Changing Assessment and Grading: Why and How

Albemarle County Public Schools
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Presented by
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What Do These Terms Mean?

**MARK(S)/SCORE(S) (marking/scoring)**

the number (or letter) "score" given to any student test or performance

<table>
<thead>
<tr>
<th>Score</th>
<th>Mark</th>
<th>Grade</th>
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</thead>
<tbody>
<tr>
<td>7</td>
<td>4</td>
<td>E</td>
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<tr>
<td>10</td>
<td>3</td>
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<tr>
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<td>1</td>
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</tbody>
</table>

**GRADE(S) (grading)**

the number (or letter) reported at the end of a period of time as a summary statement of student performance

<table>
<thead>
<tr>
<th>Score</th>
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<tbody>
<tr>
<td>91</td>
<td>A</td>
</tr>
<tr>
<td>78</td>
<td>B</td>
</tr>
<tr>
<td>64</td>
<td>C</td>
</tr>
<tr>
<td>57</td>
<td>D</td>
</tr>
<tr>
<td>42</td>
<td>F</td>
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</table>
“Why . . . Would anyone want to change current grading practices?

The answer is quite simple: grades are so imprecise that they are almost meaningless.”

Marzano, R. J., Transforming Classroom Grading, ASCD, Alexandria, VA, 2000, 1
“. . . (grading) practices are not the result of careful thought or sound evidence, . . . rather, they are used because teachers experienced these practices as students and, having little training or experience with other options, continue their use.”


Result - inaccurate and inconsistent grading practices.
What has changed since you were in high school?
For example, does your dentist use the same equipment as when you were in high school?

For those in employment, what has changed in your job?

For parents, what has changed about parenting since you were being parented?
1995 Gradebook for a High School Science Course.

<table>
<thead>
<tr>
<th>Task</th>
<th>Score/total possible</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Tests (50%)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symbols</td>
<td>16/20</td>
<td>80</td>
</tr>
<tr>
<td>Matter</td>
<td>0/68 (absent)</td>
<td>0</td>
</tr>
<tr>
<td>Reactions</td>
<td>35/50</td>
<td>70</td>
</tr>
<tr>
<td><strong>Daily Work (25%)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assignment</td>
<td>10/10</td>
<td>100</td>
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<tr>
<td>Homework</td>
<td>9/10</td>
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<tr>
<td>Atom quiz</td>
<td>9/10</td>
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<td>Moles quiz</td>
<td>5/8</td>
<td>62.5</td>
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<td>Superation</td>
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Grade 68.8%

# 2021 Science Standards-based Gradebook

## Student:

<table>
<thead>
<tr>
<th>Standards</th>
<th>Assessments</th>
<th>Strengths, Areas for Improvement/Observations</th>
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</thead>
<tbody>
<tr>
<td>Structure and Properties of Matter (HS-PS1-2)</td>
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<tr>
<td>Explaining Reaction Rates (HS-PS1-5)</td>
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<td>Properties and Periodicity (HS-PS1-1)</td>
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<tr>
<td>Chemical Systems and Equilibrium (HS-PS1-6)</td>
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<tr>
<td>Mole Calculations (HS-PS1-7)</td>
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<td>4</td>
</tr>
<tr>
<td>Scientific Inquiry (HS-PS1-3)</td>
<td></td>
<td>4</td>
</tr>
</tbody>
</table>

**Comments:**

- **Overall Grade:** I
- **M** = Missing; **IE** = Insufficient Evidence; **NA** = Not Assessed; **I** = Incomplete

**Ken Mattingly,** science teacher at Rockcastle County (KY) Middle School provided advice to the author on the Next Generation Science Standards and classification for this gradebook.

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“The most dangerous experiment we can conduct with our children is to keep schooling the same at a time when every other aspect of our society is dramatically changing.”

—Professor Christopher Dede, Harvard Graduate School of Education
What has Changed about the Why?

1. Purpose of School
2. Purpose of Classroom Assessment
3. Purpose of Grades
4. Knowledge about Motivation
5. Technology
1. The Purpose of School

Although schools serve a wide variety of purposes, decades of research has shown that the most commonly mentioned purposes of K-12 schooling tend to focus on three core elements:

* Civic development
* Emotional development
* Cognitive development = Learning = knowing, understanding, being able to do more and/or better over time

Source: Wesleyan University “Purpose of School” website http://www.purposeofschool.com accessed on 5/24/17

* Now for all, not just a select few.
Learning for all.

