# Formative Assessment & Standards-Based Grading

Hosted by: Dr. Robert Marzano & Dr. Tammy Heflebower















#### Please Consider

 Please think of a grading situation as a teacher, parent, or student that just didn't "feel" right.

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#### What We Know About Grading

- Feedback is essential to learning yet grading is not.
- Grading is complex.
- Grading is subjective.
- Grading sends messages to students about capabilities.

Adapted from O'Connor, (2009). How to grade for Learning, Thousand Oaks, CA

#### Some questions to consider

- Are grades precise (valid)?
- Are grades consistent (reliable)?
- Do our grades engage students in the learning process?





Is it possible for all students to receive an A in your classes? This is different than asking

if they are all likely to get an A.

	The Scale
4	In addition to exhibiting level-3 performance, in-depth inferences and applications that go BEYOND what was taught in class
3	No major errors or omissions regarding any of the information and/or processes (SIMPLE OR COMPLEX) that were explicitly taught
	The Learning Goal: What you expect the student to know and be able to do
2	No major errors or omissions regarding the SIMPLER details and processes BUT major errors or omissions regarding the more complex ideas and processes
	The simpler or foundational knowledge that is necessary as a step to mastery of the score 3.0
1	With HELP, a partial knowledge of some of the simpler and complex details and processes
0	Even with help, no understanding or skill demonstrated



#### **Typical Grading Plans**

#### Traditional plan:

- Weighed by points or percentages: Tests, quizzes, labs, homework
- Based on methods of assessment rather than learning components

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					Ach	ieve	men	tEv	iden	ce			
Assessments	9/9 Test	9/12 PA	9/18 PA	9/23 PA	9/25 Test	9/30 PA	10/5 Test	10/8 PA	10/12 Test	10/	10/21	10/23	
Standards ¥										PA	PA	Exam	ý
Numeration/ Number Sense		1	2		11/ 20 (1)		16/ 20 (3)			2	2	7/10 (2)	c
Computation/ Estimation	30	в											N/A
Measurement	19/ 20 (4)	4			18/ 20 (4)			4				10/ 10 (4)	^
Geometry/ Spatial Concepts	15/ 20 (2)	2				2				2		14/ 20 (2)	с
Data Analysis and Statistical Concepts		1		2		3	20/ 20 (4)			4		19/ 20 (4)	^
Algebraic Concepts	1.0000 2.13	5.V 3/2	1			1		1	8/ 15 (1)		z	6/ 10 (1)	D
Comments:		-			Vern	6.4.6	in e ri	6 <u>52</u> A	i cherte	-	-		
Summar	Used	with p	ermissi	ion	5		achie	t cons	istent I nt with	evel c	of iderat	ion	в

	Class: Q12 2 EN.ENG1 - Engish	V Add Acci
	Category Description	Category Weight
	X Standard 1 - Assignment	1 *
	X Standard 1 - Assessment	10 💌
	X Standard 2 - Assignment	1 .
	X Standard 2 - Assassment	10 ~
	X Standard 3 - Assignment	1 .
	X Standard 3 - Assassment	10
	X Standard 4 - Assignment	1 .
	X Standard 4 - Assassment	10 💌
	X Standard 5 - Assignment	1 💌
	X Standard 5 - Assassment	10 💌
	X Standard 5 - Assignment	1
	X Standard 6 - Assessment	10 💌
vhere I see being al	ole to group assignmen	s into standards:
s have complete co	ntrol in the setup of th	ese categories and can name them



