

MONTROSE

COMMUNITY SCHOOLS



District Professional Development Day #3: November 8, 2016

The Power of Standards, Scales, and Assessments

TIME IN	TOPIC	PARTICIPANTS	LOCATION	PRESENTER(S)
8:00-9:30 am	The Power of Standards, Scales, and Assessments <i>Working in PLC Groups</i>	K-12 Teaching Staff	Cafeteria	Mike Ruhl, <i>Marzano Research Lab</i>
9:30-9:45am	BREAK			
9:45-11:30am	The Power of Standards, Scales, and Assessments <i>Working in PLC Groups</i>	K-12 Teaching Staff	Cafeteria	Mike Ruhl, <i>Marzano Research Lab</i>
11:30-12:15	LUNCH PROVIDED			
12:15-3:00pm	The Power of Standards, Scales, and Assessments <i>Working in PLC Groups</i>	K-12 Teaching Staff	Cafeteria	Mike Ruhl, <i>Marzano Research Lab</i>
1:30-1:45pm	BREAK			
1:45-3:00pm	The Power of Standards, Scales, and Assessments <i>Working in PLC Groups</i>	K-12 Teaching Staff	Cafeteria	Mike Ruhl, <i>Marzano Research Lab</i>

Please bring:

- ***Technology (Ipad, Chromebook, or laptop)***
- ***Access to your Google Docs (Priority Standards, Essential Vocabulary, Proficiency Scales)***
- ***Formative Assessment & Standards-Based Grading book by Marzano***

Goals for the Professional Development Day:

1. Discuss the process for identifying measurement topics (learning goals), develop scales, and utilize high quality assessments.
2. Discuss and give examples of how to use goals and scales in the classroom.
3. Discuss how PLC's can use assessment data to drive instructional practices and move all students toward proficiency.



MARZANO Research
Leading the Way

The Power of Standards, Scales, & Assessments

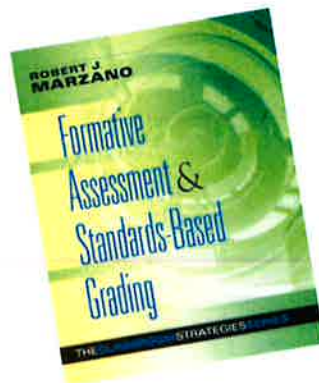


October 8, 2016

Dr. Mike Ruyle

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 @Mike Ruyle



Lotus Chart

	Valid/ Reliable			Proficiency Scales			Aligned Assessments	
	Guaranteed/ Viable			Learning Goals			Student Engagement	
	Levels of Achievement			Declarative/ Procedural Knowledge			Students Monitor Growth	

Goals for Today...

- Discuss the process used to identify measurement topics (learning goals), develop scales, and utilize high-quality assessments.
- Discuss and give examples of how to use goals and scales in the classroom.
- Discuss how PLCs can use assessment data to drive instructional practices and move all students toward proficiency.

Step 1

Identify Priority Standards

- Endurance
- Leverage
- Readiness

Process and Consensus Building

What the Research Says about Learning Goals...

Learning targets convey to students the **destination for the lesson** – what to learn, how deeply to learn it, and exactly how to demonstrate their new learning. In our estimation (Moss & Brookhart, 2009) and that of others (Seidle, Rimmele, & Prenzel, 2005; Stiggins, Arter, Chappuis, & Chappuis 2009), the intention for the lesson is one of the most important things students should learn. **Without a precise description of where they are headed, too many students are “flying blind.”**

Moss, Brookhart, Long (2011). Knowing Your Learning Target. Educational Leadership. 68 (6). Pp. 66-69

The starting place for all effective instruction is designing and communicating clear learning goals.

Marzano (2009)

Our collective goal is that the largest possible percentage of our students get there. To reach that goal we must define for ourselves and for them where “there” is. **Any energy you invest in becoming clear about your targets will pay dividends...**

Stiggins (1994)

If teachers aren't sure of instructional goals, their instructional activities will not be focused, and unfocused instructional activities do not engender student learning.

Marzano (2009)

Step 2



GUIDANCE FOR WRITING HIGH-QUALITY PROFICIENCY SCALES

- Consider each bullet point on this guidance document as you write and refine proficiency scales to ensure high quality.

Score 4.0	This level is in addition to score 3.0 performance. The student demonstrates in-depth inferences and applications that go beyond what was taught. ○ Include an example or two of how a student might demonstrate a performance beyond the expectation of the standard. ○ Content at this level does not require explicit classroom instruction. ○ Remember that a student can demonstrate a performance at this level in a variety of ways.
Score 3.0	This level articulates the expectation for ALL students and aligns to the priority standard. ○ Ensure that each bullet is a required expectation at the level of the standard. ○ Be sure the expectations at this level align to the DOK assignment of the standard. ○ Consider supporting standards content to be included at this level (if directly related to priority standard). ○ Remember that each bullet requires explicit classroom instruction. ○ Limit the number of bullets at this level to three, if possible.
Score 2.0	This level includes simple content related to the priority standard. ○ Include critical vocabulary terms related to the standard. ○ Articulate the simple content within the standard, or the prerequisite knowledge and skills, but be sure to be selective and purposeful in making decisions about what is included on the scale. ○ Each bullet at score 3.0 typically has a related bullet at score 2.0 (but not required). ○ Consider previous and following grade level expectations when determining the prerequisite knowledge and skills. ○ Consider supporting standards content to be included at this level (if directly related to priority standard). ○ Limit the number of bullets at this level to three, if possible, <u>not</u> including the vocabulary terms.

Important Idea #1...

Proficiency scales
provide clear focus for
instruction to essential
learning goals.



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Important Idea #2...

Proficiency scales serve
as the framework for a
high-quality classroom
assessment.



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Important Idea #3...

Proficiency scales ensure
alignment of curriculum,
instruction, assessment,
and feedback.



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Notes:

Step 3

- Build Assessments That Are Aligned to the Proficiency Scales

Proficiency Scales and Assessment Alignment

	Atmospheric Processes and Water Cycle
4	Infer relationships regarding atmospheric processes and the water cycle.
3	An explanation of: • How the water cycle processes impact climate changes • The effects of temperature and pressure in different layers of Earth's atmosphere
2	• Recognize and recall basic terms such as: climatic patterns, atmospheric layers, stratosphere, troposphere. • Recognize or recall isolated details such as: • Precipitation is one of the processes of the water cycle. • The troposphere is one of the lowest portions of the Earth's atmosphere.

Three types of assessment items to measure the knowledge and skills defined

- **Level 2 Items:** Simpler details and processes that have been explicitly taught
- **Level 3 Items:** Complex ideas and processes that have been explicitly taught
- **Level 4 Items:** Inferences and applications that go beyond what was taught

Level 3.0 Items

Measuring Atmospheric Processes and Water Cycle

- **Explain** how evaporation affects the climatic pattern in areas around large bodies of water, such as the shoreline communities of Lake Michigan.
- A weather balloon travels up into the stratosphere. **Explain** what would happen to it as it progressed through the various layers of the atmosphere.

Level 2.0 Items

Measuring Atmospheric Processes and Water Cycle

- Define the following terms.
 - Climatic pattern
 - Atmospheric layers
 - Stratosphere
- Identify the true statements with the letter T.
 - The atmosphere is between the troposphere and the stratosphere.
 - The Earth's atmosphere helps protect life on Earth by absorbing ultraviolet radiation.
 - The temperature of the Earth's atmosphere varies with altitude.

Level 4.0 Items

Measuring Atmospheric Processes and Water Cycle

Complete the following analogy.

Condensation is to evaporation as _____ is to _____

Why is this analogy accurate?

