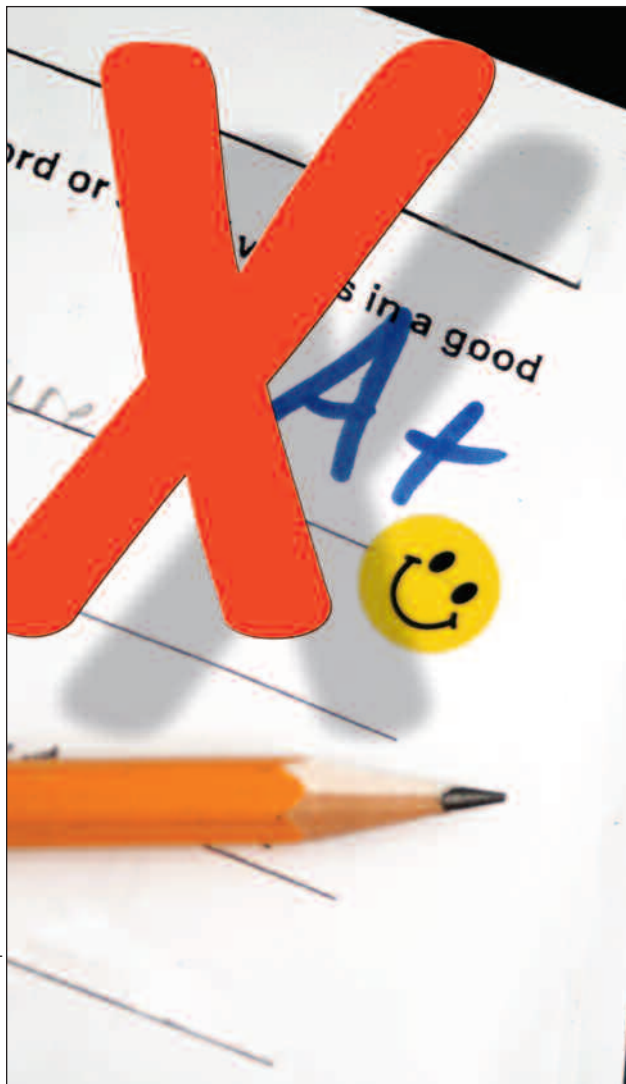


Eight Steps to Meaningful Grading

Moving from traditional grading to standards-based grading improves student learning in one Michigan middle school.

By Heather Deddeh, Erin Main, and Sharon Ratzlaff Fulkerson



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prac•tice [prak-tis] noun, verb, -ticed, -tic•ing.
repeated performance or systematic exercise
for the purpose of acquiring skill or proficiency:
Practice makes perfect.

If you ask any athlete to define practice, they may not be able to tell you the exact dictionary definition, but they certainly know that practice is critical for learning and improving skills. A softball pitcher may practice her riseball for months to achieve accuracy and consistency, hoping to make an unsuspecting batter swing underneath it. During practice, it doesn't matter how often the riseball flew over the catcher's head, was out of the strike zone, or ended up in the dirt. With continual feedback from her catcher and coach and focus on the outcome, eventually she'll master the skill and have a new tool to spring on batters. Acquiring the skill of a killer riseball is what ultimately matters. The amount of hours that it took this pitcher to perfect her craft is irrelevant as long as she's ready when the situation presents itself at game time.

What seems so logical and implicit in the athletic and performance arena is often foreign in schools, which should provide opportunities for students to practice and perfect new skills. Teachers often weigh practice and performance equally. For example, a student may earn a C on homework assignments and an A on the test. What final grade would this student earn? Many teachers would say a B, an average of the two, equally weighting practice and performance. Can you imagine this same reasoning being applied to the performers in a Broadway play? It would equate to an actress receiving a less than favorable review because she forgot

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some lines in rehearsal even though she was brilliant in the live performance.