	Convers	ion	to %	
	4.0	=	100%	
	3.5	=	95%	
	3.0	=	90%	
	2.5	=	80%	
	2.0	=	70%	
	1.5	=	65%	
	1.0	=	60%	
	Below 1.0	=	50%	
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		Douglas Cou	inty School Distric	t, 2003	
	Indicators	A Consistently exceeds expectations	B Consistently meets expectations	C Inconsistently meets expectations	U Does not meet expectations
Meet Jacques and Marie	Completes work Punctuality Neatness Makes up work	Is punctual or early turning in assignments and goes beyond the stated requirements relative to neatness and adherence to conventions.	Is punctual in turning in assignments and meets the stated requirements relative to neatness and adherence to conventions.	Is not punctual in turning in assignments or does not meet the stated requirements relative to neatness and adherence to conventions.	Is not punctual in turning in assignments and does not meet the stated requirements relative to neatness and adherence to conventions.
	<b>Is prepared</b> to learn On time Has materials	Always in class on time. Brings needed materials to class and is always ready to work.	Very few tacdies. Almost always brings needed materials to class and is ready to work	Some tardica, Usually brings needed materials but sometimes needs reminders and redirection.	Frequent tardies. Often forgets materials and is rarely ready to get to work. Often does not accept redirection.
	Participates in learning Works well with others Shares ideas	Routinely shares information or ideas when participating in discussion or groups. A definite leader who contributes consistent effort.	Usually shares information or ideas when participating in discussions or groups. Often is a leader.	Sometimes shares information or ideas when participating in discussion or groups. Exhibits few instances of leadership. Does the minimum required.	Rarely shares ideas. May refuse to participate. In groups, relies on the work of others.
Maraae Research laboratory Powerted by Solution Tree cutting-edge research concrete strategies sustainable success	Follows classroom expectations On task Follows rules	Consistently stays focused on the task and what needs to be done. Very self directed. Always has a positive attitude.	Focuses on the task and what needs to be done most of the time. Works independently. Often has a positive attitude.	Focuses on the task and what needs to be done some of the time and needs to be reminded to keep on task. Usually has a positive attitude.	Rarely focus on the task and what needs to be done. Lets others do the work. Needs reminders to perform classroom work. Often









Grades must be connected quality assessments

#### Helping to Ensure Quality Assessments: Six Quality Criteria

- Are matched to the standard
- Offer an opportunity to learn
- Are free from bias
- Are at appropriate levels
- Are they reliably judged
- Provide appropriate mastery levels





Action Planning—How might you take back the grades being precise conversation to staff?

## Are our grades reliable (consistent)?

- Consistent among colleagues
- Figured carefully and thoughtfully



- Two teachers teach a course as a team.
- Class was 26 students
- Teachers assigned grades without consulting each other.
- They considered only achievement on tests, quizzes, and homework.
- No non-achievement skills

- Marzano, Transforming Classroom Grading, (2000)

#### Results

- One student differed by three grades
- Two students differed by two grades
- Eight students differed by one grade
- Fifteen students had no difference: 57.7% agreement (15/26)



## Do grades support learning and communication?

 Provide clear information to students and parents—no more, "So what's a B mean?"



Measures of Central Tendency







#### What Instead?

- Use incomplete grade.
- Convert the zero to the failing cut, such as 50
- Require the student continue until proficiency level is obtained.
- Consider modules for the content missed.

Jason Ritter, Legend High School, Douglas County Public Schools—Castle Rock, CO

■ 50% and use of the zero





#### **Practical Considerations** for Reassessment

- Re-teaching, review, or reassessment is at teacher's discretion. It should be a philosophical belief.
- Students prove they have taken corrective actions (study, peer tutoring, or reviewing sessions) before a second opportunity.
- Some schools use an 8th period for learning (work) not completed
- Some schools use a weekly 90 minutes (HS 1x/week/ beginning of day)

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Saturday school=meaningful time for learning demonstration

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"The consequence for a student who fails to meet a standard is not a low grade but rather the opportunity-indeed, the requirement-to re-submit his or her work." -Douglas Reeves, 2000







# Do our grades support learning? • Re-teaching & retesting • How are students involved in the process?





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How to involve students and relinquish ownership to students...

- Students track their scores and achievement graphically (high ES for achievement.)
- Students use such information to make goals and work toward personal achievement.