Step 4

- Track Student Progress On All Priority Standards
 - By The Learner, By The Skill

			6/8/22 Learning Narrative Two				6/8/22 Content Class				6/8/22 Character Plot			
			10/19/2021	BL	Core	Current	BL	Core	Current	BL	Core	Current		
1	1	0	Pass	1	1	15	1	1	15	1	1	15		
2	12	10	Pass	15	4	15	1	1	4	1	15	4		
3	NA	10	NA	15	4	15	1	15	4	1	15	4		
4	0	0	Pass	1	1	1	1	1	15	1	1	1		
5	0	10	Pass	1	1	4	1	1	4	1	15	4		
6	12	5	Pass	1	4	15	1	1	15	1	4	15		
7	12	10	Pass	1	1	4	1	4	4	1	1	15		
8	1	10	Pass	1	1	1	1	15	1	1	15	1		
9	12	5	Pass	1	1	1	15	15	15	1	1	1		
10	0	10	Pass	1	1	1	15	15	1	1	1	1		
11	12	10	Pass	15	15	15	1	1	1	1	15	1		
12	NA	10	NA	1	15	1	15	15	15	1	4	4		
13	4	0	Pass	1	1	1	15	1	1	1	15	1		
14	1	10	Pass	15	15	1	15	15	1	15	15	15		
15	10	1	Pass	1	15	15	1	15	15	15	1	15		
16	1	1	Pass	1	1	15	15	15	15	1	15	1		
17	12	10	Pass	15	15	15	1	15	15	1	4	15		
18	10	10	Pass	15	1	1	1	4	15	1	15	1		
19	0	0	Pass	1	1	1	1	15	15	1	1	1		
20	12	5	Pass	1	15	15	1	1	1	1	15	1		
21	10	1	Pass	1	15	1	15	15	1	1	1	1		
22	0	10	Pass	15	1	15	15	15	1	15	15	1		
23	10	0	Pass	1	15	1	15	1	1	15	1	1		

Step 5

Correlate Proficiency Scale Scores To High Stakes Test Results

MTs Mastered	N	% Proficient or Above
0	12	0%
1	2	0%
2	6	0%
3	13	0%
4	8	0%
5	13	23%
6	29	21%
7	12	42%
8	29	52%
9	29	76%
10	29	48%
11	40	86%
12	44	84%
13	227	96%

Essential Learnings (ELs) Mastered in Language Arts and State Test Passing%

ELs Mastered	Grade 3 Percent Proficient or Above ISTEP	Grade 4 Percent Proficient or Above ISTEP
0	0.0	0.0
1	11.1	12.5
2	14.3	25.0
3	23.1	57.1
4	45.0	20.0
5	77.8	40.0
6	70.6	52.0
7	62.2	65.2
8	75.0	73.1
9	94.4	66.7
10	96.8	88.4
11	98.3	81.5
12	98.3	94.9

Essential Learnings (ELs) Mastered in Mathematics and State Test Passing%

ELs Mastered	Grade 3 Percent Proficient or Above ISTEP	Grade 4 Percent Proficient or Above ISTEP
0	0.0	0.0
1	0.0	0.0
2	0.0	0.0
3	0.0	0.0
4	0.0	9.1
5	23.1	0.0
6	20.7	20.0
7	41.7	33.3
8	51.7	16.7
9	75.9	48.3
10	48.3	42.9
11	80.0	58.3
12	84.1	56.0
13	95.6	72.7
14		82.1
15		96.0
16		97.4

Correlation Between Teacher or Educator Learnings Mastered and State Test Passing Rates

Subject and Grade	Correlation	Statistical Significance
ELA Grade 3	.952	$p < .001$
ELA Grade 4	.936	$p < .001$
Math Grade 3	.953	$p < .001$
Math Grade 4	.962	$p < .001$

Haystead (2016)

STEP 6: ADDRESS ASSESSMENT RELIABILITY

- INTER-RATER RELIABILITY- BETWEEN TEACHERS AND SCHOOLS
- STATISTICAL RELIABILITY PILOT

TEACHER CREATED ASSESSMENT RELIABILITY

Subject	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7	Day 8	Day 9	Day 10	Day 11	Day 12	Day 13	Day 14	Day 15	Day 16	Day 17	Day 18	Day 19	Day 20
ELA	1.00																			
Math	1.00																			
Science	1.00																			
History	1.00																			
Art	1.00																			
Music	1.00																			
Physical Education	1.00																			
Foreign Language	1.00																			
Health	1.00																			
Character Education	1.00																			
Technology	1.00																			
Environmental Studies	1.00																			
Life Science	1.00																			
Earth Science	1.00																			
Space Science	1.00																			
Humanities	1.00																			
Mathematics	1.00																			
Science	1.00																			
History	1.00																			
Art	1.00																			
Music	1.00																			
Physical Education	1.00																			
Foreign Language	1.00																			
Health	1.00																			
Character Education	1.00																			
Technology	1.00																			
Environmental Studies	1.00																			
Life Science	1.00																			
Earth Science	1.00																			
Space Science	1.00																			

Finding Area

		1	2	3	4	5	6	7
		Assessment 1	Assessment 2	Assessment 3	Assessment 4	Assessment 5	Assessment 6	Assessment 7
James	Day of Assessment	1	4	8	16	16	22	29
	Observed	0.50	1.50	2.00	2.00	2.50	1.00	3.50
	Predicted	0.571	1.230	1.812	2.000	2.639	1.145	3.662
Chris	Day of Assessment	1	8	22	29			
	Observed	1.00	2.00	3.00	4.00			
	Predicted	0.904	2.000	3.212	3.570			
Clara	Day of Assessment	1	4	22	29			
	Observed	0.50	1.00	3.00	3.50			
	Predicted	0.704	1.433	3.513	4.034			
Zach	Day of Assessment	1	22	29				
	Observed	0.50	1.00	4.00				
	Predicted	0.407	1.196	3.774				

Tier I- Core Instruction:

Instruction for all ELs, supplemental standards, and nice-to-know. Goal = mastery of all ELs for all students in math and language arts.

1. PLC Teams work together to determine a scope and sequence/ yearlong plan of instruction for ELs. EL standards involve many subskills or prerequisites that will need to be taught. Determine which EL will be a focus and what the specific learning targets will be for instruction.

Before core instruction for the specific EL, be thinking of what prerequisite skills are necessary. Begin remediation of prerequisite skills for those students in need.

6. Administer the CFA developed by the PLC team.

2. Gather baseline data for each student. Where are they? This could be an objective or unobtrusive assessment.

5. Core instruction- Instruction will involve the EL standard and other standards. Differentiated instruction and checks for understanding will occur along the way. Amount of time will vary per EL.

3. Plan for core instruction. Core instruction will involve differentiation by student needs within your own classroom.

4. Introduce students to the EL. Show students the scale and develop kid-friendly scales with examples for level 2, 3, and 4 learning.

Core instruction for a specific EL will not take place simultaneously with intervention (ELP) during the initial instruction. Grade level teams will determine how much time needs to be allotted for an EL in (core instruction for the majority of students to reach mastery on the chosen skill. If a team that the CFA is administered and are large to look at grouping students for intervention (ELP).

**Extended Learning
Time (ELT)**

**Tier 2 Intervention and
Acceleration**

Instruction for ELs by the student, by the skill. Goal = mastery of *all* ELs for *all* students in math and language arts.

1. Administer the grade level CFA to ALL students to determine where students are with this EL following core instruction.

Set your team's SMART goal for the EL cycle.

Evaluate your team's SMART goal.

2. With your PLC team, analyze the CFA data looking for patterns and evaluating achievement. What strategies proved most successful for students? Share and discuss strategies that produced desired results so all teachers learn from one another. Consider what strategies should be abandoned because they did not work well.