Analogies similar to these, posed by Ken O'Connor in his book *How to Grade for Learning*, prompted us — three middle school science teachers in Michigan's Walled Lake Consolidated School District —

A performance or a game is where athletes or performers are evaluated, judged, and scored. The same logic holds true for learning. Every student should have the opportunity to practice without penalty.

to question our grading practices. O'Connor's book helped us clarify the true purpose of a grade and explained key differences between traditional and standards-based grading practices. After months of reading and discussing, we began to wonder whether we had spent all of these years grading haphazardly? As we moved through his book, we felt as if we were crossing a bridge that was exploding behind us, leaving us with no way to return and no clear path ahead. We were motivated to make the changes necessary to implement more sound grading practices in our classrooms. Now, four years into using standards-based grading, the number of teachers in our building who use this grading practice or portions of it has tripled, and we are convinced that it is improving student learning.

WHAT'S THE DIFFERENCE?

A key difference between traditional grading practices and standards-based grading practices is that standards-based grading communicates only content mastery. Traditional grading practices often lead to "grade fog," in which the level of content mastery is distorted by such nonstandards-based criteria as practice, neatness, organization, attendance,

and behavior. Megan, a 7th grader, said, "I have an 'A' in my science class this year, and it is not because of extra credit, participation, and homework. It is because of my understanding of science." Grades earned in traditional grading systems are usually based on a combination of formative and summative assessments. With standards-based grading, grades are based solely on summative assessments designed to measure content mastery.

A grade is designed to communicate student achievement. Comparing three students' final grades using standards-based and traditional grading shows the discrepancy between understanding content and the final grade (see Figure 1). Including classwork as part of the final grade can misrepresent the student's true level of content mastery. "I feel like [standards-based grading] is helping me report an accurate picture of the students' understanding. When conferencing with kids and parents, I can say confidently that the student knows a certain amount of the content, and I can also report what content the students mastered or did not master," said Kim Walter, a math teacher at Clifford Smart Middle School in Walled Lake.

When we were ready to switch to standards-based grading, we found a lot of information and research on the topic. But what we really needed was a step-by-step instruction manual. After four years of creating and refining our own structure, we've identified eight steps that we believe would help other teachers navigate the transition from traditional grading to standards-based grading.

Step #1. Educate yourself. Learn more about standards-based grading practices. Teachers who aren't already familiar with standards-based grading practices may want to begin by reading Ken O'Connor's *How to Grade for Learning* (Corwin Press, 2002) or Rick Wormeli's *Fair Isn't Always Equal* (Stenhouse, 2006). O'Connor's book helped us identify three core beliefs:

FIG. 1.
Final Grades Comparing Traditional and Standards-Based Grading Systems

| Student | Grades by Category | | | Traditional Grading | Standards-Based Grading |
|---------|--------------------|----------|------------------------|--|---|
| | Classwork | Tests | Standardized Unit Test | Classwork 50% Tests 25% Standardized Unit Test 25% | Classwork 0% Tests 50% Standardized Unit Test 50% |
| 1 | 100% = A | 75% = C | 85% = B | 90% = A- | 80% = B- |
| 2 | 40% = E | 85% = B | 95% = A | 65% = D | 90% = A- |
| 3 | 98% = A | 79% = C+ | 91% = A- | 92% = A- | 83% = B |

- A grade should communicate mastery of learning standards.
- Homework is essential for learning but should not be included in the grade.
- Learning may take more than one attempt.

Step #2. Don't journey into unfamiliar water alone.

We were lucky enough to have colleagues working at the same grade level and teaching the same subjects who were all passionate about changing grading practices. Partner with someone in your subject area and grade level so that you can share the work. If that's not possible, find someone like-minded and supportive who will take on this task with you. If standards-based grading practices are new to your school, educating and involving your administrators, counselors, and support staff is essential. They're an important link in the home-school connection. They'll need to be able to clearly and accurately communicate the new grading philosophies and practices. You may be entering uncharted waters and will need to be granted some flexibility as you transition. This is a huge change. Doing it alone is possible, but it will take longer and keep you up later into the night.

