The Spirit of SBG

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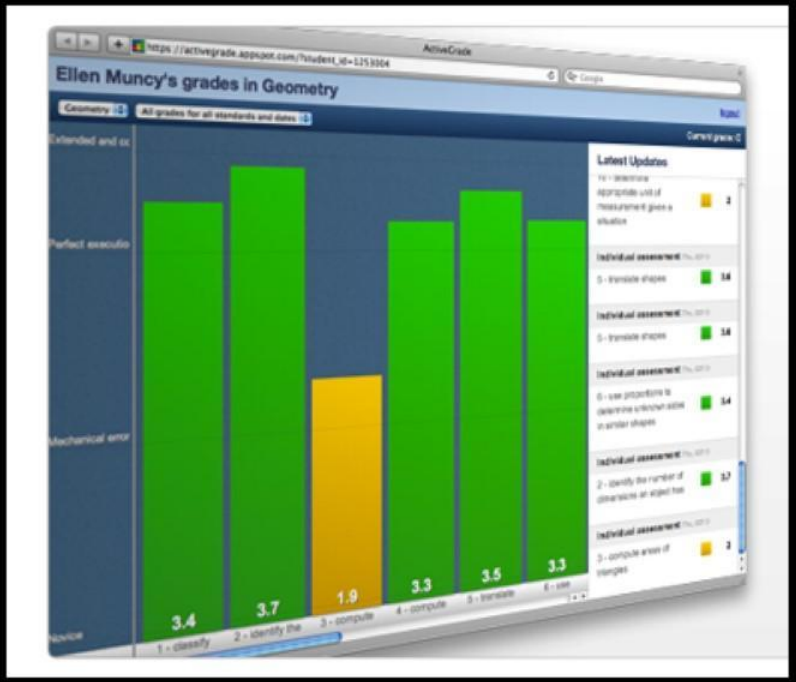


http://bit.ly/spiritofsbg2014

ActiveGrade relies heavily on **Standards-Based Grading (SBG)**--a system of reporting student proficiency in a number of specific learning goals (or standards). Rather than give students one grade on a test that assessed multiple skills, this system gives students a number of scores that represent their proficiency in each of the skills assessed. The idea is that at the end of the class a student has mastered the essential content necessary for the next level. You are focused on knowledge, not on points.

Common Definition of SBG

	Reporting	Retakes	HW	End of Term
"SBG"	By Standard ✓	Allowed ✓	Ungraded ✓	No grade ✓
"Traditional"	By Assignment	Not Allowed	Graded	One grade

SBR + RT - HW - EoT

Is this SBG?

	Reporting	Retakes	HW	End of Term
"SBG"	By Standard ✓	Allowed	Ungraded	No grade
"Traditional"	By Assignment	Not Allowed ✓	Graded ✓	One grade ✓

SBR - RT + HW + EoT

Is This Traditional?

	Reporting	Retakes	HW	End of Term
"SBG"	By Standard	Allowed ✓	Ungraded	No grade
"Traditional"	By Assignment ✓	Not Allowed	Graded ✓	One grade ✓

ABR + RT + HW + EOT

My Current System

	Reporting	Retakes	HW	End of Term
"SBG"	By Standard ✓	Allowed ✓	Ungraded ✓	No grade
"Traditional"	By Assignment	Not Allowed	Graded	One grade ✓

SBR + RT - HW + EoT

SBG vs. TG is Meaningless

	Reporting	Retakes	HW	End of Term
"SBG"	By Standard	Allowed	Ungraded	No grade
"Traditional"	By Assignment	Not Allowed	Graded	One grade

(SBR or ABR) ± RT ± HW ± EOT

The Spirit of SBG

1. Track by Concept
2. Opportunities for Growth
3. HW is Practice
4. Feedback, Feedback, Feedback
5. Spiral Concepts
6. Short, Frequent Quizzes
7. Assess What You Value
8. Clear Goals and Expectations
9. Failure, Iteration, Experiment
10. Do What Works Best for Your Students

The Problem with...

Points

Assignments

Averages

SCENARIO #1
CONSISTENT GRADE CALCULATIONS

10,000 Teachers Can't Be Wrong, Right??

Grades for the SAME Student

Hong Kong International School
Middle School

Adapted from D. Reeves (2009)

The Problem with...

Points

Assignments

Averages

Aaron was shooting for an A in the course. He had scored an 89 on the first test, a 65 on the second and he wanted to know what average he needed in order to get the A that was his goal. Our conversation began something like this…

Well, you are averaging 77% on the first two tests. There are five tests for 60% of the grade, so you have 77% of the 24% of the grade determined by these two tests. Let's assume you get all of the participation points, so you have 100% of that 20% of the grade. So we need to figure out what percent you need of the remaining 36% of the grade that comes from the tests, and what percent you need of the 20% that is the final in order to get 90% or better in the course.

Even I was confused.

The Problem with...

Points

Assignments

Averages

APP STORE

TORNADOGUARD

FROM DROID CODER 2187

PLAYS A LOUD ALERT SOUND WHEN THERE IS A TORNADO WARNING FOR YOUR AREA.