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# Middle School Are there any issues that are involved with this type of conference; and if so how do you handle these? Parents often want grades to compare their student accomplishments, with the portfolio the parents can see the work first hand and not just a grade in a grade book. Some questions or conversations can be too confidential to discuss in front of student or in open area. We encourage parents to view the parent portal and also to set a separate conference up at a later date.

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"You've got to think about 'big things' while you're doing small things, so that all the small things go in the right direction."

Alvin Toffler



















	Achievement Level Definitions
Advanced (4)	A student scoring at the Advanced Level has success with the
	most challenging content of the Colorado Model Content Standards. These students answer most of the test questions
Proficient (3)	correctly, including the most challenging questions. A student scoring at the Proficient Level has success with the
	challenging content of the Colorado Model Content Standards. These students answer most of the test questions correctly, but may have only some success with questions that reflect the most challenging content.
Partially Proficient (2)	A student scoring at the Partially Proficient Level has limited success with the challenging content of the Colorado Model Content Standards. These students may demonstrate inconsistent performance, answer many of the test questions correctly but are generally less successful with questions that are most challenging.
Unsatisfactory (1)	A student scoring at the Unsatisfactory Level has little success with the challenging content of the Colorado Model Content Standards.
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connections (within and outside of Beginning	mathematics), and designing and a Progressing	ts that promote problem solving, rea nalyzing representations.	Advanced
Uses algebraic manipulation to solve one-step equations	Uses algebraic manipulation to solve two-step equations	Uses algebraic manipulation to solve multi-step equations	
Identifies slope in a given equation	Finds the slope of the line given two points on the line	Interprets the meaning of slope and intercepts in the context of a given situation	
Evaluates a function for a given set of values; graphs a line given a table of values	Uses function notation to evaluate a function; graphs a function	Represents functional relationships using written explanations, situations, tables, equations, and graphs and describes the connections among these representations	
	Solves a system algebraically	Uses a variety of methods to solve systems, estimates reasonableness of solutions, models real world phenomena related to linear functions, and relates the solution to pairs of lines	Given a real world situation, t student generates data and presents this data in a variety ways







#### Review a Proficiency Scale

- If you are elementary and/or math or science content areas, please review an existing scale and create sample tasks for levels 2 and 3.
- If non math and science, you will simply create a scale. Begin by using a unit of study you will teach between now and end of the year. Please create levels 2 and 3.







A Balanced A	ssessment Syste	m
Large Scale (Assessment of)	Mid-Scale (Assessment for)	Small-Scale (Assessment for)
Summative	Formative	Questioning
<ul><li>Norm referenced (ticket)</li><li>Aptitude</li></ul>	<ul><li>Criterion referenced</li><li>Often teacher or district made</li></ul>	Day by day, minute by minute (Wiliam)
Achievement	Achievement	<ul> <li>Achievement</li> </ul>
Essential Question:	Essential Question:	Essential Question:
What have students already learned?	How can we help students learn more?	How can we help students learn more?