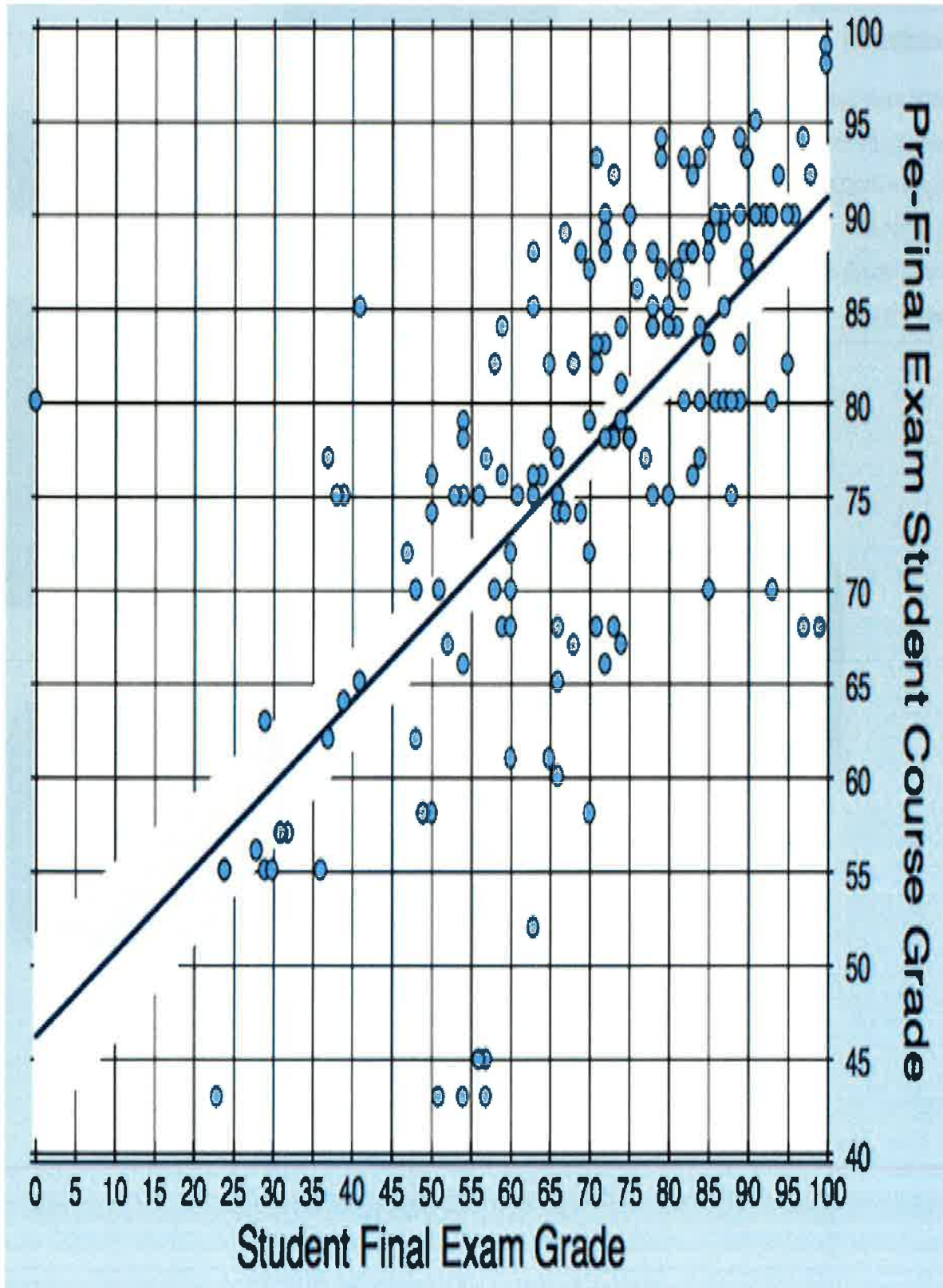
6. Form a plan to continue intervention for any students who have yet to master the EL.

5. Evaluate progress throughout Tier 2 Intervention. Where are the students on the scale now? For those reaching mastery, discontinue intervention for this EL. Identify students in need of further or modified interventions to be successful.

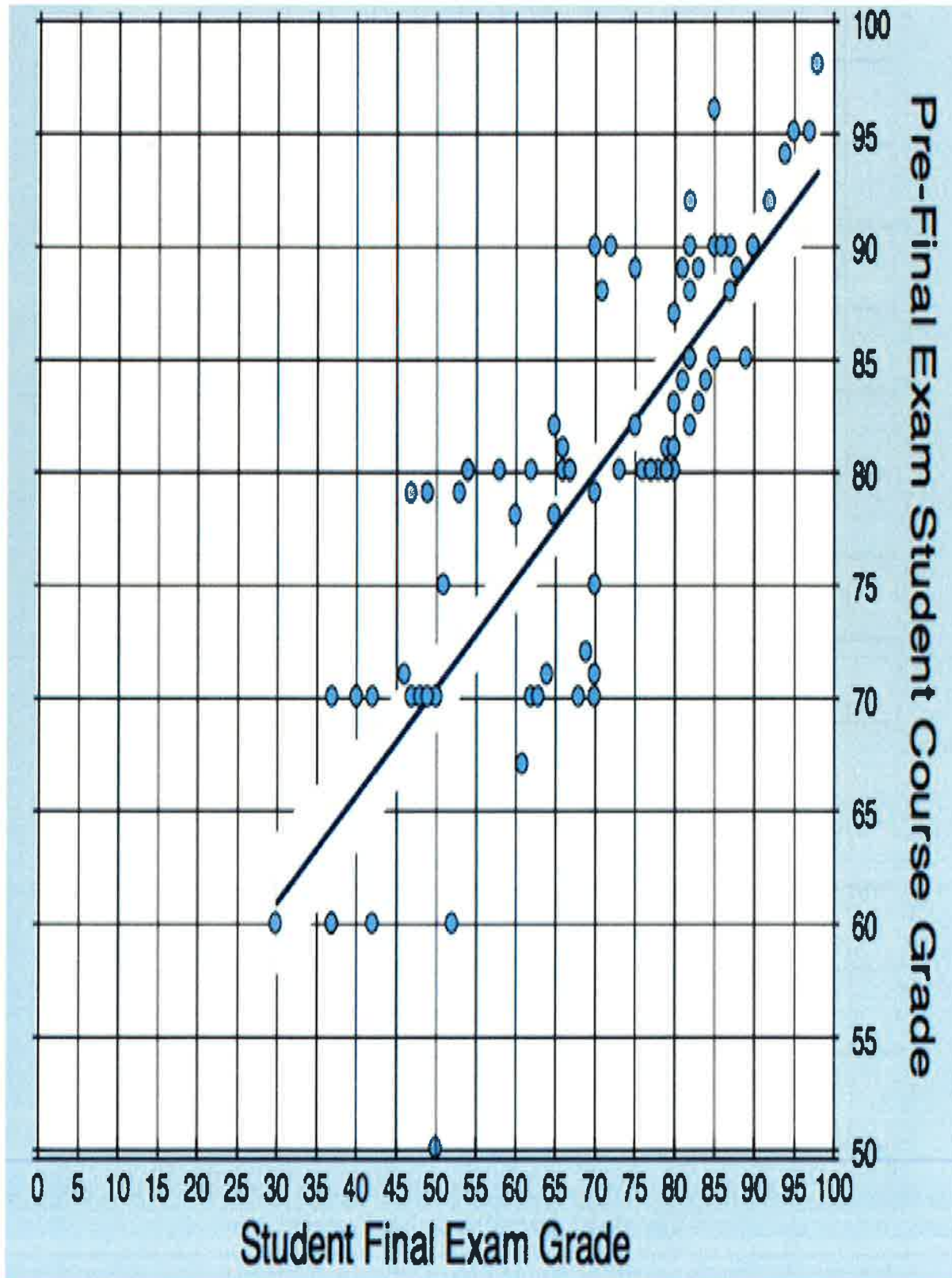
3. Group the students by need for Tier 2 Intervention /Acceleration (ELT). Which teachers had the best results? Which teachers will teach each group? How will IAs be assigned? What will be the focus of instruction for each group?

4. Begin Tier 2 Intervention or Acceleration instruction. Groups will provide intervention including enrichment and/or acceleration for those already beyond 3.0 on the scale.