RATING: ★★★★☆

BASED ON 4 REVIEWS

USER REVIEWS:

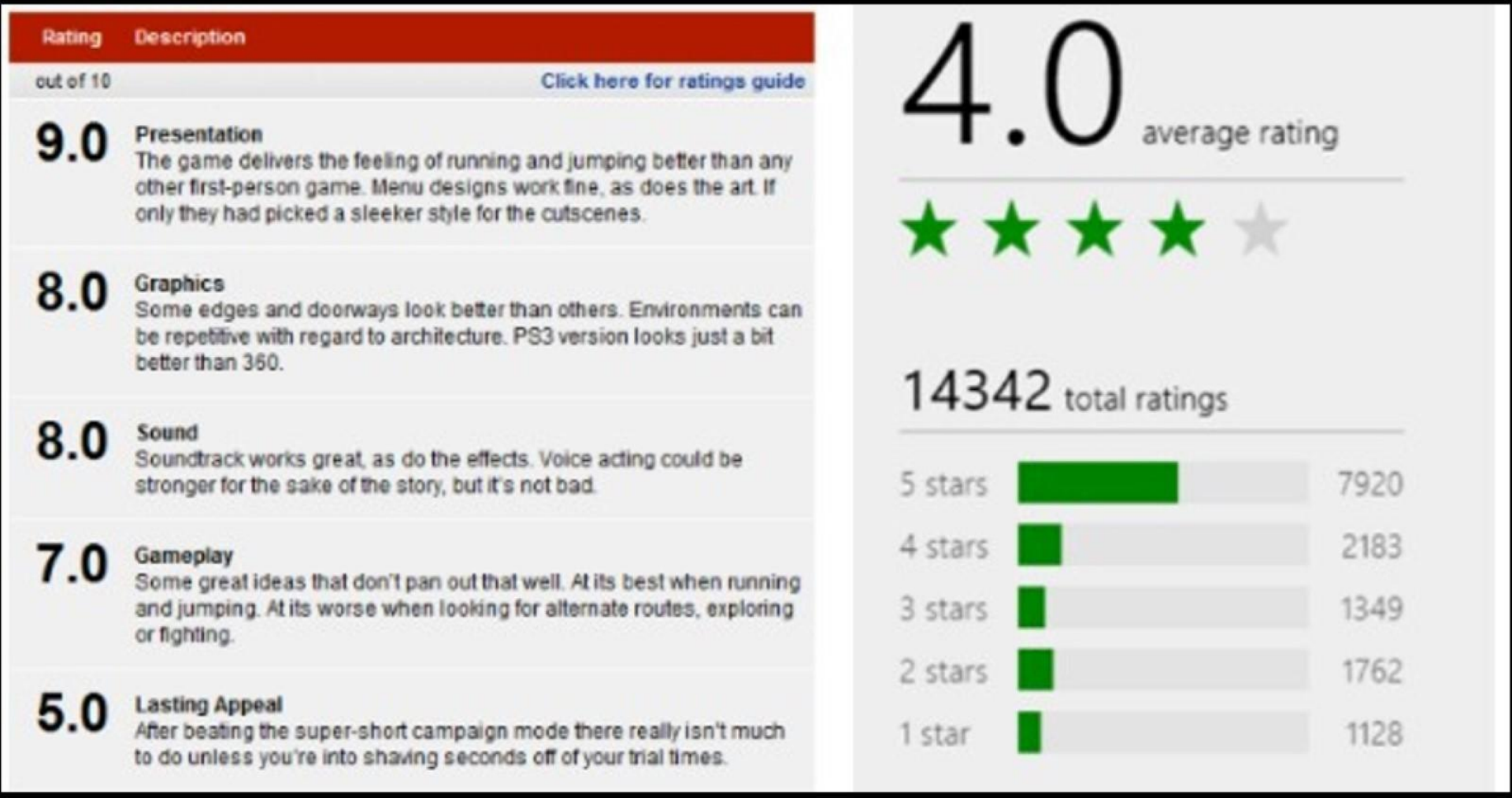
★★★★★ GOOD UI! MANY ALERT CHOICES.

★★★★★ RUNNING GREAT, NO CRASHES

★★★★★ I LIKE HOW YOU CAN SET MULTIPLE LOCATIONS

★☆☆☆☆ APP DID NOT WARN ME ABOUT TORNADO.

THE PROBLEM WITH AVERAGING STAR RATINGS



Rating	Description
out of 10	Click here for ratings guide
9.0	**Presentation** The game delivers the feeling of running and jumping better than any other first-person game. Menu designs work fine, as does the art. If only they had picked a sleeker style for the cutscenes.
8.0	**Graphics** Some edges and doorways look better than others. Environments can be repetitive with regard to architecture. PS3 version looks just a bit better than 360.
8.0	**Sound** Soundtrack works great, as do the effects. Voice acting could be stronger for the sake of the story, but it's not bad.
7.0	**Gameplay** Some great ideas that don't pan out that well. At its best when running and jumping. At its worse when looking for alternate routes, exploring or fighting.
5.0	**Lasting Appeal** After beating the super-short campaign mode there really isn't much to do unless you're into shaving seconds off of your trial times.

