

Dennis-Yarmouth RSD

Instruction Office Newsletter

Displaying a Grade-by-Grade Progression of Math Concepts

In this article in Teaching Children Mathematics, consultant Robyn Silbey suggests creating corridor bulletin boards that show elementary students' thinking and work on a particular math topic through the school's grades. "Primary teachers will learn where their students are headed," she says. "Intermediate teachers will learn about the preparation of the students they will teach. Best of all, every teacher, student, and parent will see the progression of a concept through the eyes and work of the students." Here are samples from a bulletin board on the question, "What is equal to 10?"

KINDERGARTEN:

Two rows of five circles in a box Ten stars arraved in a box The word TEN The numerals 1 to 10 A ruler with ten inches The numerals 1 to 10 with 10 circled

FIRST GRADE:

2 + 8 = 10A number line showing 1 to 10 15 - 5 = 10The number 15 with tens and ones place written above and an arrow pointing to tens 9 + 1 = 100 + 10 = 1020 - 10 = 10SECOND GRADE: 2 + 2 + 2 + 2 + 2 = 102, 4, 6, 8, 10 (ten circled) 90 - 80 = 1045 - 35 = 10

10 = 1 + 2 + 3 + 4Continued on page 2

November 2016 Volume 4, Issue 3 **IMPORTANT DATES**

November 6 **Daylight Savings ends**

> (turn those clocks back an hour!!) **Professional Dav**

November 8 8:30-2:45

Election Day November 11 Veterans Day (no school) November 23-25 Thanksgiving break (no school)

IMPORTANT NOTICE:

Central office is a **fragrance-free zone** so please be respectful and plan accordingly when you visit.

ue to one of our members at the CO being highly sensitive to any type of fragrance, we ask that staff visiting/meeting at the Administration building refrain from using any scented products. Fragrances from personal care products, air fresheners, laundry and



other cleaning products have been associated with adversely affecting a person's health. We ask that we all work together to make the environment a safe and healthy workplace for everyone. Thank you very much for your cooperation!





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WITH HOPE OTHAT

in some way,

IT AGAIN WILL BE

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Continued from page 1 **SECOND GRADE:**

620 - 610 = 105, 10 (ten circled)

THIRD GRADE:

Two rows of five dots in a box, with vertical pairs circled $5 \times 2 = 10$ 202 - 192 = 10 $20 \div 2 = 10$ Two rows of five squares in a box with the horizontal rows circled $10 = 90 \div 9$

FOURTH GRADE:

A factor tree with 10 on top and 5 and 2 below 10 = 5,237 - 5,227 $500 \div 50 = 10$ 10 = 10 + 10 / 1 + 1 $6.000 \div 600 = 10$ A factor tree showing 1 and 10 converging on 10 20 x ½ = 10

FIFTH GRADE:

30/3 = 103.2 + 6.8 = 102(4+1) = 10 $35/7 \times 2 = 10$ 2x2 + 6 = 10 $0.1 \times 100 = 10$ $2 \div 1/5 = 10$

"Bulletin Boards as Schoolwide Teaching Tools" by Robyn Silbey in Teaching Children Mathematics, August 2016 (Vol. 23, #1, p. 6), no free e-link available; Silbey can be reached at robyn@robynsilbey.com.

Using "I AM" Poems to Get Students Fully Engaged in Texts

In this AMLE Magazine article, Lesley Roessing (Armstrong State University) describes a lesson taught in a middle-school classroom. Students are asked to read an article on the 1918-19 influenza pandemic

(which killed about 675,000 Americans) and answer the following worksheet questions:

> Where did the pandemic start?

How did the pandemic spread?

When did the pandemic end?

How many Americans died from influenza?

From the article, what do you think a pandemic is?

"When they finished the assignment," savs Roessing, "they had gained neither deep understanding of the pandemic nor empathy for its victims. They had all

approached the subject from one perspective – that of middle-school students reading about an event that took place a century ago and affected people with whom they felt no connection."

> Roessing suggests a different approach having students write "I AM" poems. Here's how it works. The class reads the article together and then brainstorms different perspectives from which the events can be viewed - for example, a person living in Philadelphia in 1918-19, a child living through these events, a victim of the Great Pandemic, a

funeral director in the city, the mayor of Philadelphia, the pandemic itself. Then students each choose a perspective they'd like to take and re-read the article with that identity in mind, marking details important to





their assumed point of view, including evidence and inferences. They might put a check-mark by information they already know, an *N* by new information, and a *!* by the most important information.

Finally, students complete each prompt in the "I AM" poem format, using information from the article, their own background knowledge, and new information from further research:

I AM...

I wonder...

I hear...