Vision
Our learners are engaged in authentic, challenging, and relevant learning experiences, becoming lifelong contributors and leaders in our dynamic and diverse society.

Mission
Working together as a team, we will end the predictive value of race, class, gender, and special capacities for our children’s success through high-quality teaching and learning for all. We seek to build relationships with families and communities to ensure that every student succeeds.
We will know every student.
2. Purpose of Classroom Assessment

“... the primary purpose of classroom assessment is to inform teaching and improve learning, not to sort and select students or to justify a grade."

McTighe, J. and Ferrara, S. *Performance-Based Assessment in the Classroom*, Pennsylvania ASCD
The Evolution of Assessment

It's about **how** it is used

**Traditional Use**

- **When** - After instruction.
- **Purpose** – Grading, reporting achievement levels.
- **Main Players** - adults.
- **Impact** – Ranking and sorting students, limited evidence of what was learned, but no impact on future learning.

**The PLC – Informing Instruction**

- **When** – Embedded as a part of instruction.
- **Purpose** - Answering the second question of PLCs. How do the adults know the students learned the targeted outcomes?
- **Main Players** – Collaborative adults who plan and teach.
- **Impact** - Clear evidence of learning, who learned and how much, leading to next steps of instruction, changes to instruction and intervention.

**Fostering Student Investment**

- **When** – Embedded in the learning structure of the class AND the learning practice of the student – self-assessment.
- **Purpose** – Helping the student to become an invested and self-regulated learner. Building confidence and motivation by understanding what success looks like and how to get there.
- **Main Players** – The student and teacher in collaboration.
- **Impact** – The student takes control of their own learning.
What Can We Learn from COVID-Era Instruction?
Independent Learners - and Empowered Teachers – Succeeded

In virtual and hybrid classrooms, those who were most likely to succeed were students with higher self-regulation skills, whereas those most dependent on the teacher - or those who had teachers who over-orchestrated their classes struggled the most. . . .

John Hattie *Educational Leadership*. May 2021 78:8, 14-17
3. Purpose of Grades

“the primary purpose of . . . grades . . . (is) to communicate student achievement to students, parents, school administrators, post-secondary institutions and employers.”

4. Knowledge about Motivation

*Drive* by Daniel Pink

Motivation 1.0 - the ancient drive to survive

Motivation 2.0 - rewarding good work with pay, benefits and promotions

- centres on "Type X behavior” where people are motivated mostly by external rewards.

Motivation 3.0 - the main motivators are the freedom to do what you want, the opportunity to take a challenge and fulfillment by the purpose of the undertaking

- what Pink calls "Type I behavior”
“All kids start out as curious self-directed Type I’s. But many of them end up as disengaged, compliant Type X’s. . . . If we want to equip young people for the new world of work - and more important, if we want them to lead satisfying lives - we need to break Motivation 2.0’s grip on education and parenting. . . .

Unfortunately, as with business, there is a mismatch between what science knows and what schools do. . . . We’re bribing students into compliance instead of challenging them into engagement.”

Daniel Pink, 2009, Drive, Riverhead Books, New York, 174
According to Pink, the keys to Motivation 3.0 are:

Autonomy
Mastery
Purpose
Pink believes it is time for a "full scale upgrade" to Motivation 3.0 - intrinsic rewards that play to the intrinsic satisfaction of the activity.

Source- review by Richard Eisenberg in USA Today, January 25, 2010
Motivation

**Responsibility** – “the state or fact of being responsible, answerable, or accountable for something within one’s power, management or choice.”  (Dictionary.com)

**Compliance** – “a. the act or process of complying to a desire, demand, proposal, or regimen or to coercion;  b. conformity in fulfilling official requirements.”

(Merriam-Webster Online Dictionary)
Motivation

“No studies support the use of low grades or marks as punishments. Instead of prompting greater effort, low grades more often cause students to withdraw from learning.”

Maximize *intrinsic* motivation.

and

Minimize *extrinsic* motivation.
5. Technology

Fresh Grade
Seesaw
Google Docs
Email
Skype
Voxer
And many, many more
The Essential Question
How confident are you that the grades students get in your district/school are CALM:

• Consistent
• Accurate
• Learning-focused, and
• Meaningful?
Purpose of the ACPS Grading Policy: Three Pillars

1. **Accurate**
   “Our grading must use calculations that are mathematically sound, easy to understand, and correctly describe a student’s level of academic performance,” (Feldman, 2019).