IGN RATINGS FOR MONSTER HUNTER (PS2)

Rating	Description
out of 10	Click here for ratings guide
7.0	**Presentation** An old-timey setting with some Mayan typefaces is an odd approach, but it works
8.0	**Graphics** The framerate holds solid and there is no lag to deal with which makes the game hold up nicely.
8.0	**Sound** Environmental sound effects echo around and when you hear the dragon roar, you know you best be scurrying!
7.0	**Gameplay** A disappointing single-player experience gets bolstered by the far superior online experience.
6.0	**Lasting Appeal** The quests and the almost excessive attention to detail gets old unless you find a good group to travel with.

7.2 Good
OVERALL (out of 10)

IGN RATINGS FOR MIRROR'S EDGE (X360)

Rating	Description
out of 10	Click here for ratings guide
9.0	**Presentation** The game delivers the feeling of running and jumping better than any other first-person game. Menu designs work fine, as does the art. If only they had picked a sleeker style for the cutscenes.
8.0	**Graphics** Some edges and doorways look better than others. Environments can be repetitive with regard to architecture. PS3 version looks just a bit better than 360.
8.0	**Sound** Soundtrack works great, as do the effects. Voice acting could be stronger for the sake of the story, but it's not bad.
7.0	**Gameplay** Some great ideas that don't pan out that well. At its best when running and jumping. At its worse when looking for alternate routes, exploring or fighting.
5.0	**Lasting Appeal** After beating the super-short campaign mode there really isn't much to do unless you're into shaving seconds off of your trial times.

7.3 Good
OVERALL (out of 10)

Old School Class

Fall, 2005-06
Mr. Tryon - Period 2

GRADE RECORD

							(1) 1-1	(2) 1-2	(3) 1-2	(4) 1-3	(5) Rev	(6) Ch 1 Test		(7) 2-1	(8) 2-2	(9) 2-3	(10) 2-3		(11) 2-4	(12) 2-5	(13) Rev	(14) Test 2		(15)				
			V	Sept 6	7	8	9	12	13	14	15	16	19	20	21	22	23	26	27	28	29	30	Oct 3	4	5	6	7	NO.
1	Arbunkle, Allen	10					100	A	50	90	A	83		80	A	50	85		A	A	50	88		A				1
2	Baker, Eric	11						A	50	80	A	79		80	A	50	86		B	A	50	90		A				2
3	Beattie, Jeremy	11					85	A	50		A	62		70	A	50	95		B	B	50	87		A				3
4	Bennett, Steve	9					99	A	50	25	A	59		70	A	50	92		A	50	45	90	—	—				4
5	Benson, Jason	10						A	50	80		81		90	A	50	84		B	A	40	92		B				5
6	Bonney, Lars	11					100	A	50					88	A	50	80		B	A	50	65		A				6
7	~~Brown, Buster~~	~~11~~					~~100~~	~~A~~	—	—		—	—	—	Dropped													7
8	Bruce, Holly	9					—	A				62		90	A	50	—		100	B	50	—		C				8
9	Brueggeman, Leah	9					85	A	50	90	A	95		95		50	78	—		A	45	88		A				9
10	Campbell, Catherine	12					96	A	50		A	96		100	A	50	56		A	B	50	78		A				10
11	Casey, Maria	10					75	A	50	90	A	85		65	5		5		B	B	50	60		A				11
12	Coburn, James	12						A	50			52			A	50	62		B	B		60		A				12
13	Davis, Danny	10					60	A	50	90	A	95			A	50	64		B	A	50	88		—				13
14	Enquist, Earnie	10		—	—			—		T		48		T	A	50	82/71		A	A	50	90	—					14
15	Farmer, Freddie	9					100	A	50	90	A	97		80	A	50	80		100	100	50	91		A				15
16	George, Graham	10					100	A	50			85		80	—		62		A	A		71		A				16
17	Goldstein, Thomas	12					95	A			A	80	—	70	A	50	78		A	A	45	80		A				17
18	Hoff, Horace	10					95	A	50	90	A	98		80	A	50	80		A	A	40	85		A				18
19	~~Irving, Irene~~	~~11~~					~~95~~	~~A~~	~~50~~	~~88~~	~~A~~	~~97~~	Dropped															19
20	Jacobson, Neil	10					85	A	50	80	A	87		90	A	50			B	B	50	70		A				20
21	Johnston, Heidi	11					90	A	50		A	88		90	A	50	85		A	B	50	77						21
22	Jones, John	10					90	A	50						A	40	70							A				

Traditional Math Gradebook

STUDENT	Hmwrk 1	Hmwrk 2	Quiz 1	Hmwrk 3	Final Grd
Antonio P.	70%	78%	70%	75%	C
Arlene B.	76%	83%	76%	81%	B-
Benjamin P.	97%	95%	93%	98%	A
Bertha R.	70%	79%	70%	79%	C+

A **traditional gradebook** will average a series of scores on various assignments and tests, then calculate a final overall assessment of a student's performance without delivering an accurate picture what the student has learned.