I see...

I want...

I AM... (something else about the student's assumed identity)

I pretend...

I touch...

I worry...

- l cry...
- I AM...
- I understand..
- l say...
- I dream...
- I try...
- I hope...

I AM... (something else about you in conclusion) Here are some sample lines from a student completing an "I AM" poem about the pandemic:

I AM one of the many victims of the Great Pandemic of 1918-19.

I wonder about the other 675,000 Americans who died, leaving orphans and widows.

I AM starting to become fearful for the world.

I pretend to be strong.

I touch my chest to make sure my heart is still beating.

I worry it will be too late before this outbreak is over.

I AM trying to believe that everything will be all right.

Roessing says "I AM" poems can be used effectively in other subject areas as well

- English language arts (taking the part of a major or minor character in a novel), social studies (a native child forced to walk the Trail of Tears), science (an innovative scientist), health (a victim of chronic traumatic encephalopathy), and other subjects. "And because writing I AM poems allows for choice, creativity, and fun," concludes Roessing, "more students are engaged, the point of any academic activity."

"One Text – Many Perspectives" by Lesley Roessing in *AMLE Magazine*, August 2016 (Vol. 4, #1, p. 28-30), no free e-link; Roessing can be reached at lesley.roessing@armstrong.edu.

Close Reading of Challenging Texts in Middle School

In this article in AMLE Magazine, Doug Lemov, Colleen Driggs, and Erica Woolway of Uncommon Schools say that many middle-school teachers want to get students reading texts that will engage and motivate them often contemporary young adult fiction. This is all well and good, say Lemov, Driggs, and Woolway, but "what students 'like,' or more precisely think they will like, is inherently limited. We can all name a handful of texts we read against our better teenage judgment infallible though it seemed at the time - but which turned out to be transformative – instantly in many cases, years later in others." So teachers need to make sure students use their finite and precious classroom hours to grapple with some complex texts of the sort that they'll encounter in college and life. Here are five types:

• ARCHAIC TEXTS – The first sentence of Oliver

Twist by Charles Dickens is 98 words long and includes unfamiliar turns of phrase like "to wit," "inasmuch," and "in this workhouse was born…" In earlier eras, whether in novels or documents like the Declaration of Independence, people used words in different ways, and students need to be able to unpack and comprehend such texts.

• NONLINEAR TIME SEQUENCE -

The narrative of *Bigmama's* by Donald Crew switches back and forth between memories of a specific trip

to the narrator's grandparents' house and recollections of visits made over several years. It's challenging to







keep all this straight, and *Bigmama's* is ideal for helping young readers slow down and figure things out.

• COMPLEXITY OF NARRATOR – R.J. Palacio's book Wonder uses six different narrators to tell the story of a boy with severe craniofacial disfigurement, and one of them uses idiosyncratic punctuation and no uppercase letters. "It's a useful book, first and foremost as an object lesson in kindness and understanding," say Lemov, Driggs, and Woolway. "But it's also a starter kit for understanding books with complex and potentially confusing narration."

• COMPLEX PLOT AND SYMBOLISM -

Where the Mountain Meets the Moon by Grace Lin weaves fairy tales into the journey-ofdiscovery narrative, with characters telling other characters' stories and characters reacting to fairy tales they hear, which shapes the plot. Mastering this kind of text helps students prepare for challenging narrative structures like those in William Faulkner's novels.

• **RESISTANT TEXTS** – The beginning of Slaughterhouse Five by Kurt Vonnegut uses a highly unconventional style to capture the difficulty of telling a story (the firebombing of Dresden in World War II) that cannot be told simply. "The elements create a thrilling narrative unbounded by traditional rules," say Lemov, Driggs, and Woolway. "But confused readers readers unaware that a text might deliberately try to disorient them, readers who have never struggled with that disorientation - may in fact be confused by the premise, not comprehend that they are not supposed to comprehend, and fail, perhaps even give up on the narrative." Poetry doesn't always conform to our "expectation of logic" - for example, "Jabberwocky" by Lewis Carroll. Close reading and unpacking of short passages of texts like these prepare students for the intense challenges of reading difficult material.

"Selecting Complex Texts with Intention" by Doug Lemov, Colleen Driggs, and Erica Woolway in AMLE Magazine, September 2016 (Vol. 4, #2, p. 36-37), no e-link available; this article is based on the authors' book, Reading Reconsidered: A Practical Guide to Rigorous Literacy (Jossey-Bass, 2016)

On-the-Spot Assessment Tools

In this AMLE Magazine article, Ohio district administrator Bryan Drost recommends eight free digital tools to check for understanding and maximize student involvement:

> Padlet <u>www.padlet.com</u> is a virtual wall on which students can express thoughts on a topic. It's also possible to embed audio and video and have students join a threaded discussion.