Step #3. Chart a course. In Walled Lake, grade-level units are carefully aligned with Michigan's learning standards. Every middle school student is assessed on each unit using a standardized test. Because this system was already in place, our next step was to organize each unit into logical, assessable groups of content standards instead of the traditional chapter-by-chapter method. If your district has not done this, you can start by examining your grade-level learning standards and sorting them into your teaching units.

Since most textbooks were not written according to your state's grade-level learning standards, the text may cover more than you need to teach in some areas yet require supplemental materials in others. Determine a logical flow of content. You want your grades to communicate the mastery of specific learning standards. Therefore, you'll need to assess the mastery of each standard individually or with corresponding standards. For example, each of our units assesses students on about 12 content standards. We divide the unit into smaller sections, with two to four similar standards (see Figure 2). This allows us to assess learning, communicate mastery, and reteach when necessary. We plan with the end in mind to ensure that we cover all necessary standards.

Step #4. Organize instruction. Following a pattern of instruction for each unit is easier than re-creating it each time. If your lesson plans follow a pattern, you'll have a well-organized and easy-to-

FIG. 2.
Sample Unit Section Showing the Specific, Related Standards Being Taught and Tested

Name _____ Test Date _____

Weather & Atmosphere
Content Standards #10 & #11

-
- # 10 B9.4c Examine the negative impact of human activities.
 - # 11 E2.4c Explain ozone depletion in the stratosphere and methods to slow human activities to reduce ozone depletion.
-

Learning Goals — Student “I can . . .” Statements

- Identify environmental effects of burning fossil fuels.
 - Explain the importance of the ozone layer to life on Earth.
 - Identify negative impacts as a result of increased UV exposure.
 - Explain how CFCs destroy ozone.
 - Identify products that contain CFCs.
-

Vocabulary

Fossil fuels, acid rain, global warming, chlorofluorocarbons, ozone layer, ultraviolet radiation

Pages to read

Chapter 4, pages 96-115

Ozone Layer

The ozone layer is found in the _____ layer in the atmosphere. Ozone molecules are made from 3 _____ atoms bonded together. The ozone layer is important to life on Earth because it protects us from harmful _____.

Draw an ozone molecule

replicate system. You probably already have a structure in place. Use it!

Step #5. Practice comes first. Athletes and performers understand the need for practice. Practice is the time to learn a new skill, make mistakes, fine-tune or perfect new techniques, take risks, and receive feedback, with the goal to continually improve. A performance or a game is where athletes or performers are evaluated, judged, and scored. The same logic holds true for learning. Every student should have the opportunity to practice without penalty.

Classify each assignment as formative or summative. Think of formative assignments, or any assignment that helps the student learn new material, as practice. Summative assignments are measurement tools used at the end of learning a new skill or concept. They assess the student's level of comprehension.

At this point, you must evaluate each assignment and decide if it's helping students learn new material

or measuring their mastery of content standards. For example, homework and classwork assignments, note taking, and practice worksheets are all formative. When the students have had ample opportunities to practice and master the material, then they're ready for summative assessments.

Students can take risks during formative assessments and find the value of learning from mistakes, again, without penalty. As a result, we've found that students develop self-awareness and maturity in their learning.

Once you identify formative assessments, create a category in your grade book to record those results. Ideally, your category would be called *Formative Assessments*, but if your grading program doesn't allow for this, you can use *Homework*, *Classwork*, or *Practice*. A crucial element in standards-based grading is that formative assessments are weighted at zero percent: practice without penalties. Teacher Kim Walter commented, "It takes a while for kids and parents to understand why the homework 'doesn't count.' I reinforce over and over again to both kids and parents that the homework 'counts,' but it's just not weighted into their grade. The homework is practice, and students should not be penalized if they didn't master the content of the homework each night. Their understanding is a work in progress, and homework is part of helping students form knowledge, not a time for them to be formally assessed."