SBG Math Gradebook (ActiveGrade)

STUDENT	Add Like Fractions	Find Slope of Line	Find Area of Trian
Antonio P.	3.5	3	3
Arlene B.	3.75	2	4
Benjamin P.	4	3.2	4
Bertha R.	3	2	2

With **ActiveGrade's SBG gradebook** the focus is on understanding of individual concepts by each student. This picture of what the student has learned and is yet to learn can help inform your instruction and more effectively engage your student in their own learning.

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GRAVITATIONAL INTERACTIONS
LEARNING GOALS

ASSIGNMENT/ASSESSMENT & DATE:	Quiz 12/11	Quiz 12/18	1/14/19	Exam					INTERIM PROGRESS	QUARTER FINAL
GRAV.1 – I know how mass and separation distance affects the strength of the gravitational interaction between two objects.	2	3	4	4					3	4
GRAV.2 – I can explain the difference between mass and weight.	2	4	4	4					4	4
GRAV.3 – I can calculate the weight of an object on the surface of the earth.	0	4	4	4					4	4
GRAV.4 – I can apply the Law of Universal Gravitation to solve problems.	3/4	4	4	3					4	4
GRAV.5 – I can solve problems involving objects in free-fall.	3	3	4	4					3	4

Quiz 1
by Frank Noschese on Fri, 10/04

FL.1 Normal Force	✗
FL.2 Spring Force	✗
MR.1 Graphing	✗
MR.2 Motion Diagrams	✗

Quiz 2
by Frank Noschese on Thu, 10/24

FL.1 Normal Force	✓
FL.2 Spring Force	✓
FL.3 Gravitational Force	✗
FL.4 Tension Force	✓
MR.1 Graphing	✗
MR.2 Motion Diagrams	✓
MR.3 Interaction Diagrams	✓
MR.4 Force Diagrams	✓

Buffet Quiz 1
by Frank Noschese on Fri, 11/08

FL.3 Gravitational Force	✓
MR.1 Graphing	✓

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CONCLUSION

Again, the data I collected here is minimal, and I don't want to make any strong claims based on it. However, this data suggests that—at least for this group of students—having an assignment count toward the final average does not have a significant effect on student motivation to do the work. This data also suggests that percentage of assigned work submitted during a semester does not predict student outcomes. However, this data *does* suggest that percentage of assignments re-submitted by students (especially students who struggled previously) may have a significant effect on student improvement.

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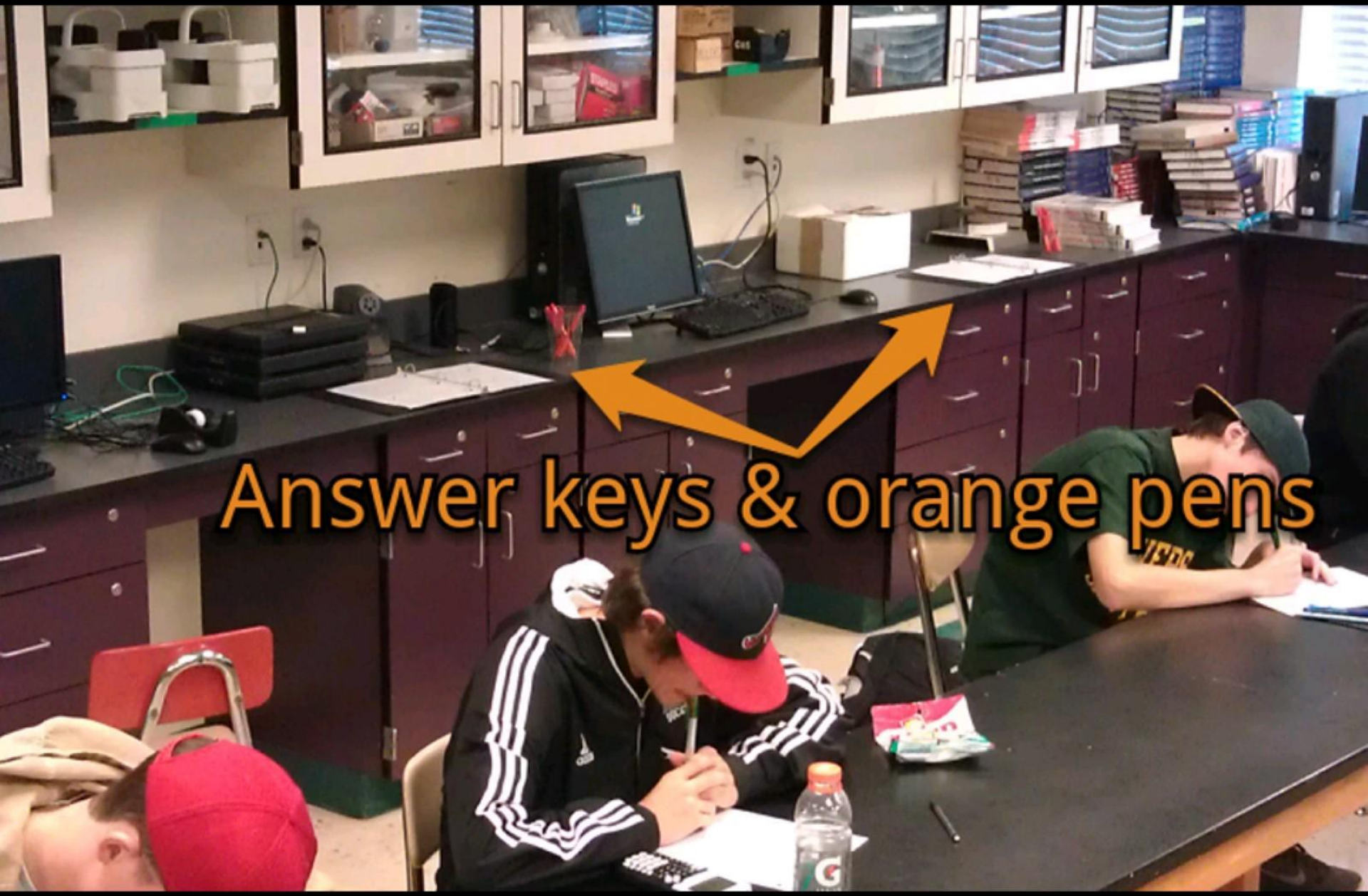
Answer keys & orange pens

