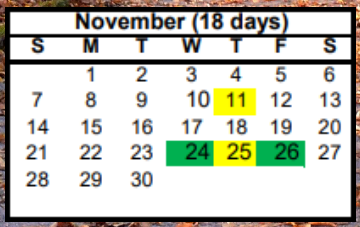
November 2021

Dennis-Yarmouth Regional School District
Office of Instruction

NOVEMBER 2021 EVENTS & HOLIDAYS

November 7 - Daylight Savings Ends
November 8 - DYH, Quarter 1 Ends
November 11 - Veterans Day No School
November 24 - No School
November 25 - Thanksgiving No School
November 26 - No School



November (18 days)						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30				

WHAT'S INSIDE

Giving Feedback That Isn't Consigned to the Bottom of the Backpack

"Feedback in Practice: Research for Teachers" by Bowman Dickson and Andy Housiaux, Tang Institute at Andover, August 2021; Housiaux can be reached at ahousiaux@andover.edu.

In this Tang Institute article, Bowman Dickson and Andy Housiaux describe every teacher's least-favorite scenario: after spending hours reading students' papers, correcting errors, and writing comments, students glance briefly at the grade, compare what they got with a few classmates, and
continue to make the same mistakes on the next assignment. "It doesn't have to be this way," say Dickson and Housiaux, and provide a synthesis of the academic research on feedback that actually works. They start with Grant Wiggins's definition: Feedback is information about how we are doing that guides our efforts to reach a goal. "It can come from others, oneself, or even the task itself," say Dickson and Housiaux. "It aims to improve subsequent efforts and not just correct work that has already been done." They give several examples of feedback containing evaluation, advice, and praise, each followed by teacher feedback that's far more likely to improve students' work:

- Ineffective: B+ You still need to master exponent rules.
- Better: You are confusing the two main exponent rules – when multiplying two bases you need to add the exponent, not multiply. Practice a few of these types of problems for the next homework assignment.
- Ineffective: Make sure your main idea paragraph relates to your topic.
- Better: Your first sentence is about therapy dogs, but the rest of your paragraph talks about what dogs eat and where dogs sleep. Look at the examples of effective writing on your handout and then rewrite the paragraph.
- Ineffective: Wow! Your lab report is really nicely done.
- Better: You explained your results with good scientific nuance, your methods section is appropriately detailed, and your data presentation is just as polished as the sample lab reports.

"Feedback that is delivered effectively," say Dickson and Housiaux, "will advance student learning in ways that even the most well-intentioned evaluation, advice, and praise simply cannot." They boil down the research on effective feedback to four big ideas:

• Big idea #1: Students must engage with feedback in order to learn from it. "Feedback should cause thinking," says British assessment guru Dylan Wiliam. "Feedback should be more work for the recipient than the donor." This means reserving classroom time for students to process the teacher's comments (often posed as questions or hints) and engage with a brief follow-up task – which might be correcting an error or writing about what they learned from the comments, what they did well, and what they will do differently next time. Students need to learn how to be "feedback seekers," looking for it, taking it in, and following up.

Giving Feedback That Isn't Consigned to the Bottom of the Backpack (Cont.)

• Big idea #2: Relationships matter. Establishing trust is an essential precursor; then the teacher can be a "warm demander," setting high expectations and conveying feedback with growth-mindset language that speaks to students' work, not their identity. Without a trusting relationship, teachers' power position, along with their gender, race, or other characteristics, can trigger stereotype threat in students. "Don't withhold criticism or overpraise mediocre work," say Dickson and Housiaux. And create a classroom culture in which mistakes are seen as an important part of learning.

• Big idea #3: Focus on specific instructional goals. "If students do not understand where they are aiming, they will not be able to make sense of the feedback they receive on their performance," say Dickson and Housiaux. That's why it's vital to be transparent about learning outcomes and assessment criteria, and provide exemplars of student work at different levels of proficiency. The teacher's goal is to build skills and habits of mind that will help students think differently and get better. "Feedback should change the way students think and engage with future material," say the authors, "instead of just fixing mistakes on past work." To that end, less is more; feedback should target only a few key areas.

