable working under a deadline and presenting to an audience, we can begin to challenge them further. In the past, we have invited local business people in to hear pitches, and we have had students move outside the classroom to present to people as they walk by in the hallway. Students are able to rise to these new challenges because they feel confident in the established framework of the project.

Once we have done one or two design challenges, we invite students to create their own. As with the short-story contest and the art critiques, we have used the standards to outline the activity, allowing students to provide the details. Student-developed design challenges build our curriculum library

exponentially every year. In fact, the ideas that come from the students are ideas that were not even on our radar. If we had maintained a teacher-driven curriculum, we would have cheated our students out of fun, engaging opportunities. We have never had to assign students to lead the design challenge; students approach us to make suggestions. Those in charge of the activity often take their role very seriously. They are motivated to see their idea come to light.

For example, one group came up with the idea to have the class make movie trailers using iMovie on the iPad. The catch was that groups would choose their theme, characters, and conflict at random from pre-printed slips of paper. In their written instructions, the student facilitators required thumbnail sketches of the movie trailer scenes before they gave out iPads. They also sat with each group to review the thumbnails, offering suggestions for improvement. We invited another class to sit with us for a viewing of the movie trailers. This design challenge was so well-planned and so fun that we have brought it out again for subsequent classes. We always make sure that the class knows that the activity was designed by former students.

Design Challenge III




VivCom Presentation:
Audience Checklist
Chenango CTE Center

Group 8:

The Challenge: Your group has been charged with creating an advertising campaign to resurrect a failed or flawed product. Use what you have learned about truth in advertising to promote the product—in fact, convince the audience to see any “flaws” in a favorable way.

The Product: Nintendo Virtual Boy



What went wrong? The Nintendo Virtual Boy has the distinction of being the only Nintendo game console to fail. Introduced in 1995, the system was a portable visor that allowed gamers to play in 3D. There are several reasons for the demise of this product. At the time, the \$180 selling price was considered excessive for a portable game unit. There also were not enough game titles available to hold the interest of players. Perhaps most seriously, use of the visor caused eye strain and headaches—complaints of physical discomfort were so common that Nintendo issued a warning that people should take 15 minute breaks for every 30 minutes of game time.

Presenters: _____ Date: _____

Circle the Appropriate Number


Presentation was:	Poor				Excellent			
1. Complete	1	2	3	4	1	2	3	4
2. Convincing	1	2	3	4	1	2	3	4
3. Creative	1	2	3	4	1	2	3	4
4. Enthusiastic	1	2	3	4	1	2	3	4
5. Professional	1	2	3	4	1	2	3	4
6. Welcoming—presenters made eye contact when they talked	1	2	3	4	1	2	3	4
7. A Team Effort—it was clear that all group members participated	1	2	3	4	1	2	3	4

TOTAL POINTS

GRADE

TOTAL POINTS = 28 * % SCORE

Comments: _____



Design challenge collage

Conclusion

Once students are invested in these projects, they are more willing to take risks in other projects. Being secure in their skills frees them up to challenge themselves in their work and not be

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Having positive school experiences is a powerful indicator of continued educational success.

afraid of being “wrong.” They are also more invested in the Visual Communications program itself.

This year’s juniors were eager to meet with visiting sophomores and show off what they had learned. They wanted to post their movies on Facebook for a wider audience. They see themselves as guiding the Visual Communications curriculum and program into the following years. Returning students often talk about the design challenges they created and ask if we are still using them. In every one of these scenarios, we have seen that students associate positive feelings with the activities in this class. Having positive school experiences is a powerful indicator of continued educational success (Plank, Deluca, & Estacion, 2005).

There’s a noticeable change in the program when students are the ones “calling the shots.” Students are engaged in their learning because they have ownership, and with ownership comes accountability. The nature of the CTE curriculum may lend itself to this student-teacher collaboration, but we invite teachers in all disciplines to find a way to incorporate student interests and feedback into instruction. The benefits begin with greater student engagement in the classroom and extend outward, influencing a student’s continued success in other areas of their lives.

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Educating for Civic Well-Being

SUMMARY

The government and civics debate series is an intensive and student-centered effort to understand and articulate a variety of issues that affect contemporary public discourse. After several weeks of preparation, students will debate these issues in front of an audience of their peers. The instructor plays a vital role, but only as a facilitator, to assist students in their understanding of the issues, to acclimate students to the debate process and to promote the articulation of ideas.

Multiculturalism in the United States

was once relegated to big cities. Now towns and villages across America have become home to people from every corner of the world.

Our nation's ethnic makeup is changing rapidly. By mid-century, minorities in the United States will, collectively, form an American majority. It is now more imperative than ever to acclimate all students to the issues that dominate public discussion and encourage a sense of civic responsibility that, some suggest, has become captive to more technocentric interests.

The predominance of information technology and the broadening of the base of scientific and mathematical knowledge required of all students to prosper in a 21st century economy has contributed to a pronounced decline in the emphasis on the role of civics in our

public schools. True, all New York State public school students are required to pass a government and civics class, but it is often given in their senior year of high school. For many students, this class marks the first and only time they examine important civic issues. Many receive their diploma having acquired only peripheral knowledge of the issues that drive today's public debates and affect the lives of millions.

Only through civic involvement and public discourse, argued the early 20th century educational reformer John Dewey (1968), could a true democracy take hold in the United States. The 19th century progression of public education in America emphasized the evolution of the quintessential citizen who, through a proper understanding of government and civics, could develop a critical consciousness of what it means to be an American.

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David Michael Fischer, United Federation of Teachers

The government and civics debate series is designed to familiarize students with the issues that influence contemporary public discourse. It is implemented in 11th or 12th grade American government and civics classes with 17- and 18-year-old students. This activity can also work with younger students, provided they receive appropriate preparation. The project takes time. Over two to three weeks students will research, interpret and articulate varying points of view on multiple political and social issues. It concludes with a series of debates in which students, assigned to groups of four (depending on class size), present their points of view and argue against opposing points of view. The activity addresses the following New York State Social Studies Standards for civics, citizenship and government (found at nysed.gov):

Standard 3: Students analyze issues at the local, state and national levels and prescribe responses that promote the public interest or general welfare; students explore how citizens influence public policy in a representative democracy.

Standard 4: Students evaluate, take and defend positions on what the fundamental values and principles of American political life are and their importance to the maintenance of constitutional democracy; students take, defend and evaluate positions about attitudes that facilitate thoughtful and effective participation in public affairs; students participate in school/classroom/community activities that focus on an issue or problem.

In addition, the activity addresses the following C3 (college, career and civic life) standards for social studies:

D2.Civ.5.9-12. Evaluate citizens' and institutions' effectiveness in addressing social and political problems at the local, state, tribal, national, and/or international level.

D2 Civ.9.9-12. Use appropriate deliberative processes in multiple settings.

D2 Civ.13.9-12. Evaluate public policies in terms of intended and unintended outcomes, and related consequences.

Only through civic involvement and public discourse could a true democracy take hold in the United States.

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The goal of civics should be to address the development of civic-related knowledge and skills rather than the development of students' participatory skills.

Recent research elaborates on the high value of activities like this on the civic well-being of students. In 2010, the International Association for the Evaluation of Educational Achievement published the International Civic and Citizenship Education Study for 2009, testing the civic knowledge engagement and attitudes among secondary school students in more than 36 countries. The study concluded that the goal of civics should be to address the development of civic-related knowledge and skills rather than the development of students' participatory skills. This project accomplishes just that (Schulz, Ainley, Fraillon, Kerr, & Losito, 2010).

In *Civic Education: What Makes Students Learn*, Richard G. Niemi and Jane Junn argue that the most effective means of promoting citizenship and participation in an electorate that is generally poorly informed is through civics education. This work is particularly appropriate because it specifically draws on the governmental and political knowledge of high school seniors from all over the country. The authors conclude that effective civics curricula enhance students' knowledge of American government and politics. But they caution that for a civics class to be effective, instructors must veer away from traditional textbook-centered lessons toward methods that have relevance in the students' lives (Niemi, & Junn, 1998).

Project Description

Upon distribution of their assignments, the students work in groups of three and four over a two- or three-week period to address one aspect of a particular social or political issue relevant to the times. In the last debate series (in 2015) the following issues were presented (with key words to assist the students to locate relevant information and to facilitate the development of clearly focused arguments):

- National Security Agency spying scandal: Is the federal government's collection of millions of Americans' phone and internet data a violation of the fourth amendment's illegal search protections even if the information gathered is used to fight against terrorism? (key words: Edward Snowden, NSA, 'metadata')
- Legalization of marijuana: Does the legalization of marijuana provide overall greater benefits to society? (key words: Colorado and Washington state legalizations, medical vs. recreational marijuana, government regulation of people's private lives)
- Torture: Is the use of torture by the government to combat terrorism an appropriate way of keeping Americans safe? (key words: Guantanamo Bay, waterboarding, 2014 Senate report on torture)

Framing a debate with yes/no questions facilitates the audience's understanding.

- Gun control: Are the federal government's efforts to regulate gun ownership a violation of Americans' second amendment right to protect themselves and their families? (key words: NRA, Newtown, Conn. massacre, McDonald v. Chicago)

By presenting each debate topic as a yes/no question, the instructor concretely establishes solid points of view to debate in favor of and against. Framing a debate with yes/no questions also facilitates the audience's understanding; vitally important as the audience vote determines the debate's winner.

These topics of debate will certainly change over time. It is important that the instructor is well-versed and up to date on the issues of current public discourse. For example, the immigration debates that roiled the 2016 presidential campaign might also be appropriate for classroom debate. The instructor's own knowledge of the issues is vital to the success of this activity.

The students will advocate their assigned points of view and counter the points of view of the opposition. They are required to obtain information from reputable sources (*The New York Times*, *The Wall Street Journal*, *The Economist*, *Time*, *Newsweek*, etc.). Material collected from tabloids or untrustworthy sources (*New York Post*, *New York Daily News*, unregulated and

unfamiliar websites, etc.) is unacceptable. Some educators may harbor concerns that the sources I have listed are too advanced for high school students. These resources are "reputable," not "scholarly." I always tell my students when they examine articles from such resources that they will not understand everything but they should understand most of what is in the article. Whatever they do not understand they can research on their own, discuss with me, or leave out of the debate. Instructors can also include a glossary that lists relevant terms for each debating group. This often helps. By the senior year of high school most students can understand and expound upon an article from a reputable resource.

The teams prepare by gathering facts to support their claim, formulating thoughtful, highly analytical questions to pose to the opposition, and predicting questions that the opposition will ask them, with appropriate responses. These mental exercises promote higher-order thinking skills and the ability to articulate complex ideas. Each team introduces its topic with a five-minute PowerPoint that clearly introduces its point of view and cites the flaws in the opposition's point of view. The debate that follows normally lasts 15–20 minutes.

Non-participants serve as judges in the debates. They will submit ballots

continued on following page

Educating for Civic Well-Being

twice: the first ballot follows an impartial three- to five-minute introduction to the topic by the instructor in which the students vote “yes,” “no” or “unsure” based on their limited knowledge of the topic (instructors may wish to assign a simple reading activity to non-participants prior to the debate so they understand the basic facts and issues). The second vote takes place after the debate has ended. The two sets of votes are then compared. The winning side has convinced more audience members to switch votes in their direction on the second ballot.

Using the NSA spy scandal as an example, on the first ballot, which asks, “Is the federal government’s collection of millions of Americans’ phone and Internet data a violation of the fourth amendment’s illegal search protections even if the information gathered is used to fight against terrorism?” 10 vote “yes,” 15 vote “no,” and five vote “unsure.” Following the debate, the second ballot vote is 12 “yes,” 14 “no” and four “unsure.” The “yes” side has won the debate because it convinced two students to support its point of view, while the “no” side, which still had greater overall support, lost a student during the debate.

The instructor’s role is relatively limited. He/she is a facilitator, bur- nishing students’ understanding of

the issues and the resources that they have selected and conducting mock debates with each group individually in order to acclimate the students to a debate scenario.

Follow these steps in order to ensure effective results:

STRATEGIC GROUPING:

Arrange groups to ensure that weak academic performers or students with limited English language proficiency are not bunched in the same group. Certify to the best of your ability that all members of a group can work together comfortably. If a student has prior knowledge of a certain issue, he can request a corresponding group.

CLARIFICATION AND

EMPHASIS: Spend 10 to 15 minutes at the outset reading the instruction sheet with the students so that they fully understand the tasks. The instructor must emphasize the use of appropriate material from reputable journalistic sources, some of which may be unfamiliar to the students. It is perfectly appropriate for the instructor to recommend and distribute to the various groups specific articles from these resources while encouraging the students to seek additional relevant resources. The instructor must emphasize that the debate is not to be a back-and-forth question and answer session. Debaters should follow up on

opponents’ responses with questions that promote specifics and accuracy. This impromptu “grilling,” which is what good attorneys and judges do in court in order to illicit more honest, accurate responses, is vital to the success of this project.

INFORMATION GATHERING AND UNDERSTANDING:

The keys to debating are to understand all sides of an issue; to clearly state one’s claim; and to articulate responses that challenge the opposition’s claim. During the first group meeting, students are required to present the resources they have acquired and share out with the other members of the group. As they share out and become more familiar with the issues that form the core of their argument, they will list facts that support their claim; they will pose a series of questions to the opposition (with probable answers noted) and questions that they think the opposition will pose to them (with answers).