Abstract

This experiment involved college students ($N = 464$) working on an authentic learning task (writing an essay) under 3 conditions: no feedback, detailed feedback (perceived by participants to be provided by the course instructor), and detailed feedback (perceived by participants to be computer generated). Additionally, conditions were crossed with 2 factors of grade (receiving grade or not) and praise (receiving praise or not). Detailed feedback specific to individual work was found to be strongly related to student improvement in essay scores, with the influence of grades and praise more complex. Overall, detailed, descriptive feedback was found to be most effective when given alone, unaccompanied by grades or praise. The results have implications for theory and practice of assessment.

The learning goals I need to improve most are: I could continue to learn more about momentum transfer.

What I can do to improve: I can continue to go to extra help and practice when to use what equations

The learning goals I excel in are: Gravity

Reasons why I excel in these areas: I went to extra help and going over the webassign with you really helped.

Student Name: Megan

Student Signature: Megan **Date:** 2/10

Parent Signature: Mary **Date:** 2/10

Questions/Comments:

From her portfolio, I can see that Megan really understands what you are teaching her.

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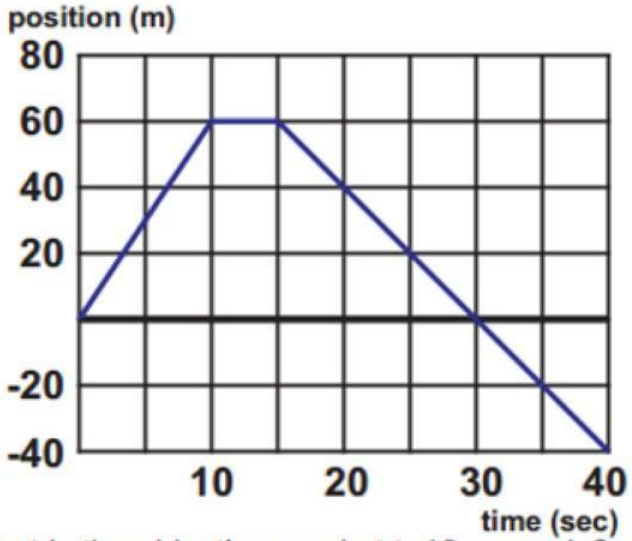
CV.4 – I can interpret/draw motion diagrams for objects moving with constant velocity.
CV.6 – I can interpret/draw the position vs. time graph for an object moving with constant velocity.
CV.7 – I can interpret/draw the velocity vs. time graph for an object moving with constant velocity.

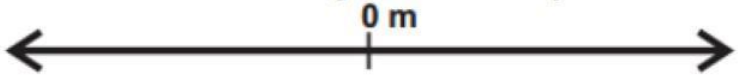
2. Shown below is a position vs. time graph for an object.



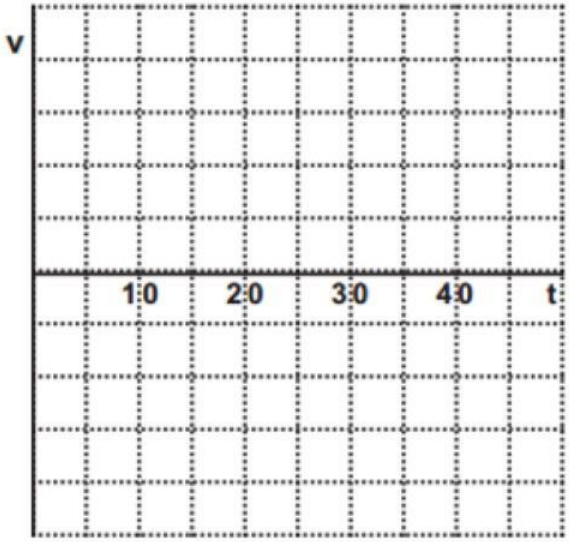
b. What is the object's speed at t=12 seconds? Explain/justify your answer.

c. Describe the motion of the object from t=15s to t=40s. Explain/justify your answer.

a. Sketch a motion diagram for the object.



d. Draw a second corresponding velocity vs. time graph for the object. Number the vertical axes.