• Big idea #4: Separate feedback from grading. Giving grades is a requirement in almost all schools, but teachers should be under no illusions that grades improve performance. The challenge is getting students less focused on grades and more on continuous improvement. "Teachers can encourage students to focus more on the feedback they receive by spending time explaining the difference between feedback and grades," say Dickson and Housiaux, "and then showing the ways in which students can improve by attending carefully to the teacher's feedback." Teachers also need to nudge students toward autonomy and independence, providing opportunities for and instruction in self-assessment and peer feedback versus constant dependence on teachers.

At the end of their paper, Dickson and Housiaux include six case studies showing how these big ideas play out in classrooms – a student demanding to know why a classmate got a better grade; students not improving despite copious written feedback on their work; a teacher's comment taken the wrong way by a student; a student not doing homework and failing to ask for help. Each case is followed by focusing questions on what might change a frustrating situation.

What Rigor Looks Like in an Equitable Classroom

"It's Time to Cancel the Word 'Rigor'" by Jordynn Jack and Viji Sathy in The Chronicle of Higher Education, October 15, 2021 (Vol. 68, #4, pp. 46-47); the authors can be reached at jjack@email.unc.edu and viji.sathy@unc.edu.

In this Chronicle of Higher Education article with implications for K-12, Jordynn Jack and Viji Sathy (University of North Carolina/Chapel Hill) say they're troubled by the way "rigor" is interpreted by some instructors:

- It's students' responsibility to show grit and do the deep analysis and thinking.
- Otherwise, how will students succeed in the real world?
- Providing too much structure and hand-holding sells students short.
- It amounts to lowering standards and watering down the curriculum.
- If too many students are getting high grades, the class isn't rigorous.
- Weed out students who aren't up to par.

"We're not in that camp," say Jack and Sathy. These beliefs, they assert, "privilege students who already have high academic literacy or who are already adept at managing higher education's unofficial rules, routines, and structures – also known as the hidden curriculum." The result is that struggling students feel blamed, that they don't belong.

So how can teachers maintain high standards and prepare students for future success? Jack and Sathy have three suggestions:

• Build plenty of structure into assignments. That means making sure students are clear about what's expected – with an English assignment, for example, specifying the assignment's genre, audience, purpose, and success criteria. "Showing students the process – the nuts and bolts of how to do the assignment – is not doing the work for them," say Jack and Sathy. "In fact, you may well be asking students to do more, not less."

• Develop a fair grading structure. Grading on a curve (for example, only the top five percent of students get an A) creates competition for high grades and communicates exclusion. Who is most likely to succeed? ask Jack and Sathy. "Students who already do well on high-stakes tests, who have tutors, who've had test-preparation training, who have time to form a study group or who are able to complete all the practice problems because they don't have work or caregiving responsibilities." Competitive grading can be profoundly discouraging for some students and even derail their desire to pursue a major or a career.

• Commit to inclusive teaching. For starters, Jack and Sathy suggest that we stop using the word rigor, which too often conveys the idea that some students don't belong. Instructors' mission should be to work with all students and "invite them in." Some specific actions:

- Clearly communicate high standards and learning expectations.
- Convey the belief that all students will be successful.
- Design lessons that get all students actively engaged, including collaborative work.
- Frequently assign low-stakes tasks that allow students to put concepts and skills to work.
- Promptly give formative feedback.
- Grade students' work on mastery of learning objectives, not on a curve.

Universal Design for Learning in Math Classes

"The Magic Is in the Margins: UDL Math" by Rachel Lambert in Mathematics Teacher: Learning & Teaching PK-12, September 2021 (Vol. 114, #9, pp. 660-669); Lambert can be reached at rlambert@ucsb.edu.