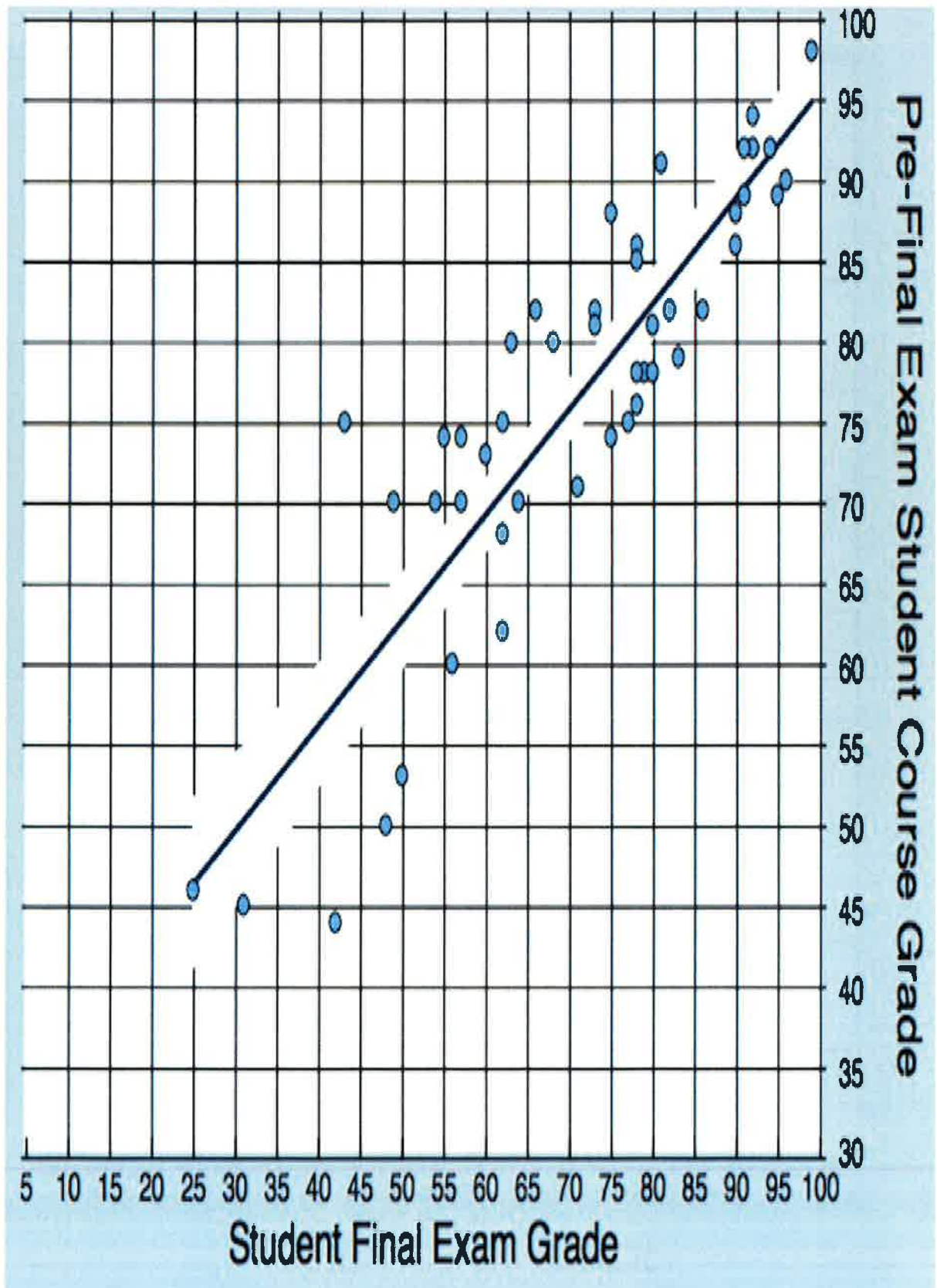
Traditional – 0.6743



Performance Based – 0.8248



Hybrid – 0.8835



Correlation of Final Grade to Exam Score

3 groups analyzed:

- Traditional – 0.6743
- Perf Based – 0.8248
- Hybrid - 0.8835

Magnitude of these numbers:

- A P.B. grade is a better predictor of an exam score
- A P.B. grade more accurately reflects knowledge

(Implication for future success – Alg 2 example)

FINAL EXAM SCORES

Model	Mean Score	Median Score
Perf. Based	65.6%	69%
Hybrid	69.1%	73%
Tradition	69.1%	72%
T-Test : Not statistically significant aka Same level of achievement		

Star Data :

Scaled Score, Growth Percentile, & Percentile Rank

- No statistical significance in 2 groups
- PB Students performed at same level as Traditional (with a 40% lower population of Reg. Ed.)
- “Powerful”
- Shows Legitimacy of Program
- *If we want to close achievement gap, we need to raise the low-flyers. This data showed equal levels of achievement as the high-flyers.



Proficiency Scale Review Checklist

Content Area _____

Grade Level and Standard(s) _____

Criteria	Yes	No	Comments
Specificity The language of each level on the scale is clear and specific.			
Progression Verbs are present and these verbs and corresponding context represent a progression of complexity.			
Comprehensiveness The proficiency scale is double. It has enough depth, yet not so much to warrant an additional scale. Each level on the scale includes one to three related learner expectations.			
Measurability Each expectation is observable and quantifiable.			
Format Each expectation is written with the verb first to provide focus on what the student should know or be able to do.			
Vocabulary Key vocabulary has been identified at the score 2.0 level.			
Alignment Aligned vertically with previous and/or subsequent grade levels/courses.			

Middle School Learning Goal Scale

Example

Grade/Content: 7th Grade – Civics and Government

Learning Goal:

Students will evaluate the roles, rights and responsibilities of United States citizens, and determine methods of active participation in society, government, and the political system.

SCORE 4.0	Students will: • Generate an action plan for increasing active participation in society, government or the political system. No major errors regarding the score 4.0 content
SCORE 3.0	Students will: • Analyze the impact of dutiful citizenship on society and correlate the findings to non-participatory citizenship. • Evaluate the adverse affects of persons not exhibiting dutiful citizenship on society. No major errors regarding the score 3.0 content
SCORE 2.0	Students will: • Define and understand the following: roles, rights, responsibilities, citizenship, society, government, political systems, laws, taxes, jury, voting, volunteering, perspectives, influence, and election • Understand the purpose of the Bill of Rights and Constitution • Understand that citizens have certain rights and obligations • Identify the current political parties in America • Understand that people have varying perspectives on governmental issues No major errors regarding the score 2.0 content
SCORE 1.0	With help, partial success at score 2.0 content and score 3.0 content
SCORE 0.0	Even with help, no success

High School Learning Goal Scale

Example

Grade/Content: 9-12 - Biology

Learning Goal: The student will be able to **describe** the scientific theory of cells, as well as **relate** the history of its discovery to the process of science

SCORE 4.0	The student will be able to evaluate and rank the importance of contributions to cell theory of several preeminent scientists (i.e., Van Leeuwenhoek, Hooke, Schwann, Schleiden, Virchow). No major errors regarding the score 4.0 content
SCORE 3.0	The student will be able to analyze the relationship between the evolution of cell theory and its contributions to the process of science No major errors regarding the score 3.0 content
SCORE 2.0	The student will be able define the following terms/phrases: • <i>Theory, law, cell, science, scientific claim, scientific argumentation, critical/logical thinking (in science), data, alternative scientific explanations, investigation, evidence, phenomena</i> The students will be able to recall the contributions to cell theory of the following scientists: • <i>Van Leeuwenhoek, Hooke, Schwann, Schleiden, Virchow</i> The student will be able to explain cell theory, including how continuous investigations have influenced its development over time. The student understands the ways in which a scientific claim is evaluated. Students can identify the necessary criteria for being scientific. The students will be able to explain the development of a theory. The students understand the differences between theories and laws. No major errors regarding the score 2.0 content
SCORE 1.0	With help, partial success at score 2.0 content and score 3.0 content
SCORE 0.0	Even with help, no success

ULTIMATE FRISBEE

Period:

Name:

STANDARD 1 - I'm good at a variety skills and movements

	1 New to me	2 On the right track but not quite there	3 I can do it!	4 # Like a boss!	WHAT NUMBER ARE YOU ?
Passing	MOST OF THE TIME, I can step with the correct foot to pass a frisbee accurately over short distances during drills - to still targets	MOTT, I can step with the correct foot to pass a frisbee accurately, short distances during small-sided games - to still targets	MOTT, I can step with the correct foot to pass a frisbee with accuracy and a variety of distances during small-sided games - to moving targets	MOTT, I can step with the correct foot when passing a frisbee both forehand and backhand accurately and a variety of distances during small-sided games to moving targets	
Catching	MOST OF THE TIME, I can catch a frisbee while stationary with a clap catch during drills	MOTT, I can catch a frisbee while moving toward it, with a clap catch during drills	MOTT, I can catch a frisbee from a variety of trajectories during small-sided games	MOTT, I know which type of catch to use and can use them all (one-handed, two-handed, lay-out and clap catch) from a variety of trajectories while moving during small sided-games	

I want to improve my skills, so I am going to...