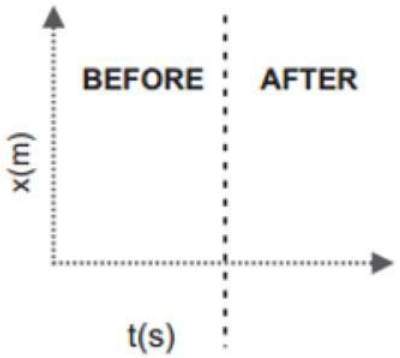


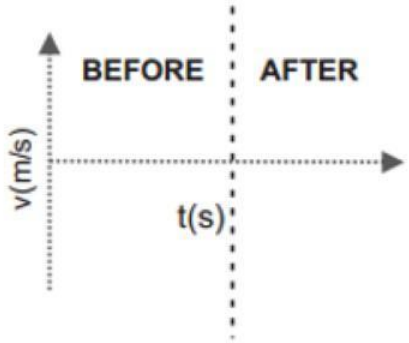
MOM.2 - I can calculate the momentum of an object/system with direction and proper units.
MOM.3 - I can draw an interaction diagram and specify the system and the surroundings.
MOM.4 - I can draw and analyze momentum bar charts.
MOM.5 - I can use momentum conservation to solve different problems.

1. Consider a collision in football between an 85-kg fullback and a 100-kg linebacker during a goal-line stand. The fullback plunges across the goal line at a velocity of 1.5 m/s east and collides with the linebacker. The linebacker and fullback hold each other and move as one.
   a. Draw an interaction diagram and identify system/surroundings for this situation.
   b. Create before and after momentum bar charts for this situation. You must label each bar.
   c. What is the **velocity** of fullbacker and linebacker as a result of the collision?
   d. Compare the fullback's **momentum change** to the linebacker's momentum change as a result of this interaction. Explain/justify your answer.
   e. Compare the fullback's **velocity change** to the linebacker's velocity change as a result of this interaction. Explain/justify your answer.

[PAGE 2]
CV.4 - I can interpret/draw motion diagrams for objects moving with constant velocity.
CV.6 - I can interpret/draw the position vs. time graph for an object moving with constant velocity.
CV.7 - I can interpret/draw the velocity vs. time graph for an object moving with constant velocity.

f. Sketch a position-time graph, a velocity-time graph, and a motion diagram for the fullback before and after the collision with the linebacker.





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MIT Faculty Newsletter

Teach Talk

Skills, Big Ideas, and Getting Grades Out of the Way

Patrick Henry Winston

- We should find a way to deemphasize grades so as to make room for big ideas
- We should test understanding, not speed and general intelligence
- We should not care whether a student demonstrates understanding early in the semester, or late, as long as the student demonstrates understanding.
- We should give an A to every student that demonstrates A-level understanding

Guided by our desire to test subject understanding and deemphasize quiz-taking speed, we decided to move from two material-packed quizzes to four more relaxed quizzes. Further guided by our desire to test subject understanding rather than general intelligence, we decided to resist the temptation to be so clever that our quizzes test the students on how well they can penetrate our cleverness, rather than their understanding of the material.

To acknowledge that we do not care when a student demonstrates subject understanding, as long as the student demonstrates understanding, we decided to divide our final examination into parts corresponding to the four quizzes, plus a fifth part covering material taught after the latest quiz date that Institute rules allow. Then, we award the student the higher of the grades they get on the quizzes and the corresponding parts of the final.

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What Do You Value?

Timeliness

Leadership

Lab Skills

Participation

Problem Solving

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LEARNING	MASTERED	
☑	☑	Knows **instructor's name.**
☐	☑	Is able to **sit on ice & stand up.**
☐	☑	Knows **proper stance.**
☐	☑	Is able to **march in place.**
☐	☑	Is able to **march forward** (8- 10 steps).
☐	☑	Is able to **dip in place.**
☐	☑	Is able to **march then glide** on two feet.
☐	☑	Is able to **squat in place.**
☐	☑	Is able to **dip while moving**
☐	☑	Is able to do **forward swizzles** (6-8 in a row).
☑	☐	Is able to do **backward wiggles** (6 in a row).
☑	☐	Is able to do **snow plow stop.**
☑	☐	Is able to do **rocking horse**
☐	☑	Is able to do **2-foot hop in place.**
		Group Activities
☐	☑	Actively **participates.**
☐	☑	Enjoys **group activities.**
☐	☑	Follows **directions.**

NAME: _____ CHEMISTRY 2

3. Counting Particles

	3.1 I can classify and distinguish between elements, molecules, pure substances, mixtures, and compounds.
	3.2 I can reason about and draw particle diagrams for gaseous chemical reactions.

2. Energy and States

	2.1 I can *qualitatively* describe the relationship between pressure, temperature, volume, and number of particles of a gas.
	2.2 I can *quantitatively* determine how pressure, temperature, volume, and number of particles of a gas are related.
	2.3 I can describe how phase energy and thermal energy change when substances are heated and cooled.
	2.4 I can draw and interpret graphs of heating/cooling.
	2.5 I can draw and interpret energy bar charts for heating/cooling.