There's a common misconception that students won't complete assignments if they know the assignments won't affect the overall grade. With few exceptions, we've found the opposite to be true. Students become internally driven to learn the material rather than externally motivated by a homework grade. "Kids still do their homework with [standards-based grading], but it doesn't just allow mistakes to be made, it allows you to learn from them," said one 7th grader. As with traditional grading practices, teach-

ers will still have students who don't turn in homework assignments and teachers will still have to stay on top of them just as they have in the past.

Students need to know where they are with their understanding of a concept at any given time. To communicate this, we used a five-point formative grading scale as a tool for students and parents.

5/+ (90%-100%) indicates that a student understands the concept.

4/✓ (70%-89%) represents basic understanding with a few errors.

3/- (50%-69%) represents major errors in understanding a concept.

We rarely use a 2 or a 1, but these would reflect assignment completion with little to no mastery of content. We use a 0 to communicate missing assignments, an incomplete assignment, or no mastery of content. These zeros are clarified with additional comments. Students with a 3 or below are expected to complete more practice until mastery is achieved. Figure 3 shows how we communicate this information to students and parents.

Step #6. Evaluate the performance. One change we had to make in creating summative assessments was eliminating extraneous items that weren't standards-based, such as giving value for participation, neatness, and even extra credit (these are not part of Walled Lake's science curriculum). If it's not a standard, it doesn't belong on a summative assessment. Amy Jo Kositzke, an 8th-grade teacher, said, "I had a professor in college ask, 'If you are marking down because they did math in pen, are you assessing what they know?' This always stayed with me."

Standards are measured for each individual student, so we don't use group grades and group work, because neither of those gives us an accurate measurement of individual student achievement. There is

FIG. 3.
Sample Five-Point Grading Scale

| Formative assignment grading scale | + | ✓ | — | 0 |
|---------------------------------------|---|---|---|--|
| Percentage | 100-90% | 89-70% | 69-50% | 49-0% |
| Grade | 5 | 4 | 3 | 0 |
| What does this mean in student terms? | "Got it" Use it so you don't lose it! | "Getting it" Keep practicing. | "Not yet" Ask for help. Try again by completing alternative assignment. | "Not enough info" Anything incomplete. Try again by completing alternative assignment. |

a time and place for group activities — and we incorporate those into our instruction — but they should not be evaluated as a measure of individual learning.

Summative assessments will total 100% of a student's grade — formative assessments are not counted at all in the student's grade. Use one category or multiple categories to make up the total. In our system, each student's final grade reflects 50% from individual standards assessments and 50% from cumulative unit assessments. Another way to do this would be to use a point system for tests, but each test should have the same value because each standard is equally important. Using a percent scale eliminates this issue.

Step #7. Give second chances. Many teachers say they believe in the old adage, “If at first you don't succeed, try, try, again,” but that is not reflected in routine teaching strategy. Here is what often happens: A teacher assigns homework on Monday, a student turns it in on Tuesday and earns an E, but the teacher moves on to Tuesday's lesson. Students end up focusing on the grade instead of the learning that still needs to occur.

We recognized that this wasn't working for many students and that it didn't match our third core belief of “learning may take more than one attempt.” We had to figure out how to provide more practice. We decided multiple practices without penalty would be an essential addition in our new approach to grading. Now, when we pass out a practice assignment on Monday, students correct their papers as we go over the assignment as a class on Tuesday and use this as a reteaching opportunity for students who may not have understood the concept on the first attempt. Students who didn't receive a plus or a check on the first attempt have a second opportunity to learn and practice the material. On Wednesday, these students turn in their *alternative* assignment and are reevaluated on their understanding of the concept. This *alternative* score now replaces the original score, for better or worse. Students who are still struggling to grasp a concept after two attempts benefit from a one-on-one conference. This also helps focus the student on the importance of learning, instead of the grade.