2. **Consistent**
   Grades should be calculated in a way that is similar across schools, courses, departments, and teachers.

3. **Support Student Learning**
   “The way we grade should motivate students to achieve success, support a growth mindset, and give students opportunities for redemption” (Feldman, 2019).
Grading and Reporting FOR Learning
1. Excluding extra credit from grades
2. Eliminating grades for practice
3. Eliminating the use of zeros
4. Removing behavior from grades
ACPS Guideline 1: Excluding Extra Credit from Grades

**Why:** Extra credit distorts grades; it is not an indication of what a student knows, understands, and is able to do

**What it means:** Students shall not be awarded extra credit for behaviors, attendance at outside events, bringing items to school, or bonus questions on tests

**Strategies that Support Teaching & Learning:**
- Allow students to redo in order to demonstrate learning
- Don’t use bonus questions to “cover up” student learning
What ACPS knows about Extra Credit

- Extra credit is not an **accurate** reflection of what students know, understand, or are able to do
- Extra credit is not applied **consistently** across classes, courses or schools
- Extra credit does not **support student learning**
  - Extra credit for bringing in items or attending events exacerbates inequity
  - Allowing bonus questions can hide student (mis)understanding
Letter to the Editor

“Recently it was “Dress like an Egyptian Day” at my school. If we dressed like an Egyptian we got extra credit. When we didn’t (which the majority of the kids didn’t) our teacher got disappointed at us because we just “didn’t make the effort.” . . .

One of the most frustrating things in my mind is that we get graded on something that has no educational value. I would very much like to discontinue these childish dress-up days.”

JENNIFER STARSINIC      Hummelstown
Bonus Questions/Points

- mathematical distortion, inappropriately inflates student achievement, e.g., 28 out of 25.
- bonus questions usually conceptual, higher order thinking questions.
- bonus points hide weaknesses
Guideline #2

Eliminating Grades for Practice

- **Why**: If practice is truly practice, it should not be counted in a grade.
  - Practice leads to mastery; mastery is based on predetermined goals; grades are based on final learning, not while learning
  - Meaningful practice **supports student learning**
  - Ungraded practice promotes a growth mindset
- **Grading practice decreases the accuracy of grades**
- **Teachers are inconsistent with including practice in grades**

**What does this mean**: Eliminating grades for practice means students have the opportunity to practice in order to improve learning. This practice builds on growth mindset principles and allows students to engage in authentic practice without impact to a grade.
Formative Assessment

Formative assessment is a planned process in which assessment-elicited evidence of students’ status is used by teachers to adjust their ongoing instructional procedures or by students to adjust their current learning tactics.


For-ME-tive

(Greg Woolcott)
“The ongoing interplay between assessment and instruction, so common in the arts and athletics, is also evident in classrooms using practices such as non-graded quizzes and practice tests, the writing process, formative performance tasks, review of drafts and peer response groups. The teachers in such classrooms recognize that ongoing assessments provide feedback that enhances instruction and guides student revision.”

“There is well-researched evidence that grades on student ‘work’ do not help in the same way that specific comments do. The same research shows that students generally look only at grades and take little notice of the comments if provided.”

Purposes of Homework

- introduces material presented in future lessons. These assignments aim to help students learn new material when it is covered in class.

PRACTICE - to reinforce learning and help students master specific skills.

EXTENSION - asks students to apply skills they already have in new situations.

INTEGRATION - requires students to apply many different skills to a large task, such as book reports, projects, creative writing.

Source: NCLB website - Homework Tips for Parents
Impact Story – Rutherford High School

In a panel discussion of how the grading system has impacted them, the students made the following points:

1. We have to actually learn the material now since there is no extra credit work to bring up the grade in the end. I like it better when I didn’t have to work so hard to learn the material.

2. The tests are less stressful because we have practiced the material until we know it, and we know we know it before the test. (Confidence)

3. We have more fun in class because there is no grade attached to the formative exercises. We are expected to mistakes that help us learn. (Relax and learn)

4. The formative assessments show us the format the test will take so there are no surprises.

5. Knowing that I can retake the test if I do poorly takes some of the stress away.

6. It is obvious that the teacher wants us to learn. (Wow!)

7. I like the points that are added on at the end as if they are free, even though we earned them ahead of time with the practice work.