1	The Momentum Principle (Chapter 1)
I	I can calculate the momentum of particle at low speeds. I can calculate relativistic momentum. I can apply the concepts of velocity, average velocity, and change in position.
II	I can apply Newton's First Law to relate motion and interactions I can use and manipulate vectors algebraically and graphically. I can calculate change in momentum and specify its direction. I can use the position update formula to solve problems.
III	

LEARNING GOALS	0 - MISSING	1 - BEGINNING	2 - DEVELOPING	3 - PROFICIENT
SR.2 - I can design a reliable experiment that solves the problem.	The experiment does not solve the problem.	The experiment attempts to solve the problem but due to the nature of the design the data will not lead to a reliable solution.	The experiment attempts to solve the problem but due to the nature of the design there is a moderate chance the data will not lead to a reliable solution.	The experiment solves the problem an has a high likelihood of producing data that will lead to a reliable solution.
SR.3 - I can communicate the details of an experimental	My diagrams are missing and/or my experimental procedure is missing or extremely vague.	My diagrams are present but unclear and/or my experimental procedure is present but important details are missing.	My diagrams and/or my experimental procedures are present but with minor omissions or vague details.	My diagrams and/or my experimental procedure are clear and complete.
SR.6 - I can record and represent data in a meaningful way.	My data are either absent of incomprehensible.	Some important data are absent or incomprehensible.	All important data are present, but recorded in a way that requires some effort to comprehend.	All important data are present, organized, and recorded clearly.
SR.7 - I can analyze data appropriately.	No attempt is made to analyze the data.	An attempt is made to analyze the data, but it is either seriously flawed or inappropriate.	The analysis is appropriate but it contains minor errors or omissions.	The analysis is appropriate, complete, and correct.

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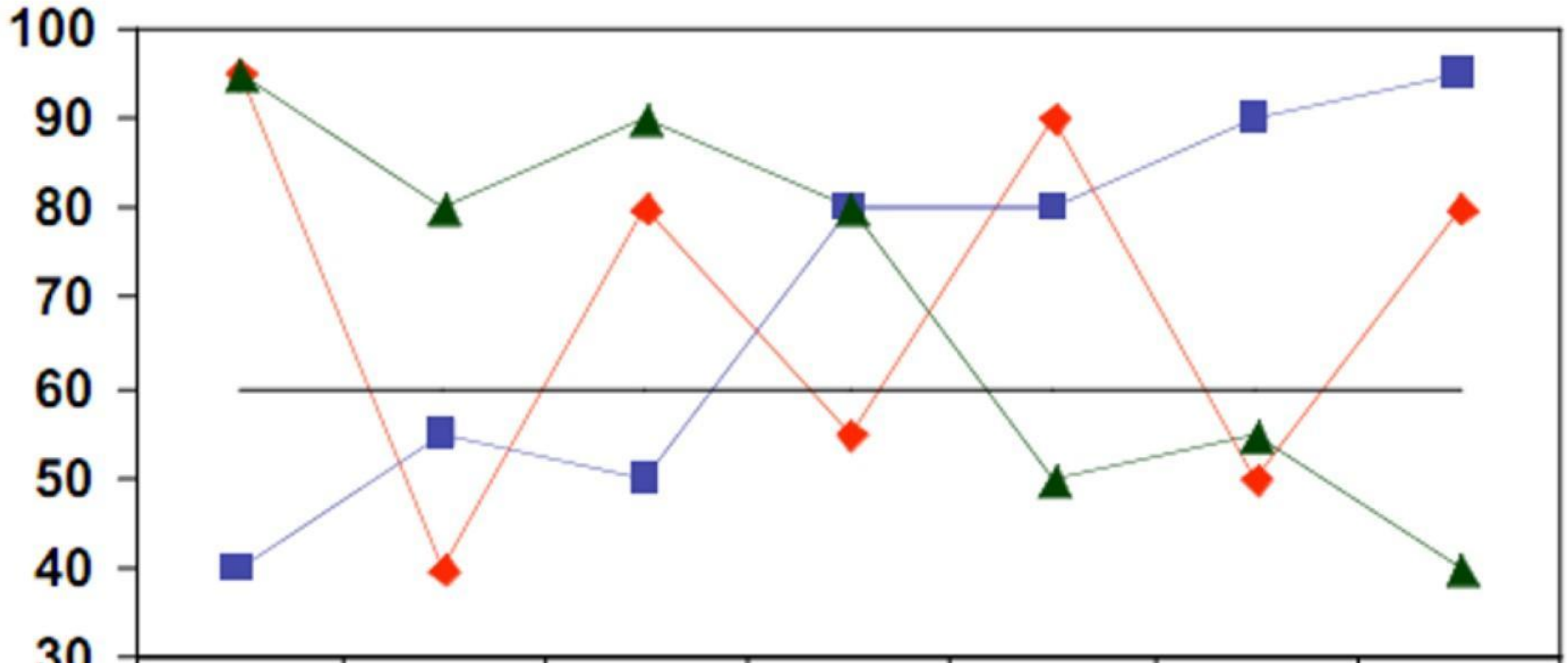
Which student would you choose to pack your parachute?