CONTENT AND

UNDERSTANDING: Debating is extremely difficult. It requires comprehensive knowledge of all points of view, the capacity to clearly articulate and support multiple ideas, and the ability to think on one’s feet. The debaters must prepare with pre-debate role-playing exercises.

Debating is extremely difficult. It requires comprehensive knowledge of all points of view, the capacity to clearly articulate and support multiple ideas, and the ability to think on one's feet.

The instructor must conduct those exercises with each group individually. She/he must do the same research as the debaters, gleaning information from the same reputable sources. The instructor must evaluate students' knowledge of the fundamentals, follow up on those answers in order to probe for comprehensive understanding, and foster the development of probing questions and follow-ups posed by the students to the opposition. If the instructor does not accept his/her role as a model for the students, the debate will suffer.

There may be instances when the instructor's base of knowledge may not be sufficient to actively coach the debaters. I acknowledge that I know nothing about guns, so my efforts to enhance the debate performances of the gun control groups probably would not have borne fruit. My colleague is a lifelong hunter and is thus well-versed in New York State gun laws and gun control. It was through his willingness to coach the debaters that the gun control debate proved highly effective.

PRE-DEBATE PREPARATION:

The students must receive guidance for their pre-debate PowerPoint presentations. Each group's presentation should last no longer than five minutes; therefore, the group must emphasize just the main debate issues in order to preclude a tedious, minutiae-drenched presentation. The finer points should be

addressed in the actual debate. The instructor must vet the presentations for spelling, grammar, clarity and brevity. The instructor should also encourage the students to incorporate appropriate visual aids to enhance understanding.

As with all performances, appearance matters. Debaters should be encouraged to assume a professional appearance. The intention is to promote a serious and professional debating environment.

TIME MANAGEMENT:

Appropriate time management is imperative in each debate. Instructors must be aware that a well-argued debate will last over a half hour, including all the pre-debate presentations and the post-debate vote. Only one debate should be scheduled in a typical 40–45 minute class period. Instructors should set aside four class periods to conduct a four-debate series.

LEARNING OUTCOMES: The instructor is at liberty to employ a variety of techniques in order to judge the debate's outcome. She/he may wish to employ a rubric to evaluate the PowerPoint, the clarity of the arguments, the clarity of the responses, etc. (A sample rubric is provided on page 109). The instructor may wish to assign a post-debate writing assignment in which all students offer personal responses in order to gauge their

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Debate encourages students to get involved, to exercise their vote and to make positive changes for themselves, their families and their communities.

mastery of the content. She/he may wish to assign post-debate questions in which all students offer personal responses about the issues. The beauty of a debate is that it is the students themselves who determine the course of the debate and evaluate the performances of the debate teams. Using the evaluation process outlined above, the audience will determine the outcome. Debate teams judged victorious by their peers can be rewarded at the instructor's discretion.

The government and civics debate series is a completely student-centered activity that elicits new ideas, encourages Socratic thinking, and develops sophisticated techniques of public expression. It is a challenging project; the written material to which the students are exposed may be obscure and imposing, but exposure to what is new and different improves standards and enhances broad-based pursuit of knowledge.

Debating promotes direct inquiry and thoughtful analysis. It fosters rational and moralistic thinking, and it requires quick counter-responses to opposition charges. Most importantly, debate encourages students to get involved, to exercise their vote and to make positive changes for themselves, their families and their communities. It is an indispensable mechanism for promoting citizenship and democracy,

encouraging the advanced articulation of thoughts and ideas, and raising standards of scholarship to a collegiate-level.

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Sample Rubric

1) Opening Presentation

Excellent — Presentation clearly and accurately summarizes the group's point of view; argument is made without excessive detail; relevant images enhance understanding; presentation last five to seven minutes

Good — Presentation slightly lacks clarity and/or accuracy; argument is slightly excessive in detail; images do not enhance understanding; presentation lasts slightly under five minutes or slightly over seven minutes

Needs Improvement — Presentation is inaccurate or unclear; tedious detail dominates the presentation; images are irrelevant or non-existent; presentation is excessively brief or so long that it leads audience to distraction

2) Argument

Excellent — Group argues cogently and confidently providing illuminating supportive details; group members show command of the facts; group members provide counterarguments that sew doubt in the opposition's argument

Good — Group's argument is acceptable but partially lacking in relevant supportive details; some members appear uncertain of relevant facts; counterarguments do not generate significant doubt about the opposition's point of view

Needs Improvement — Group's argument is significantly lacking in relevant facts and/or supportive detail; there is noticeable uncertainty among the group's members about the direction of their argument; no counterargument is presented or the effort to sew doubt in the opposition's point of view is ineffective

3) Response to opposition's attacks

Excellent — Group is clearly prepared to respond to opposition attacks with appropriate counterarguments featuring relevant details; all group members show a clear understanding of arguments and counterarguments; impromptu responses to opposition attacks are quick, clear and accurate

Good — Group's response to opposition attacks somewhat lacks clarity and/or relevant details; some group members appear to lack a clear understanding of arguments and/or counterarguments; impromptu responses to opposition attacks somewhat lack clarity and/or accuracy

Needs Improvement — Group's responses to opposition attacks are unclear and significantly lack relevant details; most or all group members appear to lack a clear understanding of arguments and/or counterarguments; responses to opposition attacks are slow, unclear or inaccurate

4) Optics

Excellent — All members appear in professional attire

Good — Most members appear in professional attire

Needs Improvement — Few or no members appear in professional attire



Guiding Chemistry Students with Essential Questions

SUMMARY

This article outlines the shift in a 10th–12th grade Regents Chemistry classroom from traditional lecture and lab lessons to more student-centered, student-driven, differentiated inquiry-based lessons. Integrating these methods in science class and lab instruction provides the opportunity to meet the students where they are while increasing student engagement and understanding.

The chemistry classroom is a busy, active place.

In one area, students conduct an experiment. While one group answers guided-inquiry questions, another group clusters around the whiteboard to record their explanations, and still a different group excitedly discusses their findings. All of the students are at various levels academically, yet all are independent, motivated and highly engaged in constructing knowledge.

This is a far cry from how I first began teaching — the days of “traditional” lecture, PowerPoint, and book work routines; the classroom where consistent content retention was lacking, cheating on quizzes and homework assignments was rampant (Loschiavo, 2015), and true student-to-student collaboration was missing.

While my students’ Regents results were decent (average 77 with 25 percent mastery) and retention in future classes was strong (60 percent), I knew piquing student interest in science to higher levels would open doors for them.

After reading a 2003 National Research Council Report that indicated 40 percent of high school students are chronically disengaged from school (Council, 2003) and subsequent reports that show disengagement among students is growing (Sheehy, 2013), I shifted focus to create an environment that fosters more active student engagement. Inquiry, the National Science Education Standards (Olson, 2000), and the National Science Teachers Association recommendations (Association, 2004) guided me in developing appropriate activities that teach skills, such as questioning, developing investigations, critically analyzing

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findings, clearly communicating results, and working with others as a part of a team. These skills transcend multiple career fields and are valued by many employers (Adams, 2014).

The inquiry process leverages a student's natural curiosity about the world. It helps students develop the need to know. This, in turn, gets students involved in learning at cognitive, behavioral, and sometimes, even emotional levels. Interest and involvement also help make the concepts relevant.

Research and standards alone cannot drive student achievement. Awareness and analysis about barriers of inquiry integration (Cheung, 2006), such as stimulating interest, forming effective groups where each member contributes, making sure activities are at the appropriate level for all of my students and verifying student progress as they learn the material, led me to develop strategies to navigate potential hurdles.

To start, I utilize unit-centered essential questions, as recommended by McTighe and Wiggins. The questions are designed specifically to guide students in stimulating thought and to provide an overarching unit theme

centered around student interests (McTighe & Wiggins, 2013). As the questions link topics of student interest to the content, they develop and deepen student understanding and serve as a lens through which students see and discover the topic. The variety of answers to the essential questions allow for unique student responses. For example, essential questions such as, “How does the structure of organic compounds in food impact the flavor?” prompt questions from the student groups — “What are our favorite foods?” “What organic functional groups are present in them?” — that drive both student engagement and the inquiry process. Groups may work on different essential questions for the same unit.

Process Oriented Guided Inquiry Learning (POGIL) is a large cornerstone to reinforce key concepts relating to the essential question. The method uses guided inquiry — a learning cycle that explores a graphic or computer animation and convergent questions to aid in concept invention and application as the basis for materials that students use to guide them to new knowledge.

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The inquiry process drives student engagement by leveraging student's natural curiosity about the world around them. It helps students to develop the need to know.

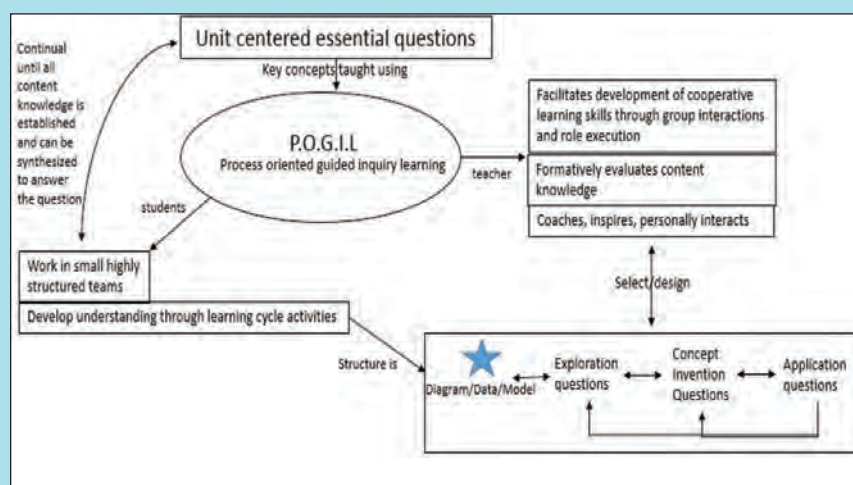
Guiding Chemistry Students with Essential Questions

In an activity where the essential question is “How does light reveal the behavior of electrons in an atom?” students start by answering questions about a provided energy, wavelength and speed of light chart. Building on their exploration question responses, students invent the concept that as

The activities focus on content knowledge of core concepts in chemistry with several activities per unit closely aligned with the New York State Chemistry Standards. Activities also develop higher-order thinking skills and a deep understanding of material (Spencer & J.N, 2006). I use many developed materials as I write my own. The POGIL activities combine the three dimensions of the Next Generation Science Standards in my classroom:

- Disciplinary Core Ideas (DCIs) that are developed within the activity;
- Science and Engineering Practices (SEPs) where students are probed to develop or design a solution; and
- Crosscutting Concepts (CCs) that are integrated during the concept invention and application questions (Next Generation Science Standards, 2016).

Process Oriented Guided Inquiry Learning (POGIL)



photon energy increases, the wavelength of light decreases. Application of this newly “invented” concept occurs after students “invented” the origin of spectral lines. The two concepts are then combined with the application extension question: “The spectral lines for atoms are like fingerprints for humans. To what extent can this method be used to provide information about the age of stars in space? How could this work?” These activities often accompanied by students exclaiming, “Oh! The pattern is...” and “Wow! I never knew how they could tell the age of stars!”

The effectiveness of the POGIL activity hinges on the purposeful grouping of students. This allows for personalized instruction and for students to develop a supportive community in the classroom. For grouping, I follow guidelines from the Cooperative Learning Institute (Johnson, 2016). Groups of three to four students work together on the essential questions and learning materials. Groups are homogeneous if content knowledge is going to be a “separating factor.” I alleviate knowledge differences by embedding additional

chemistry-specific scaffolding into student activities (Sloop, 2016).

Heterogeneous groups are used when diverse viewpoints and ideas will strengthen the development of concepts that are new to most students based on pre-test information aligned with Cooperative Learning Institute recommendations (2006). New groups are formed once or twice a quarter.

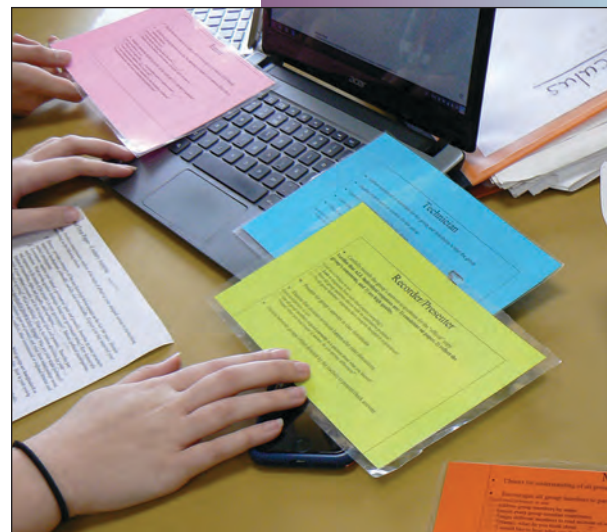
Initially, student groups struggled to work together. The upper-level students started to work individually — “I can do this by myself” — while the middle/lower level students would either write down responses or copy responses — “I know this.” I now teach students the skills necessary to work in groups effectively:

- clear communication,
- listening,
- courteous interactions,
- taking responsibility,
- accepting feedback, and
- dealing with conflict (Bosworth, 1994).