In this article in Mathematics Teacher: Learning & Teaching PK-12, Richard Lambert (University of California/Santa Barbara) describes three math lessons in which teachers used UDL with inclusive groups of students:

• A kindergarten class gathers on the rug as students prepare to measure a sensory path they are designing in the hallway outside their classroom. After discussing measuring tools and how to be a supportive partner, students team up, gather sets of connecting cubes, and get to work. As they count and measure, the teacher circulates, reteaching and clarifying. Before long a student notices that his group's measurement isn't the same as another group's, and the teacher leads a mini-lesson on accuracy in measurement.

• A fifth-grade class is asked to figure out how a family of eight can share six large burritos in a fair and equitable manner. The teacher gives students a moment to think and then lets them choose whether to work in a small group, with a partner, or independently. Students work with manipulatives and supplies, and when they're finished, they gather and share their strategies with the whole class. The teacher names each strategy and helps students troubleshoot their solutions.

• A ninth-grade class continues its multi-day exploration of functions as two quantities with a relationship. Some students graph data from a video of their classmates throwing balled-up paper into a trashcan. Others graph problems on the online program Desmos. The teacher works with a smaller group doing a paper-and-pencil graph of a function. Near the end of the lesson, the teacher calls the class together, reminds them of the big idea of the day (Functions have multiple representations), and asks, "How did that idea emerge in your work today?" Several students respond, and the class wraps up with students doing a self-evaluation of their work.

The key element in each class was that the teacher's lesson plan made learning accessible to a wide range of students, including those with disabilities. "Learners vary in how well they see, hear, and move," says Lambert. "They vary in how well they can remember mathematical facts and their ways of paying attention. Learners vary in their emotional response to mathematics." The key insight of UDL, he says, is that by planning skillfully around the needs of students with learning differences, teachers can meet the needs of the whole class.

UDL lessons are built on empathy for students' experiences, says Lambert, with the aim of all students succeeding and becoming expert, strategic, and lifelong learners. He recommends conducting "empathy interviews" to better understand what makes students tick and identify barriers to their accessing learning. Lesson design especially benefits from an understanding of marginalized students – understanding issues around disability, race, gender, language, and other social positionings. "If we as teachers can learn more about the experience of students who are at the margins," he says, "we can leverage that knowledge to design across differences."

Universal Design for Learning in Math Classes (Cont.)

The researchers who developed the UDL framework proposed that lessons should be designed to target three domains:

• The why of learning – Presenting lessons so learners get engaged and stay challenged, excited, interested, and motivated; key elements:

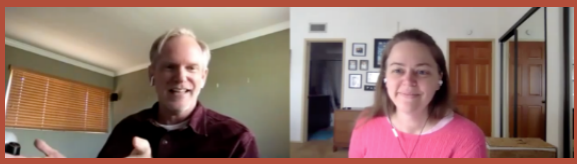
A supportive classroom environment: Do students feel safe enough to take risks? (This means deemphasizing speed and accuracy.) Are students building relationships in and through math?
Meaningful mathematics: Is the math relevant, engaging, and culturally responsive? Do students regularly work in groups and engage in sense-making?

• The what of learning – Presenting information and content in different ways because students differ in how they gather facts and categorize what they see, hear, and read; key elements:
Focusing on core ideas: Do unit and lesson plans guide students to understand and remember fundamental math ideas?
Multimodal: Is math content accessible? Can students choose how they solve problems?

• The how of learning – Differentiating the way students show what they have learned; key elements:
Equitable feedback: Does feedback help students grow as mathematicians? Is assessment appropriate for all learners?
Understanding oneself as a mathematics learner: What do students learn about themselves as math learners? How do lessons support that development?