These steps ensure that every student has had enough opportunities to practice before the summative assessment. Seventh-grader Parker stated, “Alternatives increase my understanding because sometimes I do not understand the material the first time, but when I do it again, I understand much better.”

Despite our greatest teaching efforts, some students still won't master the concepts by the first test. In keeping with our belief that learning sometimes takes multiple attempts, we offer students retesting opportunities. At first, this was an overwhelming

and often ineffective process; we had dozens of willing yet unprepared students showing up to retest. To make the process more effective, students now must first show mastery on all formative assessments before retesting and must complete a retest practice assignment to show that they're ready for the retest. Our team retests on a regular schedule during Tuesday and Thursday lunch periods. Other teachers may decide to offer retesting during regular class periods. Setting aside a dedicated retesting time reinforces the importance of learning.

Grades earned in traditional grading systems are usually based on a combination of formative and summative assessments. With standards-based grading, grades are based solely on summative assessments designed to measure content mastery.

Retests are a second version of the initial test. We assess students on the same content but use different questions. For example, a vocabulary retest can be as simple as rearranging the matching list. Test banks are great for creating retests. Once a student retests, the new score replaces the original score. This supports the philosophy that the student's grade communicates the most current level of content mastery. “I love this, [my teacher] uses the grade I got when I finally understand the material,” wrote Rebecca, a 7th grader.

This process does not continue forever. There should be a natural end to the retesting window. Ours is the end of the marking period. Our belief is that if a student needs additional retests, they can continue to retest as long as they're showing effort and progress. Our reality is that there is often only time for one retest.

Step #8. Keep records. The single-columned grade book won't accommodate practice, alternatives, tests, and retests. We wanted to be able to see the multiple attempts instead of just replacing them. For example, a student first earned a minus on a practice assignment, but on the alternative he earned a plus. Being able to see multiple attempts is a valuable piece of information when discussing individual strengths and weakness and predicting test readiness. This also helps us assess class readiness for a summative assessment. We have created a way to record multiple attempts with a customized grade sheet and in our computer-grading program.

Our customized grade sheet has three columns for each assignment. This provides space to record three attempts if necessary for each assignment. We record any unsuccessful attempts at understanding

FIG. 4. Sample Grade Book

| Science 1st Hour | Content Standard #1: Distance, Displacement, Speed, and Acceleration | | | | | | | | | | | | | | | | | Retesting Privilege? Summative | Vocab Test | | | Test | | | | | | | | | | | | | |
|---------------------|--|---|---|--|---|---|------------------------------|---|---|------------------------|---|---|-------------------------|--|---|-------------------------------|---|-----------------------------------|--------------------------------|---|---|---------------------------|---|---|-------------|--|----|-------------|----|---|----|----|----|----|----|
| | Distance & Displacement Practice | | | Measuring Distance & Displacement Practice | | | Distance & Displacement Quiz | | | Speed Formula Practice | | | Speed Graphing Practice | | | Acceleration Formula Practice | | | Acceleration Graphing Practice | | | Speed & Acceleration Quiz | | | Points: 10 | | | Points: 30 | | | | | | | |
| | Points: 5 | | | Points: 5 | | | Points: 5 | | | Points: 5 | | | Points: 5 | | | Points: 5 | | | Points: 5 | | | Points: 10 | | | Points: 30 | | | | | | | | | | |
| | Date:10/2 | | | Date:10/3 | | | Date:10/4 | | | Date:10/5 | | | Date:10/8 | | | Date:10/9 | | | Date:10/10 | | | Date:10/11 | | | Date: 10/14 | | | Date: 10/15 | | | | | | | |
| Student 1 | | | + | | | ✓ | | | + | | | ✓ | | | + | | | + | | | + | | | | | | | | | | | 10 | | | 30 |
| Student 2 | | 0 | ✓ | - | | ✓ | - | | ✓ | 0 | - | ✓ | - | | ✓ | 0 | | ✓ | - | | ✓ | - | | ✓ | | | 5 | 6 | 10 | | 20 | | 26 | | |
| Student 3 | | - | + | - | | ✓ | | | + | | | ✓ | | | + | - | - | ✓ | | | ✓ | | | ✓ | | | no | | | | 8 | | | 25 | |
| Student 4 | | | + | | | + | | | + | | | + | | | + | | | + | | | ✓ | | | ✓ | | | | | | | 10 | | | 28 | |
| Student 5 | | 0 | - | ✓ | 0 | | ✓ | 0 | | + | | | + | | | ✓ | | | ✓ | - | | ✓ | - | | ✓ | | | 6 | | 8 | 21 | | 24 | | |