> > Recap

https://app.letsrecap.com is a

video-based assessment tool that allows teachers to pose a question, have students respond with a short video

recorded on a cell phone, and then get feedback.

• **Today's Meet** <u>https://todaysmeet.com</u> allows students to engage in live "backchannelling" while a classroom activity or video is taking place.

• Active Prompt <u>http://activeprompt.org</u> allows teachers to upload any image and ask students a question about it; students move a dot on their device to indicate their answer.

• Flubaroo <u>www.flubaroo.com</u> is a plug-in for Google Sheets that allows teachers to quickly score student quizzes.

• Zaption <u>http://zaption.com</u> allows teachers to take already-made videos (like a YouTube clip), publish interactive lessons, and track student understanding.

> Nearpod and Pear Deck <u>www.nearpod.com</u> <u>https://www.peardeck.com</u> allow teachers to embed interactive assessments into a slide deck and get student responses via their cell phones.

• Quizlet Live <u>http://quizlet.live</u> allows students to practice teamwork and communication skills while the teacher checks for understanding.

"8 Digital Formative Assessment Tools to Improve Motivation" by Bryan Drost in *AMLE Magazine*, September 2016 (Vol. 4, #2, p. 42-43); Drost is at <u>drostbr@gmail.com</u>





Getting Students Thinking At Higher Levels

(Originally titled "Start with Higher-Order Thinking")w "Memorizing facts is boring," says consultant/author Susan Brookhart in this article in *Educational Leadership*. "Drill-and-practice is boring. But thinking, for most students most of the time, is actually fun." Brookhart suggests four strategies to engage students in higher-order thinking:

• **Open questions** – Every lesson should have two or three of these to highlight key content and thinking skills. Some examples: Ask students to describe similarities and differences that require analysis and reasoning:

How are 11 and 16 alike? How are they different?

How was the political climate in President Obama's first term like that in his second and how were they different? Another idea: present the work of a fictional student for example, the student's solution to an algebra problem - and have students analyze it and explain how to fix it. Or ask students to make an argument and explain their reasoning _ for

example, Why do you think many people in the U.S. became isolationist right after World War I? "Probably the simplest suggestion for designing open questions is to ask 'Why?' as often as you can," says Brookhart.

• Students to respond to one another -

Wait time is important. *Think time, no hands up*, is a good admonition. "If you don't provide enough wait time, you'll get either no responses or surface-level responses," says Brookhart. Another strategy is having students think/pair/share. In all-class discussions, teachers should resist the temptation to comment themselves, instead asking specific follow-up questions to get other students involved. Or start a whole-class discussion and then have students follow up in groups.

• Students thinking, not just retelling -

All too many student projects are simple regurgitation, says Brookhart – for example, students producing posters showing the natural resources of their state or artistically illustrating one element on the periodic



table. "All students have to do is copy information onto their poster, make it colorful and attractive, and voilá, they have a completed assignment, with no evidence of what they understand about their topic," says Brookhart. The way out of this dynamic is posing a thought-provoking problem – for example, ask students to imagine they are astronauts who have been asked decide which planet they'd like to settle on and why. Students look at all eight planets, choose one, and make the case for the choice and the equipment and other steps needed to live there.

Another approach is asking "what if" and "what else" questions to push students to expand or elaborate on what they're studying – for example, *What might have happened in the 1968 presidential election if the U.S.*

had not been in the Vietnam War? An even more openended question would be to let students choose an election year and develop their own what-if scenarios. In science, rather than a hum-drum project like making a model of the water cycle, ask students, What else would you need to know about a particular region to predict how the water cycle would function there? In math,

students might be asked for other ways to solve the problem, $46 \div 3$ using drawings, counters, or different algorithms.

• Self-assessment – "Students who can selfassess are poised to be life-long learners," says Brookhart. "They are poised to use self-regulation strategies and to be their own best coaches as they learn. They are able to ask focused questions when they don't understand or when they're stuck." She suggests three ways to help students move to this level.

Teach students to self-assess with rubrics. It's important that the rubric goes beyond the basic level and stipulates higher-level criteria like stating a position, defending one's reasoning, using supportive details.

Use confidence ratings. For example, students might be asked to use the "fist of fives" on their chest to indicate how confident they are that they understand a particular term or concept (five fingers means very



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confident, a fist means no confidence, held close to the chest to avoid embarrassment or peer pressure).