Students discuss what these skills look like from their perspective and mine. As these conversations take place, students acknowledge: “It helps to know how we should work in a group.” When needed, we employ

brainstorming strategies to ensure everyone practices skills for effective group work. To further facilitate group work, I assign roles (see below) to provide structure and to create pro-social behaviors associated with working in cooperative groups (Hanson, 2006). Specific roles are selected and assigned to students for each activity. All of the roles are not used in each instance. Students are provided a visual card and their knowledge of what to do is assessed prior to starting the activity.

During the class period I hear students say: “We have three minutes left for this section” or “What are your answers? How do they connect?” or “Do we all have something similar? Let’s move on.”



Student Workgroup Roles

Manager or Facilitator: Ensures that members are fulfilling their roles and participating, and assigned tasks are being accomplished on time.

Recorder: Records the important aspects of the group discussions, observations, insights, etc. Shares information with others as needed.

Spokesperson (Presenter): Presents oral reports to the class.

Strategy analyst (Reflector): Observes and comments on the group dynamics and behavior with respect to the learning process.

Quality Control: Verifies that ALL individual responses are consistent on paper, and reflect group’s consensus. Ensures that accurate revisions happen if needed.

Technician: Performs all technical operations for the group, including the use of a calculator or computer.

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Shifting to inquiry in class led to more engaged students, and higher quality and quantity of work the students completed.

After the activity, students reflect on how they implemented their role using an evidence/improvement form, process analysis form, or by writing out areas of strengths, improvements and insights. The clarity a role provides gives students parameters for working within groups. They know what they have to do as well as what their group mates need to do. The combination of roles and reflection gives students a concrete task they are accountable for during the activity.

Differentiating instruction

Differentiation within learning activities levels the class. Questions students are asked to complete are given various shapes — stars and squares, for example, — based on the student's level. I build in additional exploration questions for students who may struggle, while advanced students quickly get to complex open-ended questions. Open-ended questions are designed to stimulate discussion. For an activity on the differences in acid and base concentrations, a question about how the pH changes within your digestive system can impact the breakdown of food, stimulates in-depth student discussion. If students are comfortable with the question, they could skip those marked by stars. Struggling students are able to skip the questions marked by squares. Directions about the activity and an explanation of the shapes are contained in the packet of the questions and on

the whiteboard. Other methods of differentiation include having students select an application question or application activity out of a colored container that is divided by difficulty level, interest, or another factor.

Assessing individual accountability

Most student assessments are formative (Marzano, 2009) and simply provide a means for demonstrating the knowledge they have gained. Assessing individual student accountability gauges student understanding, their engagement during the activity and whether the level of rigor was appropriate for them. Some techniques I use for individual student assessment include:

- Students take a short quiz at the end of an activity.
- Students develop a review sheet from key questions.
- Students write details about their activity on the whiteboard.
- Students write a one- or two-sentence summary or reflection.
- Use graphic organizers to help students reflect on the content they learned.
- Debrief the next day as a formative assessment.
- Students break down their process for solving a problem into specific steps.

Student reflections are used to inform instruction and to improve student learning. Following guidelines from McDonald and Boud, such as making reasoned choices by applying only given criteria, providing actual marks for questions and having students provide a rationale for the given assessment of work, I ask students once a quarter to holistically reflect on their progress in the class (McDonald, 2003). Such reflection criteria helps students see their growth in content and as a member of a group. Excerpts of student reflections are shared below.

“When other students asked me for help it reinforced my understanding because being able to teach something shows that you have the highest level of knowledge about it...”

“This personal effectiveness activity really helped me see my strengths and weaknesses ... without this activity I don’t think I would have been paying attention to how I was acting in my group...”

“When our groups shifted and I no longer had super-smart K**** to lean on, I thought I didn’t know how to do the work. But as soon as I was placed in a group with a more balanced skill level, I realized that somewhere along the way, I had learned how to do the work...”

Shifting to inquiry in class led to more engaged students, and higher quality and quantity of the work students completed. Average summative assessment scores increased five points. Absenteeism also decreased. Student questions,

student-driven discussion and sharing of ideas also increased, indicating a positive impact on the classroom environment.

Student engagement and collaboration

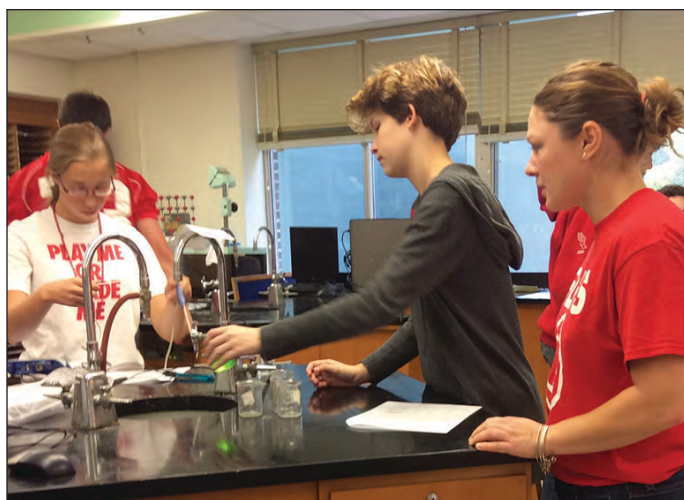
A part of chemistry class is lab. Chemistry students attend two 38-minute lab periods twice every six days. The purpose is to give students an opportunity to learn experimental techniques, apply their knowledge of concepts learned in class, and to learn concepts that are specifically lab-focused. Labs are completely separate from class; lab sizes range from four to 14 students.

Given the nature of chemistry labs, this shift to inquiry-based learning was more precarious. Students need guidance on appropriate lab techniques. Traditionally, most inquiry-based chemistry labs focus on determining an unknown that has been pre-selected by the teacher. It is not common in a chemistry classroom to have students propose variables or conduct different experiments in the same class period. Given safety concerns and limited supplies, exploration within lab is often discouraged.

Sevian & Cacciatore (2009) stated the addition of one inquiry lab resulted in a statistical improvement, according to an ANOVA model on open-ended questions involving higher-order thinking skills (e.g., analysis, synthesis, and direct application) and the potential to improve student-to-student interaction. The ability to analyze data within a science lab leads students to a better

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Guiding Chemistry Students with Essential Questions



Students work on a chemistry lab.

ability to process and determine the impact of the results of an experiment. The skills are essential so student can provide a rationale for their observations. Most changed labs occurred after the first quarter of the year based on

how well students develop lab techniques and procedures and learn the content covered in class.

Initial exposure to guided-inquiry labs came from the “Imploding Can” demonstration-turned-experiment. (Kluiber, 2010). During this lab, a 12-ounce aluminum can is filled with 150 milliliters of water that is heated to boiling. As the can heats up, students share what they think will happen: “It will explode.” “It is just going to cool down.” Once evidence of boiling is present, the can is quickly inverted into a beaker of cold water and implodes. Students exclaim: “Whoa! Wow!” Students are asked what they would change about the initial experiment to impact the results. Students propose heating the water to a different temperature, using a different size can, adding more or less water, using salt or sugar water, putting more holes in the can.

After conducting the experiment, I noticed that more students posed

questions about demonstrations. I began to record student “What if” questions about the demonstrations into a list of potential labs.

Following a luminol demonstration (two liquids are mixed and produce a glow), “What if” questions included:

- Does the length of tubing matter?
- What ratio of luminol to hydrogen peroxide is most ideal?
- Does the temperature matter?
- What if you add more ...
- What about grinding up the chalk smaller?
- What about using a more concentrated HCl (hydrochloric acid)?”

Different questions on the same demonstration result in labs that are practical to set up, have enough variation to mitigate or resolve misconceptions, and offer varying challenges for students to explore.

The “Helper Sheet” gives students structure as they develop labs. To start the lab I demonstrate the procedure, emphasizing key pieces of the experiment and places from which students can build questions. This familiarizes students with experimental procedures and provides a forum to brainstorm alternatives and propose variables. This

active engagement in changing just one small piece increases student comfort with the experiments (Putti, 2011), and facilitates buy-in. Students will guide each other — “Follow the directions in each box” — and, when probed about procedure development, indicate that they do not feel overwhelmed by the task.

Groups then select one of the proposed variables and develop a procedure for their lab (Pooch, Burke, Greenbowe, & Hand, 2007). Labs with a variety of rigor exist, as some questions are easier to approach than others.

Student-developed procedures are OK'd by me. This ensures students conduct safe experiments and allows for feedback or “hints” that helps them with procedures. Students then begin to conduct experiments, seamlessly modifying procedures as needed. The helper sheet allows me, at a glance, to gauge student progress.

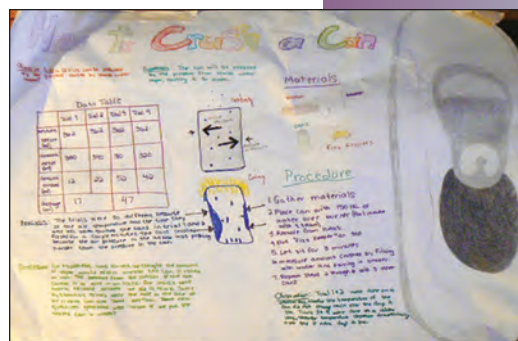
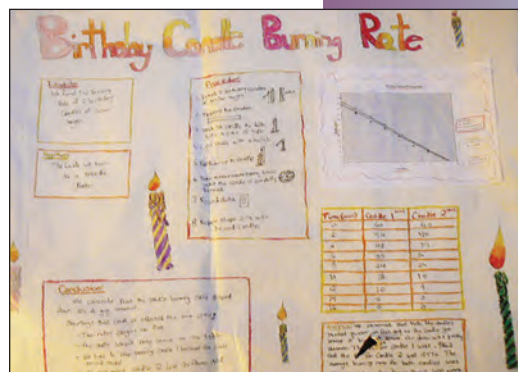
Student groups align with one of two categories for assessing and reflection. Category One groups worked together to create a poster outlining their lab experience. The poster is student-graded, teacher-graded, and graded by another group.

In 90 percent of cases, the three grades fall within five points of each other and the average is taken. The student's self-assigned grades are most often the lowest, and they often say, “It is

challenging to grade myself” or “Seeing others, I now know how I could have done better.”

Students grading other students leads to an overall increase in the quality of the posters created. This happens, I believe, because students are aware of how articulate they need to be with their knowledge so other student-graders understand it. I also think students take pride when others comment on how great their work is. Students are not aware ahead of time who will evaluate their materials.

Category Two students write a thorough conclusion/analysis section in their Report Helper Sheet that is evaluated by the student and teacher. All students within a lab class engage in full class discussions following the laboratory experience. Students are provided with discussion guidelines. The written portions along with the discussions help students crystallize and articulate their knowledge in writing and orally.



Sample student posters.

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Guiding Chemistry Students with Essential Questions

Student assessment of the lab helps students with increased critical-thinking capabilities, commitment to the course, and self-awareness of their own work. The results of the student lab assessments indicate higher average student scores on inquiry and guided-inquiry labs. Positive student feedback supports taking the additional time and effort needed for incorporating inquiry and guided-inquiry labs (see below) because the methods demonstrate a powerful impact on student learning. While the procedures are more straightforward and pre-written on the cookbook/verification labs (i.e., labs with clear directions, results that validate the introduction and questions that illicit already-learned content) in all other categories, the guided-inquiry and inquiry labs were more effective than the cookbook and unknown labs.

Conclusion

Shifting to student-centered, student-driven classes that utilize essential questions combined with POGIL activities and effectively formed groups has facilitated growth in rigorous content knowledge. It has also versed students in skills that are necessary in any profession students may pursue. The shift to inquiry lab activities has increased student engagement, interest and presence in labs.

As a result of the changes I made toward inquiry instruction, I can better meet students where they are with content. In class and lab, I can use student ideas and questions to give students appropriate activities or to help them build out their thoughts.

Students now exhibit an 81 percent Regents score average; a four-point increase with more than 40 percent

mastery, and the skill sets essential for the 21st century workplace. These shifts also closely align with the up and coming Next Generation Science Standards. Following Regents Chemistry, 90 percent of the students continue to take a science class. This tells me I have become a supporter, not an enemy, of the education process for them, creating positive classroom dynamics that motivate students to attend. I will continue to develop purposeful classroom and lab activities to reach the ever-growing edges of the population I serve. Most importantly, students can see the progress they make and the value of their work. Plus, they like that they are able to provide insight and opinions for the future.

Student lab evaluation results

2012-2016 Student Lab Evaluation Results (158 female and 145 male)

	Target alignment	Interpret Data	Error Analysis	Future Ideas	Challenge	Procedure Execution	Interesting/Fun	Overall	Other
	average	average	average	average	average	average	average	average	
Cook-book (CB)	3.00	3.60	3.50	2.50	2.50	4.00	3.20	3.19	easy, OK, could definitely do
Unknown (UK)	3.20	3.40	3.00	3.20	3.00	3.60	3.00	3.20	Ok
Guided Inquiry (GI)	4.20	4.00	3.80	3.20	4.60	3.50	3.20	3.79	Many questions; made sense in the end, LOVE the flame test!
Inquiry (I)	4.30	4.20	4.80	4.80	4.60	4.20	4.30	4.46	Really like this! Keep it! Great to do what we want!