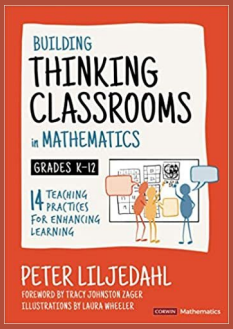
The Sum of It All

#SumMathChat



Join Audrey Mendivil and Mark Alcorn in an asynchronous book club for teachers and leaders. Read along with them by either previewing or reviewing a chapter of the selected book in the podcast and continue the conversation on Twitter using #SumMathChat or email them at sumofitallpodcast@sdcoe.net

A thinking student is an engaged student Teachers often find it difficult to implement lessons that help students go beyond rote memorization and repetitive calculations. In fact, institutional norms and habits that permeate all classrooms can actually be enabling “non-thinking” student behavior. Sparked by observing teachers struggle to implement rich mathematics tasks to engage students in deep thinking, Peter Liljedahl has translated his 15 years of research into this practical guide on how to move toward a thinking classroom. Building Thinking Classrooms in Mathematics, Grades K–12 helps teachers implement 14 optimal practices for thinking that create an ideal setting for deep mathematics learning to occur.



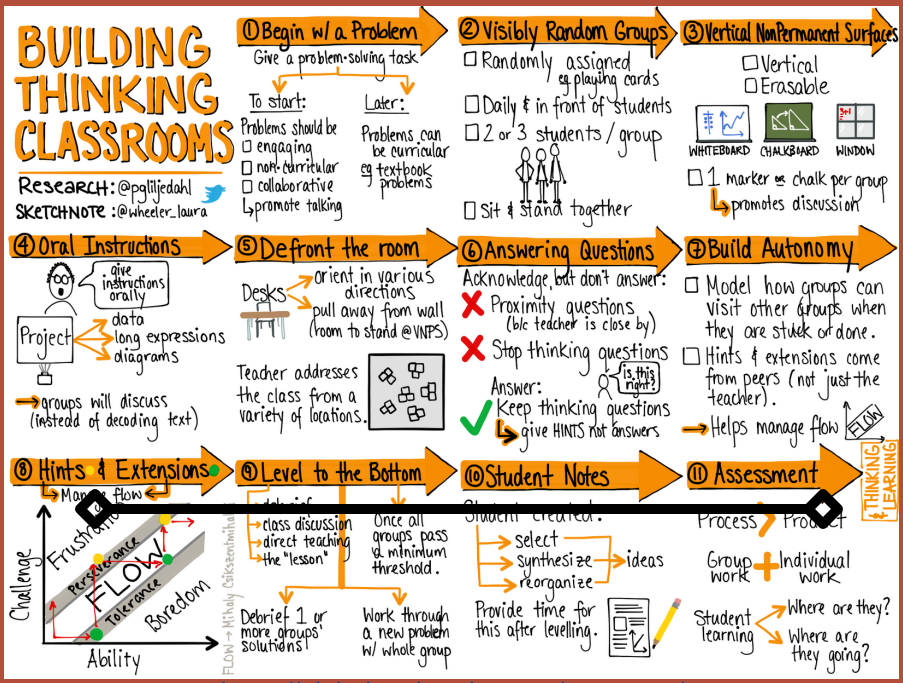
This Guide:

- Provides the what, why, and how of each practice and answers teachers’ most frequently asked questions
- Includes firsthand accounts of how these practices foster thinking through teacher and student interviews and student work samples
- Offers a plethora of macro moves, micro moves, and rich tasks to get started
- Organizes the 14 practices into four toolkits that can be implemented in order and built on throughout the year

When combined, these unique research-based practices create the optimal conditions for learner-centered, student-owned deep mathematical thinking and learning, and have the power to transform mathematics classrooms like never before.

https://us.corwin.com/en-us/nam/building-thinking-classrooms-in-mathematics-grades-k-12/book268862

HOW IT WORKS



https://globalmathproject.org/programs/

https://youtu.be/tPuAxPWcT0A

Stem week photos:

Our high school students took part in a global research study on the prevalence of antibiotic resistance in the environment. We have partnered with Tufts University on this exciting endeavor.