- <b>I</b> -					
			D Required Assessme		
Assessment	Type	Grade(s)	Content Area(s)	When Tested	Why Required
AIMSweb Classroom Based Measures	Formative	K - 8	Reading	Ongoing	DCSD required for students identified as needing targeted and intensive services
CELA—Colorado English Language Assessment	Summative	K-12	English Proficiency	January	Public Law 107-110 for students who have language background other than English
CO-ACT	Summa tive	11	English, math, reading, science	April (4* Wed)	C.R.S. 22-7-409 (1.5) (a) all 11 <sup>th</sup> grade students in public schools
CogAT-Cognitive Abilities Test	Predictive	2-8	Reasoning and problem solving using verbal, quantitative and nonverbal (spatial) symbols.	Мау	DCSD required for sudents who have been recommend for gifted and talented services
CSAP-AColorado Student Assessment Program-Alternate	Summa tive	3-10	Mathematics, reading, writing, science (grades 5, 8 and 10)	Jan March	C.R.S. 22-7-409(5)(A) requires midents with severe cognitive abilities to take the alternate version of the CSAP
CSAP—Colorado Student Annessement Program	Summative	3-10	Mathematics, reading, writing, science (grades 5, 8 and 10)	Feb. (3 <sup>12</sup> Read) March - April	C.R.S. 22-7-409 (1) requires public schools to align with the Colorado Model Content Standards. Math and Reading results fulfill requirements of NCLB
DRA2—Developmental Reading Assessment	Interim Summative	8-3	Reading	Ongoing (July-August screening) (Sep. – Dec. Progress Mon.) (May-June End of Year)	C.R.S. 22-7-501 The Colorado Basiic Literacy Act (CBLA) mandating that all students are reading at grade level proficiency by the end of 3rd grade
DRA4-6-Developmental Reading Assessment	Interim Summative	4.6	Reading	Ongoing	DCSD required for students placed on an ILP
End of Course	Samuative	7-12	Mathematics	May	DOSD mathematics educators for demonstrating proficiency of Essential Learnings in Alg. I. Other subjects and courses in the future
Interim Assessments	Interim	K-12	Mathematics, reading, science and writing	Ongoing One for each Essential Learning	DCSD required by interpretation of BoE End Statement 1.0
MAP—Measures of Academic Progress	Interim	7-12	Reading	Ongoing 3x per year	DCSD required for secondary students placed on an ILP

		DCSD.Oot	ional Assessments	
Assessment	Type	Grade(s)	Content Area(s)	Comments
Advanced Philement (AP)	Summative	9-12	Arr Hussey, inology, Calcula, Commiry, Colines Languag, Computer Science, Economics, English Language & Composition, Environmental Science, European Hisary, Prench, German, Government, Politics, Human Geography, Music Theory, Physics, Politics, Human Geography, Music Theory, Physics, Nychology, Spanish, Statistics, Studio Art, U.S. Hunoy, World Hisary	This exam is not funded by the district. Students may receive college credit for high results on AP exam. They are encouraged but not required to take the AP exam.
ADdSweb	Formative	K-8	Reading and Mathematics	Schools, at their own cost, may implement AIMSweb CBMs beyond those required by the district.
CogAT—Cognitive Abilities Test	Predictive	2 ce 3	Reasoning and problem solving using verbal, quantitative and nonverbal (spatial) symbols.	May be used as a universal screening tool for all 2 <sup>nd</sup> or 3 <sup>nd</sup> grade students.
DHBELS (Dynamic Indicators of Basic El Literacy Skills)		X-6	Mathematics, reading, writing Science (grades 5, 8 and 10)	Optional progress monitoring assessment tool for schools. N district support.
International Baccalaureate (B)	Sumaine	11-12	Art, Biology, Chinese, Chemistry, Economics, English, Prench, Geography, German, History, Mathematics, Physics, Phychology, Spanish	district. Students may receive college credit for high results of III exam. They are encourage but not required to take the III exams. Students completing al III exams may be awarded an III Diploma.
MAP - Measures of Academic Progress	Inerim	2112	Reading, Mathematics, and Science	Optional beyond select high ris schools and secondary student on ILPs. Schools or Feeders incur costs, district will provid training and data support.
Pre-SAT (Pre Scholar Apritude Test)	nic Predictive	10	Critical Reading, Mathematics and Writing	This exam is optional and is no funded by the district. The pre SAT predicts success on the SAT exam.
SAT-Scholastic Apritude Test	Predictive	11	Critical Reading, Mathematics and Writing	This exam is optional and not funded by the district. This standardized test, administered nationally, is primarily used fo college admission.
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	Asse	ssmen	t Contii	nuum	
Classroom	Comr	mon	District	Ex	ternal
,					
Most Forma	tive More	Formative	More Summat	tive Most	t Summative
Most Forma	ttive More Weekly	• Formative Unit	More Summat	tive Most Semester	t Summative → Annual
	Weekly Quizzes, Essays and				Annual Benchmarks State
Daily	Weekly Quizzes,	Unit	Monthly DIEBELS NWEA-MAP Programmatic	Semester Final	Annual Benchmarks
Daily Ongoing Student and Teacher	Weekly Quizzes, Essays and	Unit Collaboratively Developed and Curriculum	Monthly DIEBELS NWEA-MAP	Semester Final Exams	Annual Benchmarks State Assessments