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LOTE and the Five Cs: A Reflection on Teaching World Languages

SUMMARY

This article provides information and resources in support of foreign language study and includes outlines for lessons that engage students and touch upon the five Cs of World Readiness Standards for LOTE: communication, culture, connections, comparisons, and communities.

“To have another language is to possess a second soul.”
– Charlemagne

Students study a foreign language in order to become productive 21st century global citizens who are prepared to communicate and interact with people of diverse communities, are culturally competent, and are aware of varied perspectives of world events. Many colleges report that they look more favorably upon applicants who have completed long sequences in one or more languages (O’Toole, 2002). The linguistic and cultural knowledge obtained in language courses increases career readiness and opportunities in international markets and promotes national security, economic security, and social justice in society.

Although knowledge of at least one foreign language has long been recognized

as a vital 21st century skill (P21), the misconception that language classes consist solely of endless grammar drills, page upon page of written translations and memorization of dialogues continues to negatively impact the support and growth of world language programs in our schools. We often hear that learning another language is no longer important or necessary because “people in other countries speak English” or “computers can translate for us.” I have even had an administrator tell me “I don’t care if it’s on the list of core subjects and required in New York State. It’s not listed as a core subject in this district so I’m not going to treat it like one.”

After counting to 10 in several languages, my response to the first two statements would be to remind the speaker that English is the second or third language spoken by many people in other countries and to inform him or her that computer translations consisting of

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Linda Zusman, Retiree Council 10

more than a short phrase or two are notoriously inaccurate. As for the administrator, I believe he was reminded that the district did indeed include languages on the latest list of core subjects and that he could not overrule the Board of Regents nor could he ignore the National Association of State Boards of Education, which recommended that, based on “a substantial body of research,” foreign languages should be incorporated into instruction beginning in the early years and given adequate time and resources for program development (NASABE, 2003).

While studies continue to show that sequential second language study has an incremental impact on raising English language test scores (actfl.org; Cooper, 1987), students are too often taken out of language classes for “extra help” as standardized testing season approaches. Those with learning challenges are especially targeted for removal from their language classes or sometimes not allowed to take a second language at all. This may be based on a misconception that students with lower reading and writing test scores would struggle in second language

classes. In language classes we use four skills to achieve proficiency: reading, writing, speaking, and listening. Students who may have trouble with reading or writing can demonstrate their ability to effectively communicate using speaking and listening skills. These students are able to thrive in our classrooms while being given multiple opportunities for participation, a wide range of experiences, and the ability to make connections with other cultures and communities.

We have tailored our instruction toward giving students the ability to bring a global viewpoint to their education, experiences, and future careers. We counter the widespread “When will I ever use this?” question by practicing the skills they will need to use in real life situations. Rather than just memorizing lists of vocabulary, our classes actively practice scenarios involving interaction with speakers of the target language in order to achieve specific goals: obtaining medical assistance; arranging for travel necessities such as transportation, lodging, and food; socializing with people from other countries in a culturally accepted manner; finding and completing

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The cultural knowledge obtained in language courses increases career readiness and opportunities in international markets and promotes national security, economic security, and social justice.

The study of another language provides an opportunity to understand and respect diverse cultures while reflecting on similarities and differences with one's own.

official forms; reading and understanding information from signs, ads, and articles, etc.

“Language is the road map of a culture. It tells you where its people come from and where they are going.”

— *Rita Mae Brown*

The study of another language provides an opportunity to understand and respect diverse cultures while reflecting on similarities and differences with one's own. Research has shown other benefits, including enhanced problem-solving skills and general cognitive growth (Schulz, 1998), development of the skills and habits essential to the learning process, creative inquiry, and critical thinking (Curtin, 1994) and providing a competitive edge in the global economy (Hayward, 2001). The assumption that everyone in the international business community speaks English leads many to think that foreign language learning is unnecessary. While Americans are often impressed with how well their foreign counterparts speak English it may be interesting to stop and think about how much others might appreciate it if we spoke their language. Knowledge of another language can help a business professional or anyone to establish a deeper rapport with members of another language community.

“If you talk to a man in a language he understands, that goes to his head. If you talk to him in his own language, that goes to his heart.”

— *Nelson Mandela*

The American Council on the Teaching of Foreign Languages (ACTFL) has identified World-Readiness Standards for Learning Languages and broken them down into five key areas: communication, cultures, connections, comparisons, and communities (actfl.org). Based on their awareness that the selected skills would and do incorporate the areas of connections, comparisons, and communities, the creators of the New York State Standards for Languages Other Than English (LOTE) narrowed the focus to two requirements:

- Students will be able to use a language other than English for communication, and
- Students will develop cross-cultural skills and understandings. (*www.p12.nysut.gov*)

In classes throughout the state, both modern and classical language teachers demonstrate real world usage of the lessons they teach by incorporating practical applications of the material into their activities. Research shows that doing so not only allows students to improve their language skills but also enables them to understand diverse cultures

The comparative ease of accessing authentic resources through technology has made planning and implementing lessons that integrate culture and communication far less complicated.

through exposure to what the ACTFL Standards identify as perspectives (meanings, attitudes, values, ideas), products (books, tools, foods, laws, music, games), and practices (patterns of social interactions). Such experiences increase the probability that students will develop a positive attitude toward the target language and toward speakers of that language. The comparative ease of accessing authentic resources through technology has made planning and implementing lessons that integrate culture and communication far less complicated than in the past.

What does that look like in today’s classroom? Over the years we have created lessons incorporating communication, culture, comparisons, connections, and communities, although we did not always identify them using those terms. Opportunities for interlingual and interdisciplinary connections now present themselves more frequently as we are increasingly encouraged to create learning communities and demonstrate connections between disciplines.

“You can never understand one language until you understand at least two.”

— *Geoffrey Willans*

Today’s students are expected to successfully compare and contrast information from several sources in order to

draw their own informed conclusions. This is a technique we can and do frequently employ in our classes. Depending upon the topic under discussion, students can find source material from countries which use the target language and compare the perspectives contained within to those they have seen or experienced in the United States.

I was first able to appreciate how well this can work during a unit on hobbies and leisure activities. It was baseball season, and as usual I made copies of an article from a New York City Spanish language newspaper. As the class was reading, several students commented that they had seen this game and noticed that the story emphasized the performance of Latino players. This led to a discussion of how viewpoints and perceptions in media are often designed to reflect the customers they serve as well as local, national and regional interests. While some students concentrated on critiquing the Spanish language journalists for the cultural pride they demonstrated in their reporting, others pointed out that English language journalists are also guilty of choosing to emphasize the accomplishments of the players who are “local favorites.” Several students observed that newspapers will frequently devote more space to and print more pictures in stories about popular teams or players and that broadcast

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Comparing English and second language articles about the same topic helps build vocabulary for beginning students, while higher-level classes are challenged by weighing the information reported from two different countries.

journalists can chose their highlighted games and scores while relegating others to a shared graphic. Students soon realized that every culture has the same tendency to reflect the opinions and attitudes of its people.

With this in mind, students were asked to rewrite (in Spanish) an existing sports article or write an original one based on a game or match they watched on television. If it was an original report, they were to avoid any preferences shown by the announcers during the broadcast, although they could make note of them in the story while still providing a balanced account of their own. As they worked on this project they began to realize that the articles were not necessarily biased but merely reflective of the regional preferences of the majority of the target audience. The students also found it difficult to avoid writing more about their favorite player(s) than they did about anyone else.

An optional assignment was given to afford students the chance to do additional research on how the same news story was reported by sources from two different countries where the target language was spoken. While quite a few stayed with sporting events (the World Cup is a favorite,) a small number compared stories about global warming, AIDS, and American politics. The different perspectives on the cause and impact of global warming and AIDS built their awareness of the priorities in

those countries, and they were sometimes surprised or even angered at how our government was viewed.

The difficulty of the materials used will reflect the level of proficiency of the class. It is now possible to find online stories written in simpler terms for beginning students, and the advanced classes can appreciate more detailed reporting. Comparing English and second language articles about the same topic helps build vocabulary for beginning students, while higher-level classes are challenged by weighing the information reported from two different countries where the target language is spoken.

Building upon the idea that what is learned in one area can be transferred to another, I worked with the Family and Consumer Sciences (FACS) teacher to provide parallel classes. While my classes were studying a unit on health and wellness, her classes were in the middle of a lesson on nutrition, healthy eating choices, and the food pyramid. To provide my classes with the opportunity to not only supplement our material but also connect that information to the FACS curriculum, I was able to find a copy of a *Guía de la Alimentación Saludable* (a guide to nutrition and healthy eating) online. I printed copies of the healthy eating/healthy life guidelines for my students and asked them to compare the suggestions in the *Guía* to those they had been given in FACS

One of the activities students at all levels of proficiency enjoy is exploring the differences between the original and translated versions of stories.

class. They were able to identify the call for specific physical activities in the Spanish guide (walking briskly outdoors, doing stretching and breathing exercises), the difference in the amount of water one was being advised to drink by each (four to six glasses vs. six to eight glasses per day,) and the recommendation to take time for oneself each day in the English guide.

I invited my students to consider how the food pyramids for each culture might compare. After they shared their ideas, I projected the pyramids side by side and asked them to describe what they saw. Most of them immediately recognized the similarities and identified the products pictured in each section. Others pointed out the differences, especially the inclusion of beer and wine (with the note that it was optional for adults) and a recommendation for daily exercise on the Spanish pyramid. They talked about which specific foods were used to illustrate a particular category (fruits, vegetables, meats, grains, etc.) on each, and that led to another discussion about the types of foods primarily used to prepare meals in different Hispanic countries versus what we typically consume.

Students next worked in groups of two or three to prepare posters in Spanish with their own version of a “Top 10 Healthy Habits” list and suggestions for a week’s worth of balanced meals for someone their age. (The meals in

particular generated discussion about cost and availability of components). Students shared the projects in both their Spanish and FACS classes, and we had the added public relations value of seeing Spanish language materials displayed in the halls. The nutritional component of this lesson laid the foundation for making other comparisons and provided resources which we were able to use when developing visual aids for our food unit.

One of the activities students at all levels of proficiency enjoy is exploring the differences between the original and translated versions of stories. Fairy tales are always a big hit, especially when they discover that the Disney versions of the stories they know best are nothing like the earlier accounts of the tales. Classes like being challenged to determine the English titles of movies and books which, when translated into or back into another language, become almost unrecognizable. (This idea can be used for a popular quick activity using the names of sports teams during playoff season).

A search of international film databases will provide you with lists of movies as well as a brief synopsis of each plot. A synopsis can be used to provide clues to the title when students are stumped or can be used alone for more advanced students to use as the basis for their guess. How well would you do

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You don't have to be able to translate every word to understand the plot or to figure out what is happening. When students become engrossed in something they make a concerted effort to follow the story.

if the list you saw included the English language movies “My Father is My Mother,” “My Poor Little Angel,” “The Devil Emperor Returns,” “Two Men and A Dream,” or “Adam Goes to School?”

In two of these, the title includes a reference to a popular actor or character.

Devil Emperor was how Arnold Schwarzenegger was identified in “The Terminator” in several Asian markets, so the phrase appeared in many of his subsequent movies to let the audience know that he was the star. Adam Sandler became so popular in certain markets that titles were rewritten to show that it was a Sandler movie. (As for the others, they are “Mrs. Doubtfire,” “Home Alone,” and “Butch Cassidy and the Sundance Kid.” If you got that last one wrong, we have something in common.)

I have to say that this is a great pre-holiday or shortened period activity. Students began to search websites on their own for movies and television shows and bring their finds to class to play “Stump the Teacher” or to use in challenges with other classes. Bonus: They also found movies and shows from the target countries which they wanted to watch, which is how many of them discovered the original Spanish language version of “The Orphanage” (El Orfanato). They couldn't wait to tell their friends how scary it was and how much of the dialogue they actually

understood without looking at the subtitles.

While on that subject, I should mention there are also excellent comparisons to be made when talking about cultural perceptions and norms in genres such as horror, comedy, mystery, etc. What is it that makes us laugh? What do we fear? While students will recognize that physical comedy is almost universal, jokes don't always have the same impact in translation. What kinds of “monsters” are portrayed in other cultures? Does blood make something scarier or does the sense of impending danger make things worse? How are women portrayed? If you don't understand a cultural reference, can you still enjoy most of a performance?

That last question underscores something we always emphasize in our classes: You don't have to be able to translate every word to understand the plot or to figure out what is happening. When students become engrossed in something they make a concerted effort to follow the story. We can see this in the beginning level classes when we show them familiar stories which have been dubbed into the target language or even reimaged. The original French version of the film “Beauty and the Beast” had many special effects later copied and made more family friendly by Disney, and the class was thrilled to point them out. A made-for-TV musical version of “Cinderella” produced in Puerto Rico

featured a talking magic oven and a fairy godfather, but the students knew the original story and enjoyed pointing out the differences between versions. They also added new words to their vocabulary after hearing them repeated in the show.