STANDARD 2 - I use concepts, principles, strategies and tactics

	1 New to me	2 On the right track but not quite there	3 I can do it!	4 # Like a boss!	WHAT NUMBER ARE YOU ?
Offensive Skills	MOST OF THE TIME, I perform pivots OR fakes before passing in order to create open space for passing during drills	MOTT, I perform pivots OR fakes OR jab steps in order to create open space for passing during small-sided games	MOTT, I perform pivots, fakes AND jab steps in order to create open space for passing during games	MOTT, I perform pivots, fakes AND jab steps. I do give-and-go fakes in order to create open space for passing during games. I perform cuts to get open.	
Offensive Skills	MOST OF THE TIME I'm moving around the field but I'm not really sure where I should go.	MOTT, I create open space by using the width and length of the field on offense	MOTT, I create open space by staying spread out on offense and cutting and passing quickly, and I move back to the frisbee when the thrower is stuck	MOTT, I create open space by staying spread out on offense and cutting and passing quickly, and I use continuous fakes off the ball in order to keep my defender busy.	
Defensive Skills	MOST OF THE TIME, I maintain a defensive athletic position with arms extended, eyes on the offensive player, and I'm ready to move during drills	MOTT, I reduce open space by making my body larger and moving passing angles during drills	MOTT, I reduce open space by staying close to a moving opponent and not allowing them to make a catch during games	MOTT, I reduce open space by staying close to a moving opponent AND anticipating speed of frisbee AND opponent AND intercepting OR not allowing them to make a catch during games	

I want to improve my skills, so I am going to...

Standard 4/5, I am responsible for how my personal and social behavior shows respect for self and others. I realize how playing this game benefits my health and well being as a person

	1 New to me	2 On the right track but not quite there	3 I can do it!	4 # Like a boss!	WHAT NUMBER ARE YOU ?
Working with Others - Spirit of the Game	MOST OF THE TIME, I accept differences among classmates	MOTT, I demonstrate cooperation skills by giving AND receiving feedback constructively	MOTT, I problem-solves with a small group during game play in order to resolve conflicts, and I encourage others	MOTT, I provide encouragement an solutions and collaborate without prompting from a teacher	

I want to improve my skills, so I am going to...

Gravity (HS Science)

4.0	The student will: Investigate the outcome of a collision between two satellites (for example, diagram the forces acting upon two satellites orbiting around Earth heading toward one another and determine if they will continue to orbit after they collide using known equations).
3.5	In addition to score 3.0 performance, partial success at score 4.0 content
3.0	The student will: G1—Use Newton's law of gravitation to describe the gravitational forces between objects (for example, using known equations and Newton's law of gravitation, find the values for force, acceleration, velocity, mass, or the distance between two objects based upon given information). G2—Predict the motion of orbiting objects in the solar system (for example, use equations to find the velocity, period, frequency, and distance of objects in both circular and elliptical orbits).
2.5	No major errors or omissions regarding score 2.0 content, and partial success at score 3.0 content
2.0	G1—The student will recognize or recall specific vocabulary (for example, <i>acceleration, attraction, constant, distance, exert, force, gravity, mass, Newton (unit), Newton's law of gravitation, Newton's third law, opposite, proportional, radius, range, relationship, substitute, universal, universal gravitation constant, variable</i>) and perform basic processes such as: - State Newton's law of gravitation. - Use Newton's law of gravitation ($F_g = (Gm_1m_2)/r^2$) to explain the proportional relationships between the force of gravity, mass, and the distance between two objects. - Use Newton's third law to explain the equal and opposite gravitational force a person standing on the surface of the Earth experiences (the force of gravity and the force exerted by the Earth back toward him). - Explain the phrase <i>gravity is universal</i>. - Substitute values for variables, constants (for example, the universal gravitation constant or the acceleration of gravity), and applicable equations as necessary. G2—The student will recognize or recall specific vocabulary (for example, <i>acceleration, apogee, astronomical unit, axis, circle, circumference, distance, eccentricity, ellipse, focus, force, frequency, gravity, Kepler's constant, Kepler's laws of planetary motion, law of ellipses, law of equal areas, law of harmonies, mass, motion, Newton's second law of motion, Newton's law of gravitation, orbit, perigee, period, radius, satellite, semi-major axis, semi-minor axis, solar system, sun, velocity</i>) and perform basic processes such as: - Use Newton's second law of motion ($F_{NET} = ma$) and law of gravitation ($F_g = (Gm_1m_2)/r^2$) as well as the equation for acceleration ($a = v^2/r$) to find an object's velocity in a circular orbit. - Using $2\pi r$ and an object's velocity, determine the period and frequency of an object in a circular orbit. - Explain each of Kepler's laws of planetary motion (the law of ellipses, the law of equal areas, and the law of harmonies) in relation to knowledge of orbiting objects. - Diagram an object in space's elliptical orbit. - Use Kepler's third law ($P^2 \propto a^3$, where P = period and a = semi-major axis) and a knowledge of Astronomical Units (AU) to determine the distance an object is from the sun.
1.5	Partial success at score 2.0 content, and major errors or omissions regarding score 3.0 content
1.0	With help, partial success at score 2.0 content and score 3.0 content
0.5	With help, partial success at score 2.0 content but not at score 3.0 content
0.0	Even with help, no success

Adding and Subtracting Polynomial Expressions (HS Math)

4.0	The student will: Develop a strategy for simplifying polynomials (for example, first distribute any factors or negative signs across the polynomials to which they apply, then rewrite the expression with like terms next to each other, finally add and subtract like terms and write the final form of the expression with terms in order of descending degree).
3.5	In addition to score 3.0 performance, partial success at score 4.0 content
3.0	The student will: ASP1—Add and subtract polynomials (for example, $(x^3 + 3x - 6) + (-2x^2 + x - 2) - (3x - 4) = x^3 - 2x^2 + x - 4$). ASP2—Simplify polynomials with more than one variable (for example, $4x^2y - 3x^2 - 2y + 8xy - 3x^2 + 2x^2y + 4 = 6x^2y - 6x^2 + 8xy - 2y + 4$).
2.5	No major errors or omissions regarding score 2.0 content, and partial success at score 3.0 content
2.0	ASP1—The student will recognize or recall specific vocabulary (for example, <i>distributive property, negative sign, polynomial</i>) and perform basic processes such as: - Add two polynomials. For example, $(5x^2 + 8x - 3) + (2x^2 - 7x + 13x) = 7x^2 + 14x - 3$. - Subtract two polynomials. For example, $(16x + 14) - (3x^2 + x - 9) = -3x^2 + 15x + 23$. - Distribute the negative sign across the entire polynomial to which it applies when subtracting polynomials. For example, $(16x + 14) - (3x^2 + x - 9) = 16x + 14 - 3x^2 - x + 9$. ASP2—The student will recognize or recall specific vocabulary (for example, <i>commutative property, distributive property, like terms, order of operations, unlike terms</i>) and perform basic processes such as: - Identify like terms in a polynomial. - State that unlike terms in a polynomial cannot be combined. For example, $x^2 + x^3$ or $x^2y + x^2$. - Use the correct order of operations when simplifying polynomials. - Use the commutative property to group like terms in a polynomial. - Use the distributive property to simplify polynomial expressions. - Simplify polynomial expressions with one variable. For example, $3x^2 - 8x + 7 + 2x^3 - x^2 + 8x - 3 = 2x^3 + 2x^2 + 4$. - Write polynomial expressions in standard form (in order of descending degree). - Use the properties of exponents to simplify polynomials.
1.5	Partial success at score 2.0 content, and major errors or omissions regarding score 3.0 content
1.0	With help, partial success at score 2.0 content and score 3.0 content
0.5	With help, partial success at score 2.0 content but not at score 3.0 content
0.0	Even with help, no success

Probability (8 Math)

4.0	The student will: • Calculate the probability of a sequence of events (for example, when given a bag of 9 red and 14 blue marbles, determine the probability that a marble selected from the bag will be blue and that after it is replaced the next marble selected from the bag will be red).
3.5	In addition to score 3.0 performance, partial success at score 4.0 content
3.0	The student will: P1—Understand the probability of different events (for example, when given a bag of 9 red and 14 blue marbles, determine the probability that a marble selected from the bag will be blue).
2.5	No major errors or omissions regarding score 2.0 content, and partial success at score 3.0 content
2.0	P1—The student will recognize or recall specific vocabulary (for example, <i>compliment, complimentary event, dependent event, event, experiment, experimental probability, independent event, mutually exclusive event, outcome, probability, ratio, theoretical probability, trial</i>) and perform basic processes such as: • List the common types of probability (theoretical and experimental). • Explain that experimental probability describes the number of times an event occurred in an observed experiment. • Explain that the experimental probability of an event is calculated as the number of times an event occurred in an experiment divided by the total number of trials. • Explain that theoretical probability describes the likelihood that an event will occur. • Explain that the theoretical probability of an event is calculated as the number of outcomes that can result in that event occurring divided by the total number of equally likely outcomes. • Explain that probability can be expressed as a ratio. For example, an event A with a 50% probability can be expressed as $P(A) = \frac{1}{2}$. • Explain that the probability of two events occurring together can be calculated by multiplying their respective probabilities. • Explain that an independent event is an event that is not affected by previous events or the events that follow. • Explain that a dependent event is an event that is affected by previous events or events that follow. • Identify two events as independent or dependent. • Explain that complimentary events are two events whose probabilities add up to 1 (or 100%). • Identify complimentary events. • Explain that the probability that an event which has a complement will occur can be calculated by subtracting the probability of its complement from 1 (or 100%). • Explain that mutually exclusive events are events that cannot occur at the same time (the probability of the events occurring at the same time is 0). • Identify mutually exclusive events.
1.5	Partial success at score 2.0 content, and major errors or omissions regarding score 3.0 content
1.0	With help, partial success at score 2.0 content and score 3.0 content
0.5	With help, partial success at score 2.0 content but not at score 3.0 content
0.0	Even with help, no success