DRA II K-3 Determine 3x year To studer reading parents, proficiency school
ACT 11 or 12 College Spring To studer predictor To studer





### Assessments can come in many forms in a rigorous scale-based system.

- Paper and pencil (obtrusive)
- Projects (obtrusive)
- Probing discussion (obtrusive)
- Observations (unobtrusive)
- Examples shared by students in class discussions (unobtrusive)
- Re-working a problem with explanation (student generated)



**Formative Scores** 

Summative Scores (Grades)

Instructional Feedback

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All assessments have a measurement error

Observed score = true score + error

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#### Why is this so difficult?

- Varied levels of difficulty...
   On one test, items might be "easy" and
  - On one test, items might be "easy" and students receive high scores.
  - On the next test, items may be more difficult and students receive lower scores.
  - Teachers often weigh assessment items differently from one another on identical content.

		Strand: Reading		
		Topic: Genre		
		Level: 10		
Score4.0	In addition	to Score3.0, in-depth inferences and applications that go beyond		
	what was	aught such as:		
		comparing and contrasting literature from various genres, from the		
		same time period		
	Score3.5	In addition to Score3.0 performance, in-depth inferences and applications with		
		partial success.		
Score3.0	While eng	aged in tasks regarding level-appropriate reading tasks, the student		
	demonstra	tes an ability to identify and analyze literature genre by:		
	<ul> <li>identif</li> </ul>	ving different genres of literature as they relate to specific time periods		
	100.0	pic poetry in the classical period, drama in the Renaissance, poetry in		
	the Romantic period, the novel in the Victorian period)			
		at exhibits no major errors or omissions.		
	Scorg2.5	No major errors or omissions regarding the simpler details and process and partial		
	011112.5	knowledge of the more complex ideas and processes.		
Score2.0	There are no major errors or omissions regarding the simpler details and			
	processes as the student:			
	<ul> <li>recognizes or recalls specific terminology such as:</li> </ul>			
	<ul> <li>classical, renaissance, romantic period</li> </ul>			
	<ul> <li>performs basic processes, such as:</li> </ul>			
	<ul> <li>making basic connections between major genres and major time</li> </ul>			
	b making basic connections between major genres and major time periods			
	However, the student exhibits major errors or omissions regarding the more			
	However, the student exhibits major errors or omissions regarding the more complex ideas and processes.			
	Score1.5	Partial knowledge of the simpler details and processes but major errors or omissions		
	Score1.5	Partial knowledge of the sampler details and processes but major errors or omissions regarding the more complex ideas and procedures.		
Score1.0	With help, a	partial understanding of some of the simpler details and processes and some of the		
		x ideas and processes.		
	Score0.5	With help, a partial understanding of some of the simpler details and processes but		
		not the more complex ideas and processes.		
Score0.0	Even with he	to, no understanding or skill demonstrated.		

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#### How Much Sufficiency Is Sufficient?

- Depends on data use.
- Low stakes: Multiple assessments to make decisions about groups of students
  3 items per level = 12 total
- High stakes: One assessment to make decisions (e.g., graduation, retention) about individual students
  - 6-8 items per level = 24-32 total

-Buros Center for Testing

Ensure your questioning and activities are aligned to your goal (s).





Name:	Aida Haystead	Subject Areas:		
Address:	123 Some Street	Language Arts	В	
City:		Math	В	
Grade Level:	5	Science	D	
Homeroom:	Ms. Becker	Social Studies	А	
		Art	В	
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If an individual teacher really wants to, he or she can be standardsbased in the classroom, even within the context of a traditional system.







#### Legal considerations

- The notation on the transcript must not identify a student as receiving special education services.
- It can read such on the report card, as long as that report card is private.
  - Cannot read "special education goals" or "IEP goals".
  - Can use the term "modified standards"