“Learn everything you can, any time you can, from anyone you can; there will always come a time when you will be grateful you did.”
— *Sarah Caldwell*

When students are shown or find examples of how facts can get “lost in translation” based on possible national bias or cultural norms reflected in the tone of the piece, they begin to understand how people think. In the past, we were restricted to finding copies of newspapers or magazines which were usually out of date or relying on made-for-the-classroom materials. Today, most major international publications have websites where their current editions are available for view. Events such as the Olympics, World Cup, and Academy Awards always have major international coverage as well as multi-lingual websites. Finding out about election practices in other countries and then seeing an “outside” perspective of our own elections and political situations can be both enlightening and disturbing. It also provides an excellent interdisciplinary connection with social studies or global studies teachers. LOTE teachers and

science teachers can examine coverage of stories about space exploration or recent scientific breakthroughs. Connections can be made with health teachers to compare how English language and target language media cover medical issues such as the Zika virus. Finding differences and similarities between celebrations of family milestones such as births and weddings allows students to share personal stories and connect within the school community as well as learn about other countries. (There is a lesson plan for this last idea on the NYSED website: www.p12.nysed.gov/ciai/standards.htm).

Finding broadcasts in the target language and contrasting not only story content but also body language, tone, and general demeanor of the reporters adds to student appreciation of different cultures. It also provides opportunities for reinforcement of basic conversational and informational skills: asking who, what, where, when, why, and how during news reports; reviewing weather expressions and application of the metric system; reflection of cultural norms in the editorial pieces. Television commercials can also be useful cultural barometers, asking students to decide who is being targeted by the ad, how the advertisers are promoting the product, and what are the physical and personality characteristics of the people in the ad.

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... most importantly,
remember a
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“In every national crisis, our nation has lamented its foreign language shortfalls. But then the crisis goes away, and we return to business as usual. One of the messages of 9/11 is that business as usual is no longer an acceptable option.”

— *Senator Paul Simon*
Washington Post, 10/23/01

In recent times we have seen the word “foreign” become a derogatory term, used whenever someone wants to convey a sense of mistrust and potential danger. During my long 40-year career in teaching, I have gone from being a Foreign Language teacher to a World Language teacher to a World Language Other Than English teacher and finally to a teacher of Languages Other Than English. The job is the same, but we use different words to describe it. Every day we remind our students that although people use different words, they are still people. And most importantly, they should remember that a language is only foreign until you learn it!

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New Wave of Fitness

SUMMARY

Physical education and health teachers use technology and fitness trends to educate students on a variety of new fitness concepts and their benefits. The new approach has seen tremendous results, students are engaged in the lessons and look forward to each unit. Most important, students are excited about establishing and maintaining a lifelong fitness program.

As the amount of physical activity children get

in and out of school has declined in recent years, youngsters have become more overweight and less fit. To help reverse that trend, some fitness experts say physical education (PE) classes should be revamped so there is less emphasis on team sports and more of a focus on lifelong fitness activities. We need PE programs that stress fitness, health awareness, and lifelong exercise habits.

For too long, some fitness experts say, PE has not lived up to its name. Traditional PE classes provide too little activity to too few students, offer little or no guidance for maintaining a healthful lifestyle, and can sometimes discourage less athletic children and even make them feel inadequate. In the

end, many students turn away from personal exercise or fitness regiments.

We are now entering a new generation of physical education, with programs that stress lifelong fitness such as walking, snowshoeing and tennis, without eliminating team sports activities.

Physical education should be centered around activities that students can do throughout their lives. Ann Flannery, executive director of PE4Life, notes physical education “should be about introducing them to something they like and having them stick with it (Education World, 2016, Student Health section, para. 5).”

This does not mean team sports should be completely eliminated from the PE curriculum. Flannery also notes, “there still are lessons learned from games; it’s still important to have that exposure to sports (Education World, 2016).”

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Leonard J. Brown III, New Lebanon Teachers Association
Timothy Christiansen, New Lebanon Teachers Association

Paula Kun, spokesperson for the National Association for Sport and Physical Education, a nonprofit professional organization for physical education teachers and professors, agrees that PE curriculums have to change. Kun explains, “We want a physical education class to be a place where students try a whole variety of activities and find something they want to do their entire lives (Education World, 2016, Student Health section, para. 6).”

H.W. Kohl (2013) contends that physical fitness programs should emphasize physical fitness in the context of a healthy lifestyle by focusing on “... cardiorespiratory fitness, muscular strength and endurance (p.202).”

New Lebanon is a small bedroom community in a rural school setting. It is an old farming town with a mostly middle class population. The current junior/senior high school enrollment is just 215 students. There are few options for our youth to get involved in any type of fitness programs or clubs.

Over the past few years there has been a wave of new fitness programs. Being from a small town with limited outlets, our students are not exposed to these new fitness programs. We think it is

important for our students to understand the many different options when it comes to fitness. We saw a need to develop this program to help students become more educated on the new fitness programs that have exploded onto the scene.

For students trying to sort out all the different programs and special claims the industry has to offer, how do they make a decision about which ones to use? We decided to go back to basics with our unit, which includes: cardio endurance, muscle strength, muscle endurance, agility, and flexibility.

The fitness unit that we developed for our 7–12 grade physical education program incorporates nutrition education and four different fitness programs: circuit training, cross fitness (X-Fit), core workout, and yoga.

Traditional PE classes provide too little activity to too few students, offer little or no guidance for maintaining a healthful lifestyle, and can sometimes discourage less athletic children...



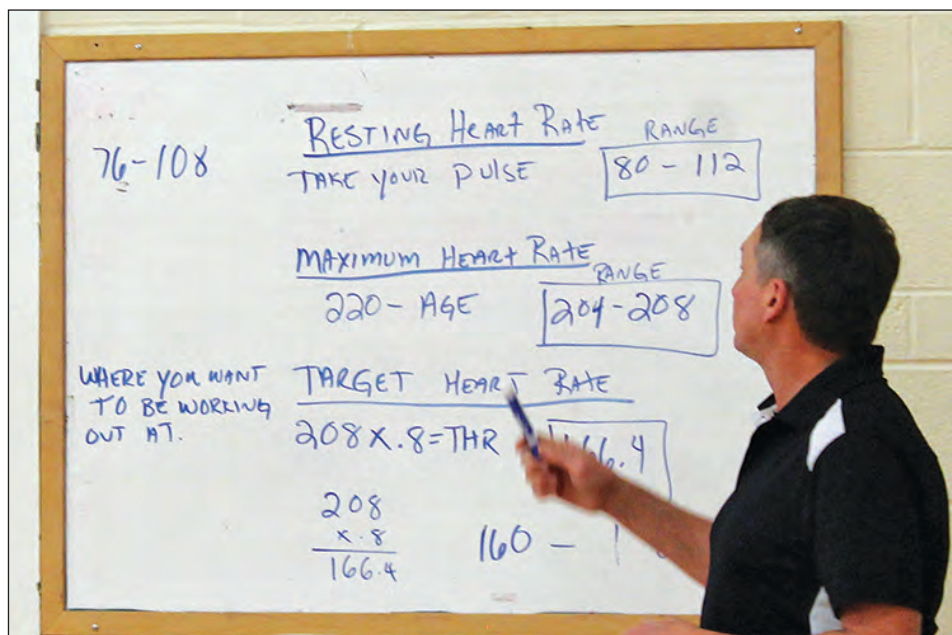
Practice

At the beginning of each day, students are welcomed with the lesson objectives posted on whiteboards outside the locker rooms and told which station they will be working in that day. During the unit, a “word wall” of vocabulary words pertaining to fitness is also posted on the whiteboards. Students have to wait until everyone is ready to go upstairs to the gym, so we see them reading the vocabulary words. We also post motivational posters near the word wall, which will have some of the vocabulary words being used in sentences or quotes. The unit-specific vocabulary words are incorporated in each of the daily objectives and students have to answer a question at the end of class, which enhances vocabulary and reading comprehension.

Once all of the students are in the gymnasium, they begin a short dynamic warm-up consisting of butt kicks, high knees, lunges, karaoke (a lateral warm-up groin exercise) and dynamic stretching consisting of figure 4’s, pike and straddle stretching, which lasts approximately five minutes.

Next we divide the class into three groups, planning for each group to rotate between three different stations (circuit training, X-Fitness, and core strength) throughout the unit. Over a three-day period, each student will have an opportunity to participate in all three stations. Our fitness unit runs for the entire month of November, new exercises are added and introduced to eliminate boredom and encourage participation.

Once students are separated into their groups and are refocused they are taught the daily lesson objective. We differentiate by having the students choose between competitive and non-competitive groups, this lets them work out



without the feeling of being judged or singled out. It also gives the athletes an opportunity to compete.

This unit is very easily adapted for those who have physical limitations. Each exercise or station can be changed or adapted so all students feel they can participate and be successful. For example, if students are instructed to do pushups but are unable to, they can modify the exercise by getting in a plank position, do shoulder taps or perform the pushups on their knees.

Circuit Training in the weight room consists of seven different stations, which will give the students an opportunity to work on strength for all muscle groups. For example, the day one workout has the following exercises: biceps curl, lateral pull down, triceps, pull down, back extensions, dumbbell shoulder press, lunges, and leg extensions.

Students have a choice of **strength training**, three sets of 8–10 repetitions, or toning, two sets of 15–20 repetitions. Students are encouraged to bring their smartphones to use technology in a more productive way. They scan in the QR codes that are posted at each station; the codes are linked to YouTube videos on how to perform each exercise correctly. These videos have been taped using one of our own students, thus enticing and stimulating interest to watch and perform the

exercise. Students work with a partner and are given a workout sheet to record their progress. The partner is also responsible for watching and critiquing their partner's form. Each station is timed for approximately four minutes. The teacher observes the students and gives individual instruction to the partners ensuring that students are on task and are using proper form.

X-Fit (our spin on the cross fit craze) consists of different aerobic, strength and endurance stations where students are to perform a predetermined number of repetitions for each exercise. The teacher walks the students through each station with demonstrations and provides visual aids of proper form. Examples of exercises would be air squats, jump rope, burpees, and bleacher dips. The students are slowly introduced to this, since it is a non-stop



New Wave of Fitness

workout, jogging from station to station lasting a minimum of 10 minutes with each station requiring 10–20 repetitions, increasing their endurance each day. Each time students report to X-Fit their time will build up to a non-stop workout lasting up to 20 minutes. Once they have reached the allotted time for that day, the teacher will allow students to get drinks, have them come back to the center of the gymnasium and lead the class in yoga to increase their flexibility and for cool down and relaxation.

Core Strength consists of different abdominal workout videos using some of the newest trends from Beach Body (P90X and 21 Day Fix). This is a student-led and student-driven unit supported by a teacher aide but overseen by the X-Fit teacher. Students have a choice to compete in daily challenges, the most popular one being the plank

challenge (how long can you hold a plank position). We pull most of these activities from the various forms of social media to which students are exposed.

At the end of each class, students will answer the “Ticket Out” question, which is specific to the daily objective for the station they reported to that day. This is also posted on the whiteboard and the students fill out their self-assessment cards. The self-assessment card is a tool for students and teachers to evaluate their participation level and level of understanding of the daily objectives. Students are encouraged to use the new vocabulary words from the word wall to write — using complete sentences — their understanding of the daily objectives. Students then return completed cards to the teacher for immediate feedback.

After three weeks of rotating through the different fitness stations offered, the students should be able to show the proper use of equipment, proper form and have demonstrated to the teachers a good understanding of the learning objectives that have been presented. We also incorporate the importance of proper nutrition into our daily objectives. We start out by discussing carbohydrates, proteins and fats, having the students give us examples of each. We then discuss how each is needed and used in the body for developing a strong healthy body in conjunction with the different forms of fitness.



The health and fitness unit ends with a half-day field trip, with our juniors and seniors, to a local fitness club to see the club layout, discuss protocols, and to experience the benefits of a fitness club. Because of the exposure and students' new knowledge, we usually find around two students will join the club we visit; several other students usually end up joining other clubs in the area.

In the past we taught a stand-alone weight room class which had little learning and was becoming stale. Letting the students differentiate and adding a variety of fitness programs gave the unit a fresh new feel, and made it more comfortable and fun for all to participate. The daily challenges, most notably the plank challenge, took off from just a one-day challenge, to a week. The students were pushing to beat their friends. We also saw a noticeable increase in the student level of understanding the differences in the programs we presented through the self-assessment cards.

Student participation is outstanding and they actually look forward to it throughout the entire unit. This could also be seen in our after-school Fitness Club. When we first launched the club, only two or three students would show up, now more students are taking advantage of the fitness club and attendance averages between 12–18 students a day.

Collaboration

The lessons we teach at the junior/senior high school are important for younger students as well. To that end, we collaborate with the physical education staff and health teacher at the W.B. Howard Elementary School.

The students first learn each component of fitness and then are asked to match the fitness component to each exercise. For example, when learning about cardiovascular endurance the students are taught max heart rate, resting heart rate and target heart rate.

Teachers instruct the students how to take their pulse to determine their resting heart rate, and incorporate math skills to calculate their max and target heart rates. The max heart rate (roughly calculated as 220 minus your age) is the upper limit of what your cardiovascular



Student races a math teacher.

system can handle during physical activity. The target heart rate is considered the acceptable level to reach and maintain an optimal level of fitness, and is measured as exercising within 55–85 percent of your max heart rate. Once students are physically active the teacher stops the activity and has the students take their pulse again to determine if they are working at the max or target heart rates.