Energy Flow in a System (HS Science)

4.0	The student will: Take a position on why there are often disparities between theoretical calculations and experimental calculations for energy changes (for example, explain why Hess's Law might predict a change in heat that is slightly lower than the value determined by an experiment).
3.5	In addition to score 3.0 performance, partial success at score 4.0 content
3.0	The student will: EFS1—Calculate the change in energy of one component in a system when energy changes of the other component(s) and energy flows in and out of the system are known (for example, by substituting variables for constants and specific equations, solve the equation for change in a system's internal energy or enthalpy).
2.5	No major errors or omissions regarding score 2.0 content, and partial success at score 3.0 content
2.0	EFS1—The student will recognize or recall specific vocabulary (for example, <i>calorimetry, chemical reaction, closed system, constant, convert, endothermic, energy, enthalpy, exothermic, flow, heat, Hess's Law, internal energy, isolated system, product, reactant, system, unit, work</i>) and perform basic processes such as: - Explain a system's internal energy as the sum of the system's kinetic and potential energy. - Explain how a change in a system's internal energy can be calculated as the amount of heat plus the amount of work ($\Delta E = q + w$). - Explain why a system's absolute internal energy may be difficult to calculate. - Substitute alternative equations for variables such as heat (for example, $q = \Delta H = sm\Delta T$) and work (for example, $w = -P\Delta V$). - Consult sources to find the values for constants in an equation (for example, gravity). - Explain the relationship between a system's internal energy and its thermodynamic potential (enthalpy). - Explain how to calculate changes to the enthalpy of a system (the internal energy of a system plus the product of the pressure and volume of a system). - Compare the use and ease of calculation of enthalpy and internal energy. - Use Hess's Law to find changes in heat ($\Delta H^{\circ}_{\text{reaction}} = \sum n_p \Delta H^{\circ}_{f \text{ products}} - \sum n_r \Delta H^{\circ}_{f \text{ reactants}}$). - Explain why a reaction is endothermic or exothermic based upon a given change in energy. - Relate endothermic and exothermic reactions to flows of energy in and out of a system. - Convert units in an equation appropriately.
1.5	Partial success at score 2.0 content, and major errors or omissions regarding score 3.0 content
1.0	With help, partial success at score 2.0 content and score 3.0 content
0.5	With help, partial success at score 2.0 content but not at score 3.0 content
0.0	Even with help, no success

Generating Claims, Evidence, and Reasoning (8 ELA)

4.0	The student will: • Prove the claims in an argument by providing relevant and sufficient evidence and by acknowledging and refuting a counterclaim (for example, develop a claim about the importance of free speech, find evidence that supports the claim and a counterclaim, and construct an argument that validates the claim and refutes the counterclaim).
3.5	In addition to score 3.0 performance, partial success at score 4.0 content
3.0	The student will: GCER1—Generate claims and distinguish them from counterclaims (for example, generate a claim about the use of cellphones as educational tools in schools, generate a counterclaim that argues the opposite position, and describe why a person might take either position). GCER2—Support claims with relevant and sufficient evidence as well as logical reasoning (for example, use evidence from the text to support a claim about the purpose for Walt Whitman's contrasting tones in "O Captain, My Captain").
2.5	No major errors or omissions regarding score 2.0 content, and partial success at score 3.0 content
2.0	GCER1—The student will recognize or recall specific vocabulary (for example, <i>backing, claim, counterclaim, evidence, fact, general, grounds, opinion, prompt, qualifier, specific</i>) and perform basic processes such as: • Describe the qualities of a claim (for example, it should be specific and should be an opinion that can be proved using evidence). • Describe the roles of grounds, backing and qualifiers in a claim. • Describe two possible arguments a person could make about a particular topic. • Explain the grounds for two contrasting claims. • Make a general claim more specific by incorporating details. • Make a specific claim more general by removing details. • Compare two opposing claims for the same argument. GCER2—The student will recognize or recall specific vocabulary (for example, <i>claim, evidence, logical, reasoning, relevant, sufficient</i>) and perform basic processes such as: • Describe different types of evidence that can support a claim. • Annotate notes and texts for evidence that could support a claim. • Find specific pieces of evidence and add them to an outline. • Explain why it is important to have relevant and sufficient evidence. • Annotate a paragraph's claims and matching evidence in coordinating colors. • Describe why a piece of evidence supports a claim. • Use evidence to determine the backing and qualifier for a claim.
1.5	Partial success at score 2.0 content, and major errors or omissions regarding score 3.0 content
1.0	With help, partial success at score 2.0 content and score 3.0 content
0.5	With help, partial success at score 2.0 content but not at score 3.0 content
0.0	Even with help, no success

Analyzing Ideas and Themes (9–10 ELA)

4.0	The student will: Decide which of several possible themes in a text is the strongest (for example, make and defend the claim that Fitzgerald presents several themes in <i>The Great Gatsby</i>, including greed, power, betrayal, social stratification, and the American dream, but that social stratification is the strongest theme in the text).
3.5	In addition to score 3.0 performance, partial success at score 4.0 content
3.0	The student will: AIT1—Determine the main ideas or themes in a text (for example, explain that gender is a theme of Shakespeare’s <i>The Tragedy of Macbeth</i> or that American ideals are a main idea of Lincoln’s “Gettysburg Address”). AIT2—Describe the development of an idea or theme over the course of a text (for example, explain how the idea of reputation is developed throughout Miller’s <i>The Crucible</i>).
2.5	No major errors or omissions regarding score 2.0 content, and partial success at score 3.0 content
2.0	AIT1—The student will recognize or recall specific vocabulary (for example, <i>connection, detail, main idea, paragraph, section, text, theme, topic</i>) and perform basic processes such as: - Identify important details and claims in a text. - Identify repeated details in a text. - Take notes about details and claims in a text. - Identify connections between important details or claims in a text. - Describe how repeated details change over the course of a text. - List common themes found in literature (person vs. nature, person vs. self, loyalty, family, ambition, independence, struggle against society). - Identify passages in a text related to a specific main idea or theme. AIT2—The student will recognize or recall specific vocabulary (for example, <i>chapter, character, detail, event, paragraph, section</i>) and perform basic processes such as: - Identify specific words that are related to a main idea or theme. - Explain how specific words strengthen a main idea or theme. - Identify specific sections of a text related to a main idea or theme. - Explain how specific sections of a text strengthen a main idea or theme. - Identify specific details that are related to a main idea or theme. - Identify the attitudes of particular characters toward a main idea or theme.
1.5	Partial success at score 2.0 content, and major errors or omissions regarding score 3.0 content
1.0	With help, partial success at score 2.0 content and score 3.0 content
0.5	With help, partial success at score 2.0 content but not at score 3.0 content
0.0	Even with help, no success



Quality Criteria for Classroom Assessments

1. Assessments are *valid*.

The assessment measures what is intended to be measured. It produces accurate and truthful results.

2. Scoring is consistent or *reliable*.

The assessment produces believable results that mirror the learning that has occurred. Consistent results are gleaned across multiple users of the tool.

3. Assessments and surrounding processes are *fair*.

- The level of the assessment is appropriate.*
- Students have received adequate opportunity to learn.*
- The assessment is free from bias and the format does not interfere with students engaging in the assessment.*

Types of Bias

- Offensive content
- Stereotyping
- Unfair representation
- Use of situations that may be unfamiliar to subgroups
- Poorly written items
- Literacy bias (using too sophisticated of language for the nature of the content)—David Meisner.