8. I always know what I have to do to make my grade better.

Source: Sandy Wilson, Rutherford HS, Bay District Schools, FL
An ASSESSMENT PLAN should start with the
• desired results (learning goals, standards, etc), then the
• summative assessments that are going to be used to
determine whether the student ‘knows and can do,’
next should be the
• diagnostic assessment(s) that are going to help to
determine the what and how for teaching and learning,
then should come the
• formative assessments that are going to help students
achieve the learning goals and that are going to cause
the teacher to adjust teaching and learning activities.

- homework, quizzes → tests
- practices → performances
- first draft, second draft → product(s)
- - - Learning/Practice -- Perform

**SOURCE:** Adapted from Guskey and Bailey (2001, p. 98).

Guideline #3
Eliminating Zeros

Why:
• Grades should communicate what students know;
• Zeros are the ultimate outlier on a 100 point scale and they distort the accuracy of grades.
• Zeros are used inconsistently across schools and classes.
• Zeros don’t support student learning
  * Zeros aren’t motivators; in fact experts say it does the opposite
  * Zeros/grades shouldn’t be a behavior management tool
  * Zeros don’t represent what students know, understand and can do. (KUD)
Guideline #3
Eliminating Zeros

What does this mean:
- Minimum grading - no scores lower than 50% creates a mathematically correct equal difference 10 point scale

What does it look like in the gradebook:
- Enter the MISSING for assignments not submitted (calculates as a 50 + missing flag)
- When a teacher enters any score less than 50, the grade will automatically be calculated as 50% in the overall grade.

Strategies to support Teaching and Learning:
- Expectations when a student doesn’t show proficiency – relearning, reassessment
- Students aren’t allowed to opt out of submitting essential evidence of learning; use Incomplete or Insufficient Evidence
- Students not turning in essential evidence of learning - learning contract, conference, intervention/remediation time
Problems with zeros

- Philosophical
- Mathematics
- Motivation.
“If we think about grades on an equal-interval basis, each grade band is worth an equal value of 1. An F is 0, a D is 1, C is 2, B is 3, and A is 4. If we make each grade band equal, then failure isn’t disproportionately weighted. If we still have to use the 0–100 scale (which is mathematically skewed to failure), then we have to hack the traditional grade book and convert that 0–4 equal-interval scale into a 50–100 scale. Essentially, this makes 50 the new zero. We redefine the floor of our grading system to make it more mathematically accurate and less punitive. I’m not giving them something for nothing. I changed the narrative to redefine the floor at 50, so that failure isn’t worth more than success.”

Tamony, A. The Case Against Zeros in Grading, *Edutopia*. October 6th, 2021
“To recover from a single zero in a % grade system, a student must achieve a perfect score on a minimum of nine other assignments.

A single zero can doom a student to failure, regardless of what dedicated effort or level of performance might follow.”

“The use of an I or “Incomplete” grade is an alternative to assigning zeros that is both educationally sound and potentially quite effective.”

Grading Guideline #4
Removing behavior from Grades

Why:
• Grades that include behaviors are inaccurate
  ○ Grades should measure student achievement, solely
  ○ Behaviors include effort, attendance, participation, compliance, organization, etc.
    Grading participation/behavior is inconsistent across the division, schools, teachers
• Grading behavior doesn’t reflect student learning
  ○ Work habits are a measure of how, not what students have learned
• Grading behavior/work habits is inequitable
  ○ It rewards students who “do school” well
  ○ Grading behaviors exacerbates biases
“... grades often reflect a combination of achievement, progress, and other factors.

... this tendency to collapse several independent elements into a single grade may blur their meaning.”

FIGURE 0.13 Sum Total of Everything Students Do in School/Classroom

Everything—or Almost Everything—Students Do in the Classroom

Representative Sampling of What Students Do

**PROCESS**
Assessment of Students Using Observation Over Time

- learning logs
- journals
- portfolios
- teacher observations/anecdotal notes

**PRODUCT**
Assessment Tasks

- performances
- presentations
- tests/quizzes/examinations
- culminating demonstrations

**ATTITUDE, LEARNING SKILLS, WORK HABITS**

- enjoys learning
- questions/investigates
- participates in class
- works independently
- completes assignments
- completes research/projects

- cooperates with others
- respects others
- resolves conflicts
- attendance, punctuality
- reflects and sets goals

**ACHIEVEMENT**

**Reporting Variables (Desirable Behaviors)**

**Report Card**

**Grading Variables (Standards)**

SOURCE: Adapted with permission from the work of Ken O’Connor and Damian Cooper. President, Plan, Teach, Assess, Consulting, Mississauga, Ontario.

Any other questions, comments, concerns