Part of our effort to emphasize physical education in the context of a healthful lifestyle includes us leading by example. We both work after school with students and compete in duathlon and triathlon competitions. The students are aware of this and come at the beginning of class the morning after the competitions to see how well we did. Our school also fields a large group of teachers who compete in the 5K Work Force Challenge each year.



Conclusion

The best story of positive outcomes came the first week of this school year, 2016–17. One of our students had previously tried to play on sports teams, but was impaired to do well because of his weight — he weighed more than 300 pounds. When the student showed up in September, he had dropped 75–100 pounds. When I asked what he did, he said “... ever since our fitness unit, I joined the YMCA fitness club. It has become my new passion to make a change in my physical fitness.” (Personal Communication, Dezieck, J. 2016).

Among all the different fitness programs comprising the latest fitness craze, what’s most important is for students to have a good understanding and a knowledge base to identify the proper fitness program for their personal needs. Ultimately having the knowledge to not get locked into just one fitness program will enable our students to establish and maintain programs for lifelong fitness that they can enjoy.

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ADDITIONAL RESOURCES

Activities are designed for health benefits, and the ultimate goal for the student is to develop a commitment to regular exercise and physical activity. It is assumed that all children can achieve a health-enhancing level of fitness through regular engagement in vigorous- or moderate-intensity physical activity.

Concept-based fitness education curriculum models:

Fitness for Life: Middle School
(Corbin et al., 2007);

Personal Fitness for You
(Stokes and Schultz, 2002);

Get Active! Get Fit!
(Stokes and Schultz, 2009);

Personal Fitness: Looking Good, Feeling Good
(Williams, 2005);

Foundations of Fitness
(Rainey and Murray, 2005).





Bullying in the Early Grades: Giving Visual Form to Voice

SUMMARY

A first-grade classroom's concern about bullying is the focus for students to engage in image making in conjunction with the writing process. Through the process, students discover they can give form to painful experiences and feelings and receive feedback from their peers.

A National Center for Education Statistics study

found almost one out of every four students (22%) reported being bullied during the school year (NCES, 2015). According to a report by the Centers for Disease Control (2015), students who experience bullying are at increased risk for poor school adjustment, sleep difficulties, anxiety, and depression. The report goes on to note students who engage in bullying behavior are at increased risk for academic problems, substance use, and violent behavior later in adolescence and adulthood while students who are both targets of bullying and engage in bullying behavior are at greater risk for both mental health and behavior problems than students who only bully or are only bullied.

In March 2011, President Obama with First Lady Michelle Obama, held the first White House bullying conference to provide information from various government agencies on how kids, teens, young adults, parents, educators, and others in the community can prevent and stop bullying. The conference was a call to action — policies, statistics, and effects of bullying were made clear. In the words of President Obama, “if there’s one goal of this conference, it’s to dispel the myth that bullying is just a harmless rite of passage or an inevitable part of growing. It’s not.”

American Federation of Teachers President Randi Weingarten (2012) calls all educators into action when she says: “We must empower those who have been bullied by listening to them and hearing their anguish, so they know they are not alone. We must find ways to educate the people who bully

Joan Davidson, a retiree from the United Federation of Teachers, is serving her 36th year as president/chairperson of the New York City Art Teachers Association/UFT. She taught art at all levels, kindergarten through college, for nearly 40 years. She is currently a volunteer art teacher at the Brooklyn New School. Davidson's award-winning paintings have been exhibited in galleries and museums across the country in one-woman and group exhibits.

Joan Davidson, United Federation of Teachers

others, so that they can know the harm their behaviors cause and understand it is wrong.”

It was in this context that we developed a lesson that provides a safe environment for students to express their feelings and concerns about bullying. Healthy social-emotional development is promoted by building a safe, secure, and respectful environment in an early childhood setting with positive and consistent relationships among adults, children, and their peers (Wright, Diener, & Kemp, 2013). Building a strong classroom community aligns with current early childhood education quality standards and child development theory. A study by Findlay, Girardi, and Coplan (2006) has shown that 6- to 7-year-olds who have low empathic skills are more prone to bullying. When instructed about empathy, their aggression decreases, while their self-respect and social competency is strengthened. This insight echoes Weingarten’s comments about student anguish. By showing students that they are not alone in dealing with their difficult experiences we can help them to understand the visual ways they could communicate their ideas.

Research on the Art Room

Hurwitz and Day (2001) explain that in art classes, drawing upon the students’ imaginations, internal goals, and life-worlds and connecting these to creative artmaking is the first step in lesson development. The process of creating an expressive image based on the theme of bullying and reflecting on the product and the products of peers encourages students to empathize with their own feelings and the feelings of others. Goleman (1998) explains how an individual’s emotional intelligence (EQ) that includes the competence of empathy rooted in this lesson contributes more than their IQ results to their potential for success in a work situation. It is through the arts that this EQ is nurtured.

Image making has the ability to bring out experiences, thoughts, and emotions that may not be expressed verbally (Kohl, 2010). Creating art, she explains, allows children to work through feelings and emotions and by referring to a finished piece of artwork, helps a child talk about feelings in a unique and meaningful way. “The art products of children tell us a great

“We must empower those who have been bullied by listening to them and hearing their anguish, so they know they are not alone. We must find ways to educate the people who bully others, so that they can know the harm their behaviors cause and understand it is wrong.”

— Randi Weingarten

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Bullying in the Early Grades: Giving Visual Form to Voice

... creating an expressive image based on the theme of bullying encourages students to empathize with their own feelings and the feelings of others.

deal. Children create directly and without fear. Art is more than a pastime; it is meaningful communication with the self, as children select and organize parts of the environment into a new whole (Lowenfeld, 1987, p.34).”

Awareness about bullying in schools is growing. It is imperative that we create opportunities for students to share their thoughts, fears, and stories in an expressive way.

Relating Image Making and Bullying

“Curriculum must include instruction that supports the development of a school environment free of discrimination and harassment. (The Dignity for All Students Act, 2012).”

The visual arts constitute important “ways of knowing” for all children, for they are among the primary languages through which personal and cultural meaning find echoes within each other. Burton (2015) explains, “... children bring their own interests and ideas with them to the study of art, and it is the teacher’s task to be sensitive to the life-worlds of their pupils in their interpretation of the curriculum. (p.1).”

The process of art making provides an opportunity for students to take a journey inside themselves and identify the feelings they have about the given topic. These feelings once expressed can then be viewed in a new light and become the basis for rethinking one’s actions.

Engagement in the process of image making gives students an opportunity to access their feelings and to discover new ideas and feelings. When making their images, students re-experience the feelings they had during the bullying event. Adams and Baynes (2006) put it this way, “Irrespective of age, thoughts impact and interact on/with the drawer and their drawings by the eye receiving feedback from the marks appearing on the page, which prompt further thought and mark-making.” The authors go on to say, “Thoughts are not static; they constantly shift and change. Furthermore, thinking is not a regulated procedure, but an unpredictable exchange between experiences, ideas, reactions and actions. (p.3).”



In this drawing, a student explains that one student pushed her, but another helped pick her up.

Engagement in the process of image making gives students an opportunity to gain access to their personal feelings and to discover new ideas and feelings.

The image making process and the image itself, clarified by the student statement, allowed the bullying problem to be seen and heard by peers, family, and community members. When sharing their work midway and at the end of the project, students saw how bullying affected not only them but their peers as well. The process gets to the core of a student's feelings and results in images that have a strong impact on the viewer.

Image making and reflection on the work, can be used as a strategy to develop solutions to a given problem, by those who view the work. Freedman and Lynch (2012) explain that in making and sharing their artwork with others, students learn that they can actually have an impact on the world through the images they create.

The Stand Up to Bullying Project

The primary purpose of the project was to engage students in an opportunity to express their personal concerns, their fears, their feelings of helplessness, sadness, isolation, and/or their need to be a bully.

Students were encouraged to share personal accounts about their experiences in a visual form accompanied by a written/verbal statement about what the work was about. Time was also provided for students to talk about their work and the work of peers. This process supports the development of a

school environment free of discrimination and harassment, sensitive to the concerns of others and appreciative of the unique points of view of their peers.

Using the framework of the New York City Department of Education's Blueprint for Teaching and Learning in the Visual Arts (2015), this lesson covered five strands: Art Making, Literacy in the Visual Arts, Making Connections, Community and Cultural Resources, and Careers and Lifelong Learning. The components of the strands go through pre-K-12 and the benchmarks for the grades are scaffolded and recursive.

Young children are active and exuberant explorers (Burton, 2015). Artistic images capture the physical and sensory aspects of their discoveries. They

continued on following page



**A student shares a bullying incident:
A little boy is punching me. I have a bloody nose.**

Bullying in the Early Grades: Giving Visual Form to Voice

Inherent in the process of image making is critical thinking, decision-making and flexibility, and persistence — all skills that are essential to life-long learning.

love to express the movement, feeling of places and people. They tell stories by combining their observations with their inner worlds of fantasy and include details that capture the important parts of their ideas. Art making becomes an important spur to the use of imagination.

The bullying theme, introduced with teacher and student stories and role-playing, was appropriate for the way early childhood students learn.

Inherent in the process of image making is critical thinking, decision-making and flexibility, and persistence — all skills that are essential to life-long learning.

I presented the lesson to 26 first-grade students in a Brooklyn public school. The students were culturally and academically mixed. Most were beginner readers and were just beginning to write sentences using “inventive” spelling.

It was helpful to present the theme in cooperation with the classroom teachers, who had knowledge of the students and who had discussed bullying during other class sessions.

The class was structured into segments:

- Whole group presentation and discussion;
- Whole group review of resources;
- Small group studio work;
- Individual instruction;
- Peer dialogue and;
- Whole group reflection on the work.

The classroom teacher grouped all the students on a rug and began telling a dramatic story of when he was a bully. Next, students role-played a time they were a bully or a time when they were bullied. For this they had to stand and do an action that would show what they were doing or what was happening to them. Some stood in front of the group and repeated their action and asked other students to guess what was happening and how they thought the student felt.

When the students were ready to “draw their story,” we discussed a reproduction of “Carolina Shout,” a picture created by Romare Bearden (see right). This work of art was chosen because the parts of the figures are exaggerated and each figure is doing something different;



This artwork shows one student reacting to seeing another student hit.

the color is expressive and the figures are shouting/singing — something children like to do.

Art materials, such as crayons, construction paper, glue, and scissors were set up at each table of four. The students were each given a 12 inch x18 inch white drawing paper to work on.

I asked, “What topic are we working on?” I did this to review and clarify what the students were to do. I suggested students begin their work by tearing or cutting out the figures or drawing their figures that were involved in the bullying activity first. Then I suggested that they add their background.

Hwang (2012) cautions adults to avoid asking young children, “What is it?” Instead invite children to tell you about their picture in their own words. As students worked I walked around the room, responding to their questions and guiding them individually by commenting on what they were doing well and by asking some of the following questions:

- How can you make certain parts stand out?
- What parts could be exaggerated to add to your story?
- What colors could you choose to get across your feelings?
- What could you add to tell where the event happened?

continued on following page

“Carolina Shout” art discussion

Where did you notice that the artist used exaggeration to communicate his ideas?

(Show “exaggeration” by speaking in a very loud voice then a very soft voice.)

Can you point out, in the picture, parts you think are exaggerated?

(Using a pointer, students showed the hands, the heads, and the mouths of the figures.)



Can you describe what you see in the picture?

(One student responded, “I see people.” After the students counted the people, one student was selected to use the pointer to touch the people and count them out loud.)

What do you think the people are doing?

(Students said the people are talking; when asked to point to areas in the picture that gave them that idea, one student pointed out the mouths.)

Can you make sounds that you hear in the picture and use your hands at the same?

(Students began to make loud shouting noises and raised their hands high and moved them in a variety of ways.)

Can you guess what materials the artist used to make the picture? And why do you think that?

(I finally explained that the artist, Romare Bearden, made the picture by combining bits of cut or torn paper, from magazines or papers with a design on them. I tore some paper and demonstrated how it could become a figure in action.)



*This drawing shows a student helping:
I'm patting my brother's head to make him feel better.*

Bullying in the Early Grades: Giving Visual Form to Voice

- What can you do to consider the whole page?
- What details, such as patterns, parts of things, can you add to clarify your story?



Above: A drawing shows one student slapping another.

Below: A student shares how it feels to be told, "You can't play!" by another student.



Midway through the lesson, while students worked, I held up a few pieces that showed different ways of presenting ideas to encourage students to be inventive and to think in new ways. When sharing their work midway and at the end of the project, students saw how bullying affected not only them but their peers as well. When the pictures were completed they were set up on the floor and students were invited to walk around our floor gallery and see what their peers had done.

Assessment/Reflection:

Students who wanted to share why they liked a particular picture were encouraged to do so. I asked students to tell how the artist whose work they viewed got across their feeling about bullying. Some students mentioned the colors the artist used, others mentioned how certain parts were exaggerated, others mentioned what they saw happening in the picture. I asked where they thought the action took place and to give evidence in the work, why they decided what they did.

I asked the young artists what they had learned in working on their images. One artist said, "I didn't know I could remember so much about what happened." Another said, "I learned that exaggeration really adds to your picture." I asked, "Can anyone point out a work that shows a similar experience as yours?" Several hands went up. This last question was to encourage children

to look at each other's work. Then I asked students to share what they had learned in making their work or seeing the work of other students.