Writing Quality Assessment Items

Selected Response Items

- True/False
- Matching
- Multiple Choice

True/False

- Related to a single idea
- Absolutely true OR absolutely false
- Avoid using qualifiers, opinions, and negatives
- Use sparingly, as students have a 50-50 chance of guessing the correct answer

Matching

- Homogeneous in content
- Keep the matching set short
- Uneven number of items to be matched OR items may be used more than once
- Longer reading on the left, matching items on the right

Multiple-choice

- Problem clear in the item stem
- Stem stated in the positive when possible
- Emphasize qualifiers in the stem
- All answer choices plausible
- Answer choices parallel in grammar and length
- Avoid "all" or "none of the above"
- Answer choices in a logical order
- Avoid clues in answer choices
- One correct response possible

Constructed Response Items

- Fill-in-the-blank
- Short Answer
- Essay

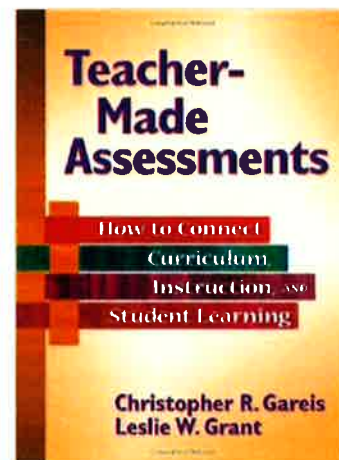
Fill-in-the blank

- Position the blank at the end of the sentence, if possible
- Limit the number of blanks in an item
- Blanks should be same length
- Be sure information prior to/surrounding the blank is adequate
- May use a word bank

Short Answer and Essay Items

- Make the nature of the response desired clear to the reader
- Develop and communicate scoring criteria for the question
- Provide adequate space for responses.

RESOURCE:



When Students Track Their Progress

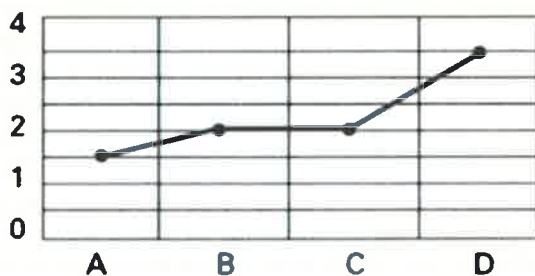
Robert J. Marzano

The strategy of tracking student progress on specific learning goals is well supported. For example, Fuchs and Fuchs¹ found that providing teachers with graphic displays of students' scores on formative assessments was associated with a 26 percentile point gain in achievement. Unfortunately, this strategy has not received the attention it deserves.

When students track their own progress on assessments using graphic displays, the gains are even higher. Over my many years of working with teachers, I have had the opportunity to examine the effects of such an approach. In 14 different studies, teachers had students in one class track their progress on assessments; in a second class, these teachers taught the same content for the same length of time without having students track their progress (see www.marzanoresearch.com/research/strategy20_trackingprogress.aspx). On average, the practice of having students track their own progress was associated with a 32 percentile point gain in their achievement.

In the studies, students recorded their scores on a chart after taking each assessment. Figure 1 shows how a student tracked her progress on the topic of habitats using her scores on four different assessments. Using a rubric with a rating scale of 0 to 4 to score the assessments, this student began with a score of 1.5 on the first assessment and ended with a score of 3.5 on the fourth assessment.

Figure 1. Student Progress Chart



Letters represent assessments;
numbers represent the student's
score on each assessment.

This approach provides two kinds of information for students and teachers. First, the rubric provides a description of the levels of performance that the teacher expects of the students. Second, the graph provides a representation of each student's progression of learning. The combination of these two types of information produces the powerful effect.

What Produces the Best Results?

Given the expected 32 percentile point gain, one might assume that this strategy is a sure thing in terms of enhancing student achievement. As is often the case, however, the details of the studies clarify the circumstances under which the strategy produces strong, as opposed to mediocre, results.

- **Address a single goal in all the assessments.** To track student progress in the manner depicted in Figure 1, all assessments must address the same learning goal. For example, assume that a teacher has two learning goals that relate to the topic of habitats. One learning goal might be, "The student will understand that habitats provide plants and animals with the things they need to survive." A second learning goal for this same topic might be, "The student will understand how a local habitat of his or her choice supports specific local animals." The assessments should clearly differentiate between these two goals. One assessment can address both goals, but only if the teacher assigns two scores to the assessment—one for each learning goal.
- **Use rubrics instead of points.** Across the 14 studies, teachers obtained the best results when they scored assessments using a rubric instead of points. Teachers typically assign a certain number of points to each answer on a test and then convert the total points to a percentage score. When teachers use this approach, they tend to change the type and difficulty of items from test to test, even when those tests measure the same topic. The first test might include all easy items, but the second test might include all difficult items. Consequently, a student might receive fewer points on the second test even though he now knows more than he did when he took the first test. A graph of his test scores would make it look as though he had decreased in knowledge when he had actually gained in knowledge. In fact, in the two studies that did not show positive effects for students tracking their own progress, the teachers used points instead of rubric scores. A rubric I have found useful involves five values, 0 through 4, with the score of 3 meaning the learner has mastered the content that is the target of instruction—the specific learning goal that the teacher wishes to assess and track. The teacher would state the learning goal in a form that describes what he or she expects students to do to demonstrate their understanding: "Students will explain and illustrate how habitats provide plants and animals with the things they need to survive." A score of 4 indicates that students have mastered score 3 content and can also use that content to make inferences. For example, to earn a score of 4 on the habitat learning goal, students might be required to explain what would happen if the number of animals that the habitat typically supported increased dramatically over a short period of time. A score of 2 indicates that students know simple details and processes that relate to the learning goal (score 3 content) but not the more complex information and processes that the learning goal involves. In this case, a score of 2 might indicate that students recognize some basic facts and terminology associated with habitats even though they cannot explain and illustrate how habitats provide plants and animals with the things they need to survive. A score of 1 indicates that students cannot produce any of the content on their own but can do so with some help from the teacher. Finally, a score of 0 indicates that

even with help, students cannot produce any of the content.

- **Use different types of assessments.** The paper-and-pencil test is only one of many options that teachers can use with rubrics. Other types of assessments include demonstrations, probing discussions, unobtrusive observations, and student-generated assessments. A well-constructed rubric allows for a relatively accurate measure of a student's level of understanding through both a demonstration, in which students demonstrate their skill at a procedure or their understanding of information, and a probing discussion, in which the teacher asks individual students to explain their understanding. Unobtrusive observations involve a teacher observing a student demonstrating a procedure without the student being aware of the observation. For example, a physical education teacher might observe a student demonstrating the overhand throw on the playground. If the teacher has designed an appropriate rubric for this process, he or she can assign a score to the student without interrupting the student's play. Finally, student-generated assessments are those that students have designed to demonstrate that they have met the requirements of a specific score on a rubric. For example, to show that she has attained score 3 status, a mathematics student might decide to explain how to solve a specific type of problem and demonstrate her explanation using selected problems from the end of a chapter in the textbook.