the material in the first two columns and mastery scores in the third column. If mastery occurs on the first attempt, we put the score in the third column. If the student does not achieve mastery on the first attempt, their score is recorded in the first column. This allows space for two more alternative scores. Once the student has achieved mastery, this score is recorded in the third column (Figure 4). This format works for both formative and summative assessments. We dedicate a separate grade sheet for each learning standard or group of standards. This allows us to see progress leading up to the summative assessment for that learning standard. "The [standards-based grading] has helped me maintain a good grade, because if I mess up on a [formative] assignment, it is not counted against me. I just have to do it again until I get it right," said Adam, a 7th grader.

Because we had less control over our computer grading program, we had to find creative ways to communicate progress. Our grading program limits us to one score per assignment or assessment. We wanted to communicate multiple attempts to parents. We use the comment field under each assessment to show these multiple attempts. For example, the score might say 5 (+), but the comment says, "Alternative Completed." This tells the parent that mastery was achieved on a second or third attempt. We use a similar format for retesting. If the student doesn't show mastery on the first attempt, we use the comment "not mastered" or "retest recommended." Once the student has mastered this assessment, we use the comment "retested." We always hope students will take advantage of retest opportunities. At any given point in time, however, we're confident that our grades reflect the level of mastery for each student.

REVISITING OUR THREE CORE BELIEFS

A grade should communicate mastery of learning standards. When we began transitioning from a tra-

ditional grading practice to standards-based grading, we did not realize the complexities of a grade. The long hours we've invested in this have been exhausting and frustrating, yet energizing and eye-opening. We have never considered returning to our outdated grading practices. To be certain that making this switch was actually an improvement, we compared grades with test scores. We learned that, when traditional grading was used, students earning a C in class had standardized unit test scores ranging from 47% to 94%. After switching to standards-based grading, students earning a C in class have standardized unit test scores ranging only from 63% to 78%. This supports our belief that our grades now clearly communicate to parents and students exactly what the student has learned.

Second, homework is essential for learning but should not be included in the grade. Sometimes, kids just say it best, "I think that [standards-based grading] has helped my grade tremendously, because when you practice, if you don't understand what you are learning, it is not counted against you and it gives you more time to learn what needs to be learned," said Kevin, a 7th grader.

Finally, learning may take more than one attempt. This tends to be one of the largest deterrents for teachers contemplating the change to standards-based grading. The time and effort to create alternative assignments and retests and finding time to retest students is cumbersome, but it's been worth the effort. We believe it's important to do whatever it takes to give students the opportunity to be successful while learning the material.

We know we've made a positive difference when a 7th grader makes the following comment about our grading practices: "I find that I am more prepared for tests because I don't have to worry about getting a good grade; I have to worry about learning and understanding the material, and good grades will follow." ◀

File Name and Bibliographic Information

k1004ded.pdf

Heather Deddeh, Erin Main, and Sharon Ratzlaff Fulkerson, Eight Steps to Meaningful Grading, Phi Delta Kappan, Vol. 91, No. 7, April 2010, pp. 53-58.

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