Conclusion

Arts processes by their very nature incorporate multimodal opportunities for students to discover and solve problems independently and/or collaboratively. When artists, including young artists, are intensely engaged in the creative process the visual language is used most expressively.

In this project, the children were passionately involved with communicating their feelings and stories. They were in a "creative zone" in which they intuitively exaggerated parts of the picture, used color, lines, shapes, and patterns in a rhythmic and unified way.

Like the work of Romare Bearden, which the students examined before they made their artwork, they used the whole page to tell their story.

In my research I found only a few organizations concerned with stopping bullying and/or teaching tolerance that capitalized on the language of the arts, whether it be theater, music, dance, or visual arts. Students were asked to draw a picture, sing and/or write a song, role play, etc. and the work was looked at for content only, not how the students manipulated the language of the art form expressively.

While the examination of these issues is important and can be empowering, Bickley-Green (2007) cautions art teachers to work with other school staff when introducing a theme that may reveal more conflict and discomfort than was anticipated. Also autobiographical images may incriminate students among peers or in the broader community. One way to reduce this problem is to ask that names of the children who did the negative action(s) not be mentioned. It is not productive for children to carry a descriptive label of "bully" or "victim."

I believe that when students really want to share their feelings, story, or idea about something in a visual form, it is their intent, passion and full engagement in the art-making process that becomes a springboard for them to learn about the power of the visual arts language to communicate what is inside them. In this project the need to share their experiences related to bullying was the springboard. This lesson provided students a safe environment to express their feelings and concerns around bullying.

(Editor's note: See additional resources for a unique idea for an anti-bullying art exhibit.)

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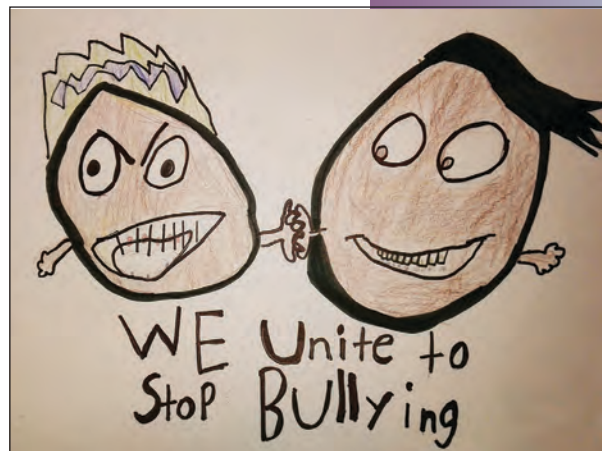
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**The New York City
Art Teachers Association/
United Federation of Teachers
developed a student
anti-bullying exhibit.
For resources and guidelines
to use to develop
your own exhibit, visit
www.nycata.webs.com.**



THE NEW YORK CITY ART TEACHERS ASSOCIATION/
UNITED FEDERATION OF TEACHERS IN COLLABORATION WITH COPE NYC
presents a Student Exhibit Opportunity

INSIDE/OUTSIDE: YOUNG ARTISTS UNITE AGAINST BULLYING

The goal of the project is for students to share their concerns about bullying in a visual form. We hope this exhibit of student work will result in the artists and viewers gaining new insight. Understanding a problem is the first step in finding a solution.

Students are encouraged to create images that share their feelings about bullying and intolerance - it could be an incident they were involved in or one they observed. It could be from the point of view of a friend or family member. All types of visual solutions to the problems are welcome. Work can be in any genre or media - realistic, figurative, symbolic or abstract. Words can be included in the image. **Key words can be but are not limited to:** fear, alone, pain, empathy, rage, anger, thrill, hope, self-esteem, tolerance, strength, identity.

Guidelines:

- Art work to be two or three dimensional (individual or group), film/slide show (2 minutes);
- 3D work can be any size but must be delivered and picked up by teacher/artist at end of Reception
- Maximum size for 2D work 18x24 for physical exhibit; Size unlimited for digital exhibit.
- Work need not be mounted or matted.
- Materials -your choice. For relief, materials should be securely attached. Pastels, charcoal, or cray-pas must be well fixed. We cannot be responsible for damage due to fragility.
- Please do not submit artwork that specifically addresses a person by name or title. For example an artwork that says "I don't like when John Doe calls me names everyday" could simply say "I don't like it when he calls me names everyday".
- Please e-mail up to 10 student images 300 dpi or film/slide links before Friday, February 17th to:
Anu Sieunarine aasieunarine@gmail.com

SAVING AND LABELING IMAGES: Each image should be numbered and labeled:
#. Student Name, Grade, School, Teacher, Title.
(Example: #1, Jane Doe, Gr 4, PS 1, Ms. Adams, No Bullies)
Student writing-double spaced (a WORD document) Label document to match jpg.

Timeline:

Friday-February 17th : Digital Submission deadline
Week of March 8th : Adjudication: work will be grouped: Grades 1-3; 4-6; 7-8; 9-12;
Week of March 13th : Teacher notification
Digital Exhibit : Beginning March 20th -
Physical Exhibit : May 2017 Place, Date, Time TBA

Selection Criteria:
Work will be selected for digital and physical exhibits based on: interpretation of the theme; clarity of message; craftsmanship and size (no size limit for digital exhibit)

Recognition:

- A Reception for selected students and Teachers. Date, Time, Site TBA
- All teachers and students will receive certificates thanking them for their participation

See Exhibit Overview: www.nycata.webs.com
Details include: Bullying defined; basic understandings, goals; resources; optional written statement content; suggested questions to motivate students; process arts activities; art-making activities.

Exhibit Coordinators: NYCATA/UFT: Joan Davidson, President; Anu Sieunarine, VP, High Schools; Mario Asaro, VP, Executive.
COPE NYC: Vida Sabbaghi, Founder & Director

Glossary

ACRONYMS AND TERMS

Concession

Acknowledging valid points of an opposing argument.

Interlingual

An adjective pertaining to or using two or more languages.

K-W-L charts

Graphic organizers that help students organize information before, during and after a unit or a lesson. The charts track what students know (K), want to know (W), and have learned (L). They can be used to engage students in a new topic, activate prior knowledge, share unit objectives, and monitor learning.

Metalinguistics

A branch of linguistics that deals with the relation between language and other cultural factors in a society.

Morphemic awareness

Morphological awareness is the recognition, understanding, and use of word parts that carry significance. For example, root words, prefixes and suffixes (e.g., -s or -es for plurals) are all morphemes which can be added or taken away from a word to alter its meaning.

Refutation

Negating an argument, opinion, testimony, doctrine, or theory, through the use of contradicting evidence.

Technocentrism

Thinking that advocates the use of technology to try to answer all questions.

POGIL

An acronym for Process Oriented Guided Inquiry Learning, POGIL is a student-centered, group-learning instructional strategy and philosophy developed through research on how students learn best.

Quizlet

A free website providing learning tools for students, including flashcards, study and game modes.

Word wall

An organized collection of words displayed in the classroom. They are designed to teach students to recognize and spell high-frequency words.

Resources

ADDITIONAL RESOURCES ON ENGAGING ALL LEARNERS

Union Resources

New York State United Teachers (NYSUT)

Resources for Educators: Addressing the New York State Instructional Shifts

NYSUT is a steadfast advocate for high-quality teaching in every classroom and a staunch believer that good teaching becomes better teaching over time with appropriate support in school cultures that recognize the complexities of teaching practice. Supported by an NEA Great Public Schools grant, NYSUT has developed this resource to support educators as they implement the state learning standards.

<http://www.nysut.org/resources/special-resources-sites/nys-learning-standards>

P-12 NY State Science Learning Standards and Resources

<http://www.nysut.org/resources/all-listing/2016/december/ny-state-science-learning-standards>

NYSUT's portal for the new science standards includes: lesson plans created by teachers that are organized by standard and grade level; a large collection of videos relevant to individual standards; and a link to Earth Science Week, a repository of activities on Earth Science. The site also includes links to engineering resources, as well as sample curriculum maps K-5 for physical science and life science.

Educator's Voice: NYSUT's Journal of Best Practices in Education

For the past 10 years NYSUT has been publishing an academic journal to showcase the best practices of its members across the state. Previous volumes have centered on literacy instruction, assessment, technology integration, social-emotional learning, critical thinking, and teaching English language learners. Each year, a few author teams are featured in video interviews about their work. All of the volumes and videos are archived on the website:

<http://www.nysut.org/resources/special-resources-sites/educators-voice>

NYSUT Education Learning Trust (ELT)

ELT has an extensive list of graduate and undergraduate courses, including its college degree partnership programs, in-service programs and seminars. With more than 10,000 members engaged in its services yearly, ELT is the go-to choice for high-quality professional learning.

<http://elt.nysut.org/>

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Resources

American Federation of Teachers (AFT)

Share my Lesson: Lesson-sharing website funded by the AFT. “Built by educators across the country, we bring together a community of teachers, paraprofessionals, school-related personnel, parents, partners, union members and non-union members to join in our effort to provide high-quality education to all students.”

<https://sharemylesson.com/>

National Education Association

Tools and Ideas for Classroom Teachers: NEA’s website maintains a repository of downloadable lesson plans and activities in the arts, health and physical education, language arts, math and science.

<http://www.nea.org/home/ToolsAndIdeas.html>

State Organizations

New York State K-12 Social Studies Framework

This framework integrates existing New York State Learning Standards and the New York State Core Curriculum for Social Studies into a single, three-part document.

<https://www.engageny.org/resource/new-york-state-k-12-social-studies-framework>

New York State K-12 Social Studies Resource Toolkit

The toolkit resources focus on implementation of the Inquiry Arc, as presented in The College, Career, and Civic Life (C3) Framework for Social Studies State Standards, including the four dimensions: (1) Developing questions and planning inquiries, (2) Applying disciplinary concepts and tools, (3) Evaluating sources and using evidence and (4) Communicating conclusions and taking informed action.

<https://www.engageny.org/resource/new-york-state-k-12-social-studies-resource-toolkit>

New York State Curriculum and Instruction in the Arts Webpage

This page provides links to information and resources on the Arts in New York State, including the standards, video resources, and NYS arts regulatory summaries.

<http://www.p12.nysed.gov/ciai/arts/>

New York State P-12 Science Learning Standards

Performance expectations, science and engineering practices, disciplinary core ideas and cross-cutting themes.

<http://www.p12.nysed.gov/ciai/mst/sci/documents/p-12-science-learning-standards.pdf>

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New York State Curriculum and Instruction for Physical Education and Health

Physical Education

This page provides guidance, information and resources for school physical education instruction as required by education law and commissioner’s regulations.

<http://www.p12.nysed.gov/ciai/pe/>

Health

This page provides guidance, information and resources for school health instruction as required by education law and commissioner’s regulations.

<http://www.p12.nysed.gov/ciai/health/>

New York State World Languages Webpage

SED’s goal is to promote and support the teaching and learning of one or more languages and cultures, in addition to the English language.

<http://www.nysed.gov/world-languages>

New York State Education Design and Technology Webpage for School Library Services

This page provides guidance information and resources for school libraries and library media specialists as required by education law and commissioner’s regulations.

<http://www.p12.nysed.gov/technology/library/>

New York State Education Professional Organizations

New York State Council for the Social Studies (NYSCSS)

The New York State Council for the Social Studies (NYSCSS) is the statewide professional organization of social studies educators. Members are committed to ensuring that all students graduate from high school and college ready for lifelong learning, engaging careers, and active civic life.

<http://nyscss.org/>

New York State Art Teachers Association (NYSATA)

The New York State Art Teachers Association (NYSATA) is a nonprofit professional organization founded for the purpose of advancing the cause of art education.

<http://www.nysata.org/>

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Resources

New York State English Council (NYSEC)

The NYSEC promotes excellence in English education while it fosters collegiality and camaraderie among English language arts educators throughout the state.

<http://www.nysecteach.org/>

New York State Association for Health, Physical Education, Recreation, and Dance

The New York State Association for Health, Physical Education, Recreation, and Dance includes teachers of health education, physical education, recreation and dance; agency, community, and worksite health professionals; youth coaches, and future professionals who are interested in promoting health, physical education, recreation, and dance in the kindergarten through higher education settings, throughout New York State

<https://www.nysahperd.org/index.cfm>

New York State Association of Foreign Language Teachers (NYS AFLT)

NYS AFLT's mission is to promote the teaching and learning of foreign languages in New York State.

<http://nysaflt.org/>

School Library Systems Association of New York State

The vision of the School Library Systems Association of New York State (SLSA) is to lead through innovation, collaboration, advocacy and education, impacting student achievement across the state. The organization's mission is to strengthen, support and advocate for its members as they foster quality school library programs.

<http://www.slsa-nys.org/>

New York State Association for Supervision and Curriculum Development

The goal of NYSASCD is to assist educators in the development and delivery of quality instructional programs and supervisory practices to maximize success for all learners.

<https://www.newyorkstateascd.org/>

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National Organizations

Association for Supervision and Curriculum Development (ASCD)

Publishes books on K–12 learning, teaching, and leadership; sponsors annual conferences on teaching and learning including the Whole Child Symposium.