Have students co-create success criteria. Studying material with which students are familiar, they can jointly create what the teacher and students will look for in their work. "This higher-order, creative exercise," says Brookhart, "requires students to look at work samples, decide whether they are high or low quality, decide what makes them highquality or low-quality, and describe those characteristics."

"Start with Higher-Order Thinking" by Susan Brookhart in *Educational Leadership*, October 2016 (Vol. 74, #2, p. 10-15), available for purchase at <u>http://bit.ly/2dqECAZ</u>; Brookhart can be reached at <u>susanbrookhart@bresnan.net</u>.

Student Work Analysis to Improve Teaching, Assessment, and Learning

In this article on her website, consultant Karin Hess suggests analyzing student work in three layers: first *describing* the student work we actually see (or what students tell about it); then *interpreting* what the evidence might mean (specific to the intended purpose); and then *evaluating* what next steps should be taken. Hess outlines how the process of analyzing student work can be helpful to teaching and learning:

• Purpose #1: Improving the quality of tasks/prompts and scoring guides – Piloting tasks and looking at student work helps to clarify prompts, make tasks accessible and engaging for all students, trim unnecessary components, modify the wording of scoring rubrics, and tweak questions so they will measure deeper thinking. For example, teachers gave this assessment to kindergarten students: I saw 4 kindergarten students lined up to go outside to play in the snow. Everyone was wearing boots and a hat. How many







boots and hats did I see in all? Show and tell how you know. By jotting down the details of students' individual responses as they completed the task, teachers gained insights on the task and their students' abilities – for example, one student knows how to count to 8 but not how to write an 8.

• Purpose #2: Making key instructional decisions – Observing and taking notes on students' responses to this task gave teachers two specific teaching points. First, the sentence Show and tell how you know was unfamiliar to students. Second, watching students complete the task on paper and listening to their thoughts, teachers were quite surprised that students could do as much as they did with the task, changing adult perceptions of what was possible at this point in the school year.

• Purpose #3: Monitoring progress over time – A good preassessment focuses on the core learning or prerequisite skills that students will need to build on, and teachers can sort and work with students according to what they need to learn to be successful in the unit. Here's how a group of New York City teachers handled a unit on opinion writing with their third graders:

The pre-assessment asked students to write about a favorite or not-so-favorite holiday and give personal reasons to support their opinions.

Looking at students' work, teachers saw that most of them wrote an informational summary about holidays, not an opinion.

Teachers designed lessons that taught the key parts of an opinion piece and how they differ from parts of a summary, also how to locate relevant text evidence to support an opinion.

The post-assessment asked students to read about a shark scientist, examine facts about two different kinds of sharks, and state and support an opinion about which shark they wanted to study.







The post-assessment allowed teachers to track students' progress writing opinions from the preassessment and also measure more-complex skills, including using text-based evidence.

• Purpose #4: Engaging students in peer- and self-assessment – One approach is having students look at two pieces of work by other students side by side and asking them (for example):

What does each student know and understand and where might they improve?

(With two pieces of work done by the same student at different times) What does the student know now that he or she didn't know how to do as well on the first task? What were the areas of improvement?

Which piece of work comes closest to the expectations? What's the evidence?

Students can use assessment evidence to set and monitor progress, reflect on themselves as learners, and evaluate the quality of their own work. "Valuing both one's struggles and successes at accomplishing smaller learning targets over time has proven to have a profound influence on deepening motivation, developing independence as a learner, and building what we have come to know as 'a growth mindset,'" says Hess.

Purpose #5: Better understanding how

learning progresses over time – Many skills, concepts, and misconceptions revealed in student work analysis are not explicitly addressed in curriculum standards. Looking at students' learning trajectories in interim assessments and student work can guide teachers in the next step that students at different levels of progress need to take.

Purpose #6: Building content and *pedagogical expertise* – "Teachers give assignments" and grade them daily," says Hess, "but it is analyzing evidence in student work that causes teachers to reflect on how students learn and how to make their instructional and assessment practices more effective." Teacher teams can establish common understandings of student work quality and measure the effectiveness of their instruction over time. "By the same token," she concludes, "students who engage with rich, strategically-designed tasks on a regular basis learn that finding the answer is not as personally meaningful as knowing how to apply knowledge in new situations and explain the reasoning that supports their thinking."

"Student Work to D-I-E For" by Karin Hess, *Educational Research in Action*, Winter 2016, <u>http://media.wix.com/ugd/5e86bd_0f9ffd8bf4a24aaf8</u> 7371d9d1bc586cc.pdf

The purpose of feedback in the learning process is to improve a student's performance- definitely not put a damper on it. The ultimate goal of feedback is to provide students with an "I can do this" attitude.

Laura Reynolds from

Giving Students Feedback: 20 Ways To Do It Right