	1st Try	2nd Try	3rd Try	4th Try	5th Try	6th Try	7th Try
Student A	95	40	80	55	90	50	80
Student B	40	55	50	80	80	90	95
Student C	95	80	90	80	50	55	40
Mastery	60	60	60	60	60	60	60

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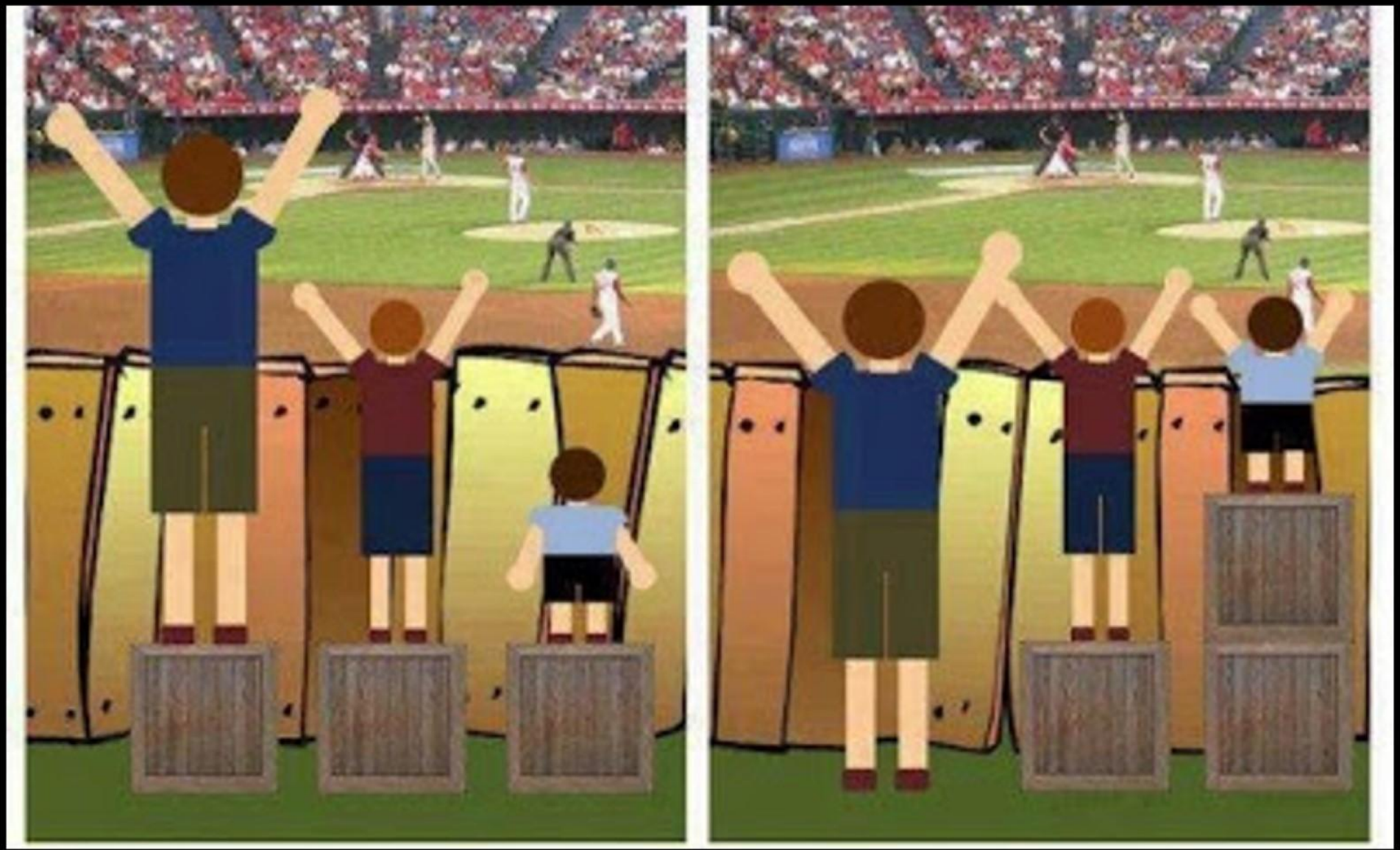
7. Assess What You Value
8. Clear Goals and Expectations
9. Failure, Iteration, Experiment
10. Do What Works Best for Your Students

Fair Isn't Always Equal



"*Are grades improving?*":

No, not yet, but we have done a better job of more accurately reporting student grades. When we first started investigating grading reform our frustrations were with student behavior. We wanted to fix kids. What we found out was that our instruction needed fixing. We studied the standards and the test specs. We did away with sections in the text that didn't address the standards so we could spend more time on those that did. We wrote our tests based on the standards and then designed our lessons based on the tests. We were trying to make sure our lessons prepared students for our tests, which in turn prepared them for the state assessments. I just know I feel better doing it this way because I feel like I am doing the right thing. The grades that I give are based on what the student knows and has learned and what behaviors they have shown during the process.