<http://www.ascd.org/books-publications.aspx>

ASCD Report on “The Engagement Gap”

<http://www.ascd.org/whole-child-symposium.aspx>

National Council for the Social Studies (NCSS)

The largest national association for social studies education, NCSS develops and publishes the National Framework for Social Studies, as well as several noteworthy academic journals. The organization’s website includes links to many publications including the College, Career, and Civic Life (C3) Framework for Social Studies State Standards, and a Performance-Based Assessment Clearinghouse. NCSS also sponsors an annual teaching conference.

<http://www.socialstudies.org/>

National Coalition for the Core Arts Standards

NCCAS provides a national conceptual framework for arts learning that was revised in 2014.

<http://www.nationalartsstandards.org/>

National Science Foundation (NSF): Education Classroom Resources

The NSF website provides a resource portal designed for teachers, their students and families. Many draw from the National Science Digital Library (NSDL) for Science, Technology, Engineering, and Mathematics (STEM) education.

<https://www.nsf.gov/news/classroom/education.jsp>

National Council of Teachers of Mathematics (NCTM)

NCTM publishes national standards for math education, Principles and Standards for School Mathematics. NCTM has developed the Activities with Rigor and Coherence series. The series includes standards-aligned lesson ideas on many topics including counting strategies, growing patterns, discovering area relationships, and triangle congruence.

<http://www.nctm.org/ARCs/>

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Resources

SHAPE America (Society of Health and Physical Educators)

SHAPE America, the nation's largest membership organization of health and physical education professionals, is committed to ensuring all children have the opportunity to lead healthy, physically active lives. The website hosts extensive resources including national K–12 standards for health and physical education, publications, links to national conferences, grants and professional development.

<http://www.shapeamerica.org/>

Family Engagement and Community Partnerships

Educators have always embraced the practice of building deep and significant relationships with families. Family and community partnerships help to create more vibrant school communities and support a child's overall well-being by promoting the integration of academic, social and emotional learning. As school communities across NYS realize the importance of family and community engagement projects, they are actively interested in learning more about new and innovative research-based strategies.

The next volume will feature these important initiatives. We call for proposals from programs and partnerships, classrooms, schools and school districts, individuals or teams that are involved in cultivating these important family/school/community relationships.

Examples of submission areas include (but are not limited to):

- Community schools / wraparound social, health and community services
- Family-school engagement initiatives
- Collaboration with cultural institutions / community-based organizations
- Professional development and community partnerships in teacher education
- Community partnerships in higher education
- Parent and family networks / academic parent teacher teams
- Parent teacher home visits
- Building community in the classroom
- Productive parent-teacher communications models
- Family and community outreach initiatives
- Grassroots collaboration with the school community

Family Engagement and Community Partnerships

PROPOSAL GUIDELINES

Please tell us about your proposal by referencing each of the following nine elements (approximately 2–5 pages) and submit to NYSUT by June 12, 2017. Please include the element titles.

Be sure to complete the author submission sheet and send it in with your proposal.

- 1) **Title:** What is the working title for your article?
- 2) **Topic:** What do you plan to write about? What practice or program will your article focus on? (Please provide specifics about school(s), grade levels, etc.)
- 3) **Relevance:** Why is this practice relevant to the theme of this year's volume? Why is it important to you?
- 4) **Setting:** Describe your setting and the student population(s) involved in the practice or programs.
- 5) **Practice:** Describe the practice or program and your method or approach.
- 6) **Outcomes:** What are the intended outcomes or indicators of success and how do you plan to measure or observe them?
- 7) **Research Base:** Describe the academic research base that supports your practice. (Please provide specific examples/citations.)
- 8) **Diversity:** How does your practice address the needs of diverse populations?
- 9) **Collaboration:** Which groups and individuals across the school community are involved in the collaboration?

Deadlines for Volume XI:

June 12, 2017	Proposal submission deadline
July 1, 2017	NYSUT responds to proposal
Sept. 5, 2017	Completed article submission
April 2018	Publication

Family Engagement and Community Partnerships

AUTHOR SUBMISSION FORM

Name of Author(s) / If multiple authors, select one author as the primary contact person. At least one author *must* be a NYSUT (or affiliate) member. Please spell out all information, do not use acronyms.

Primary Author's Name: _____

Name of school: _____

School Location: _____

Current position (title and grade level/s): _____

Union Affiliation: _____

Next Author's Name: _____

Current position (title and grade level/s): _____

Union Affiliation: _____

Next Author's Name: _____

Current position (title and grade level/s): _____

Union Affiliation: _____

Do all of the authors work in the same building? If not, tell us where they work:

Primary Author CONTACT INFO (all fields are required)

Email address: _____

Telephone number: _____

Alternate telephone number: _____

Home address: _____

**Information can be
submitted electronically
by June 12, 2017, to:**

llembo@nysutmail.org

Or by mail to:

NYSUT Research & Educational Services

Attn: *Educator's Voice*

800 Troy-Schenectady Road

Latham, NY 12110

You can download
this document from
our website:

[http://www.nysut.org/
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call-for-proposals](http://www.nysut.org/resources/special-resources/sites/educators-voice/call-for-proposals)

Family Engagement and Community Partnerships

EDITORIAL GUIDELINES

- Grade and Content Area:** Author(s) can describe practices or programs in any grades (P-20) on the topic of family and community engagement.
- Audience:** This is a practitioner journal. Our readers include teachers, school-related professionals, pupil personnel services providers, union leaders, parents, administrators, higher education faculty, researchers, legislators, and policymakers. For examples, please browse previous volumes of *Educator's Voice*.
- Please write your article to the practitioner. Authors are encouraged to write in a direct style designed to be helpful to both practitioners and to others committed to strengthening education. All education terms (i.e., jargon, all acronyms) should be defined for a broad audience. For articles with multiple authors, use one voice consistently. Please limit the use of writing in the first person.
- Article Length:** The required article length is flexible. Please submit approximately 2,000 – 3,000 words (or 7-9 double-spaced pages plus references).
- Rights:** *Acceptance of a proposal is not a guarantee of publication.* Publication decisions are made by the Editorial Board. NYSUT retains the right to edit articles. The author will have the right to review changes and if not acceptable to both parties, the article will not be included in *Educator's Voice*. NYSUT may also retain the article for use on the NYSUT website (www.nysut.org) or for future publication in *NYSUT United*.
- Manuscript Basics:**
- Style**
- Use American Psychological Association (APA) 6th edition style for in-text citations and references.
 - Do not use footnotes.
 - Double-space your manuscript.
- Graphics Guidelines**
- Although your images will be embedded in the manuscript for review, submit all graphics as separate files.
 - Save all images in high-resolution (300 dpi). Anything downloaded from a website will be low-resolution (72 dpi) and will not be acceptable. If using a cellphone, choose high quality settings.
 - Any graphics (photographs, charts, tables, or samples of student work) must be submitted in PDF, TIFF, or JPEG files.
 - Add a parenthetical place marker to your manuscript for images that will be included in the appendix or elsewhere (for example, “see image 3 on p. 16”).
 - Image file names should correspond to image place markers in the manuscript (for example, “image 3 student work sample”).
 - We need permission to reprint artwork; you need release forms to use images that include people. Photos should illustrate the context, rather than the subject(s) looking posed.
 - Do not submit copyrighted material unless you have permission from the publisher.

NYSUT Education & Learning Trust

The Education & Learning Trust is NYSUT's primary way of delivering professional development to its members. ELT offers courses for undergraduate, graduate and in-service credit, partnership programs that lead to master's degrees and teaching certificates, and seminars as well as professional development programs for teachers and school-related professionals.

NYSUT Education & Learning Trust offers the following professional development on the topic of Content Area Instruction:

Online Courses:

■ Building Mathematical Understanding Grades 3-5

EDU 661116 Empire State College

This course is intended to help those who teach mathematics in Grades 3-5 understand the mathematical content, how mathematical ideas develop, and how to implement successful teaching practices that make it more likely for students to grasp and be comfortable with mathematics. The course includes research findings on which the teaching of solid mathematics is based. It highlights teacher practices that researchers found to be associated with greater learning of mathematics and that teachers found to be relevant and vital for teaching mathematics in all grades K-12 with a focus on grades 3-5.

The course aligns the Ten Principles of Thinking Mathematics, the NYS P-12 Common Core Learning Standards for Mathematics, the Standards of Mathematical Practice and the National Research Council's Strands of Mathematical Proficiency, all vital frameworks for teaching mathematics. The research behind these principles is explained with models and explanations from within multiplicative structures and discusses the implications for teaching multiplication and division which is the essence of the work of Grades 3-5.

■ Instructional Planning, Strategic Teaching

EDU 661114 Empire State College

This course is designed to provide participants with instructional strategies that meet the needs of all students at all grade levels. Emphasis will be placed on misconceptions of academic failure; curriculum organization; effective instructional design; curriculum evaluation and instructional strategies that enhance and improve academic performance for all students. The following concepts serve as the basis for the design of curriculum and instruction: core concepts, essential questions, background knowledge, judicious review, strategic integration, cognitive strategies, and mediated scaffolding. Additional strategies and applications introduced in this course include rubrics, graphic organizers, LINC'S vocabulary strategy, class wide peer tutoring, note-taking, paraphrasing, summarizing, reciprocal teaching, questioning, and the Socratic Seminar. The implications of brain research and the use of technology are also components of this course. Additionally, many of the practices examined correlate with the indicators on state and district-wide teacher evaluation rubrics, the New York State Teaching Standards, and the shifts in Common Core Standards implementation.

ELT

 Education & Learning Trust

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Visit our site at www.nysut.org/elt to learn about what else we can offer.

■ Math Made Meaningful

EDC 663 The College of Saint Rose

This course is designed to help participants help children learn mathematical concepts and skills, including most important, problem solving skills. The course is divided into three parts. The first part provides learning theories as a base for understanding the foundations of mathematics curriculum and how children learn it. It also helps participants apply the learning theories to help children develop foundations of number sense and problem solving. The second part discusses teaching strategies for computational procedures in whole number, fractions and decimals. Third part focuses on investigation and process skills of mathematics including estimation, measurement, geometry and spatial skills.

■ Reading and Writing Across the Content Areas Grades K-12

UNY 801 Adelphi University

This course explores content area teachers' roles in each student's literacy development. You will learn how to utilize research-based teaching strategies in content-area instruction. Strategies include word attack, before-reading, during-reading, after-reading, writing and research -- applied within the context of content area learning. In addition, you will learn how to incorporate technology into literacy tasks in your classroom, and explore how to assess reading and writing tasks within a balanced literacy-content area classroom.

■ Reading Across the Curriculum

EDU 661110 SUNY Empire College

The course provides research-based, active reading comprehension strategies that participants can apply to their grade level or content area. By learning how to implement these metacognitive reading strategies, participants will be able to plan lessons more effectively. Participants will also discover how to engage students, deepen their understanding of content, and prepare them for success beyond the classroom. Emphasis is on learning styles, types of text, notation systems, content-area reading, assessments, fluency, motivation, and grade-level vocabulary.

Seminars:

■ 21st Century Skills For Teachers

This seminar is designed to address one of the NYS Teaching Standards priorities by helping teachers understand that knowledge is expanding at a more rapid rate than ever anticipated. Information and communication is changing how we teach and how students learn. Routine skills are no longer the basis for the workplace or the classroom. The seminar will emphasize that today's students and teachers must be able to communicate, share, and use information in a number of diverse ways. The seminar explores critical student skills such as using information and solving complex problems relevant to a changing work environment. Technology and problem solving skills will be defined as successful learning and the participants will develop strategies to share those skills with their students.

Meets NYS Teaching Standards II, III, IV, V

■ Deepening Knowledge of the Learning Standards in the Content Area

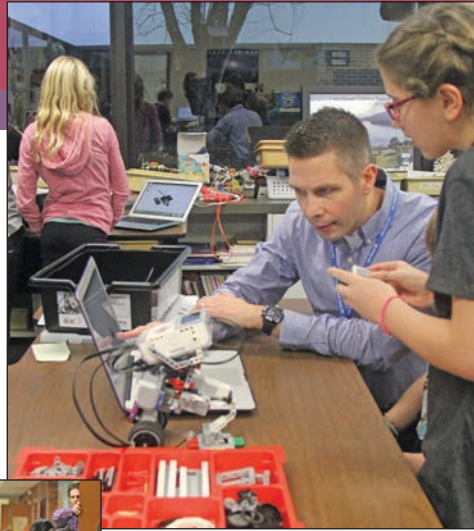
The instructional shifts, called for in the NYS Learning Standards, require teachers to have an extensive understanding of the standards in order to create classroom instruction that balances student learning and application. Participants will learn to use a step-by-step process to improve student learning as well as turn the standards into teachable learning targets. Each participant will need a copy of the NYS ELA/Literacy Standards as well as a lesson plan in their content area.

Meets NYS Teaching Standards I, II, III, IV, V,VI

■ Reading, Writing and Thinking Strategies that Build Success in the Content Areas (Grades 5-12)

This program focuses on how teachers can help students become more effective readers using research-based and teacher-tested strategies. Participants will identify strategies that stimulate student thinking about the content before, during and after they read and about how to incorporate reading and writing strategies into content area instruction to meet the literacy needs of all students. (15 hour)

Meets NYS Teaching Standards I, II, III



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