Benefits for All

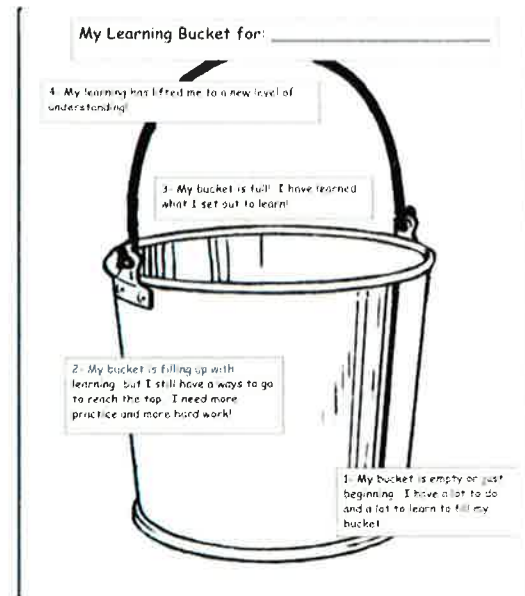
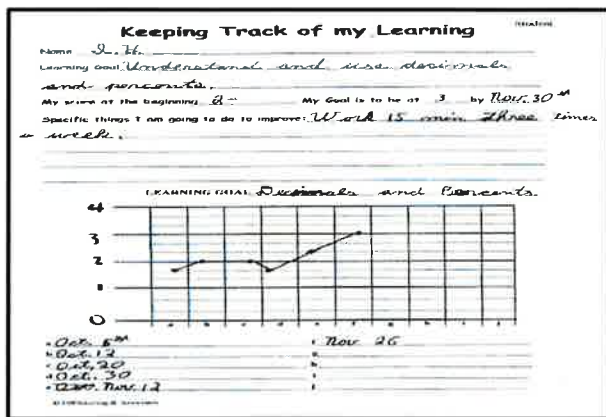
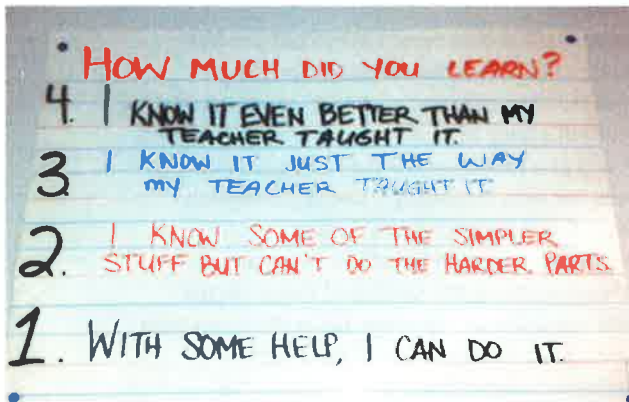
When it comes to using classroom assessment to enhance student achievement, having students track their progress using rubrics is a hidden gem. This strategy involves multiple types of assessments, increases interactions between teachers and students, and provides students with clear guidance on how to enhance their learning.

Endnote

1 Fuchs, L. S., & Fuchs, D. (1986). Effects of systematic formative evaluation: A metaanalysis. *Exceptional Children*, 53(3), 199–208.

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Tracking Student Progress



Examining Effort and Preparation

- 4** To be sure I accomplish my goal, I'm trying harder and preparing more than I think is necessary.
- 3** I'm trying hard enough and preparing well enough to accomplish my goal.
- 2** I'm trying hard but not preparing as well as I could.
- 1** I'm not trying very hard or preparing very well.
- 0** I'm not really trying or preparing at all.

1. Teachers identify the proficiency scale or scales that need to be measured by the existing assessment.
2. Teachers examine each assessment item to determine the level of the proficiency scale that it corresponds with and label it appropriately.
3. Teachers identify assessment items that do not correspond to any levels of the proficiency scale and remove them.
4. Teachers add items for levels of the proficiency scale not represented by items already on the assessment.

!

Complete the definition:

- L2

L2

- L2

4. $7,000,000 + 40,000 + 3,000 + 20 + 7$

- L3

L3

- ### Estimating'

- L3

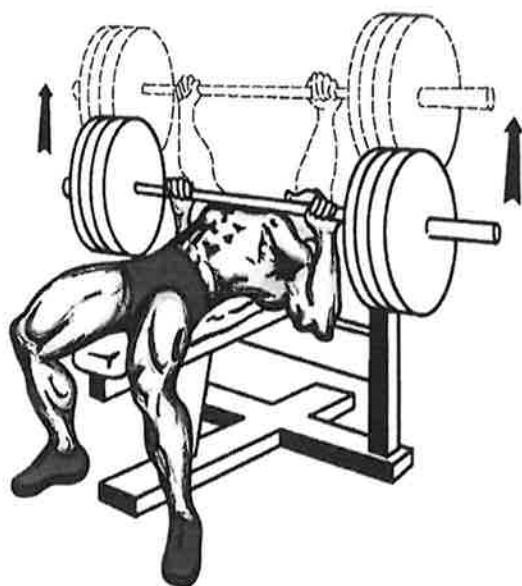
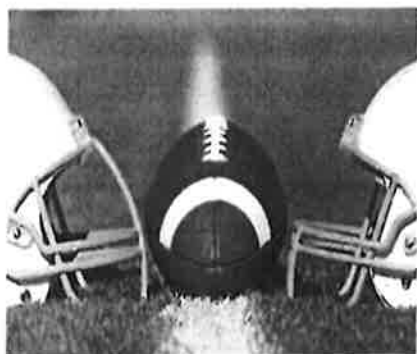
- L3

- L4

[illegible]

ButterBean Bench Press

205, 205, 215, 220, 215, 225, 235, 225, 240, 250,
260 250, 260, 275, 300, 305, 300, 285, 300, 310



Edwards will use performance to each of these goals to determine the overall grade for the class (for that particular 9-week period). The following table presents one student's performance to these priority learning goals. Looking at the performance, please discuss and determine the summative score to be awarded to the student for each of the seven goals.

Priority Standard	Artifact #1	Artifact #2	Artifact #3	Artifact #4	Artifact #5	Artifact #6	Overall Performance
#1	Obtrusive 1.5	Obtrusive 2	Unobtrusive 3	Unobtrusive 2	Obtrusive 2.5	Common 2.5	
#2	Unobtrusive 2	Obtrusive 2.5	Obtrusive 2.5	Common 3	Student-Gen 3		
#3	Obtrusive 3	Obtrusive 3	Obtrusive 3	Unobtrusive 2.5	Obtrusive 2	Obtrusive 3	
#4	Unobtrusive 3	Obtrusive 3.5	Unobtrusive 3.5	Common 3		Student-Gen 3	
#5	Unobtrusive 2	Unobtrusive 2	Unobtrusive 2	Unobtrusive 2	Obtrusive 2.5	Obtrusive 3	
#6	Obtrusive 3	Obtrusive 3	Obtrusive 2	Common 2.5			
#7	Unobtrusive 2	Unobtrusive 2	Obtrusive 3	Common 2.5			

Part II:

Mrs. Edwards has informed her students (and parents) that they will receive formal feedback at the end of each nine-week grading period in two ways: 1) by priority learning goal; and 2) an overall grade for the class (percentage score). In the previous table, you determined the feedback (based on the proficiency scale) that will be provided for each learning goal. Now, please discuss the overall grade for ELA. Use the conversion scale below to assign a letter grade for the nine-week period, which represents performance across the priority learning goals.

Score	Percentage	Grade	Score	Percentage	Grade	Score	Percentage	Grade
4.00	100	A	1.86 to 1.99	76	D	0.80	50	F
3.86 to 3.99	99	A	1.72 to 1.85	75	D	0.79	49	F
3.72 to 3.85	98	A	1.58 to 1.71	74	D	0.78	48	F
3.58 to 3.71	97	A	1.44 to 1.57	73	D	0.77	47	F
3.44 to 3.57	96	A	1.30 to 1.43	72	D	0.76	46	F
3.30 to 3.43	95	A	1.15 to 1.29	71	D	0.75	45	F
3.15 to 3.29	94	A	1.00 to 1.14	70	D	0.74	44	F
3.00 to 3.14	93	A	0.99	69	F	0.73	43	F
2.94 to 2.99	92	B	0.98	68	F	0.72	42	F
2.88 to 2.93	91	B	0.97	67	F	0.71	41	F
2.82 to 2.87	90	B	0.96	66	F	0.70	40	F
2.76 to 2.81	89	B	0.95	65	F	0.69	39	F
2.70 to 2.75	88	B	0.94	64	F	0.68	38	F
2.64 to 2.69	87	B	0.93	63	F	0.67	37	F
2.57 to 2.63	86	B	0.92	62	F	0.66	36	F
2.50 to 2.56	85	B	0.91	61	F	0.65	35	F
2.44 to 2.49	84	C	0.90	60	F	0.64	34	F
2.38 to 2.43	83	C	0.89	59	F	0.63	33	F
2.32 to 2.37	82	C	0.88	58	F	0.62	32	F
2.26 to 2.31	81	C	0.87	57	F	0.61	31	F
2.20 to 2.25	80	C	0.86	56	F	0.59 to 0.60	30	F
2.14 to 2.19	79	C	0.85	55	F	0.57 to 0.58	29	F
2.07 to 2.13	78	C	0.84	54	F	0.55 to 0.56	28	F
2.00 to 2.06	77	C	0.83	53	F	0.53 to 0.54	27	F
			0.82	52	F	0.51 to 0.52	26	F

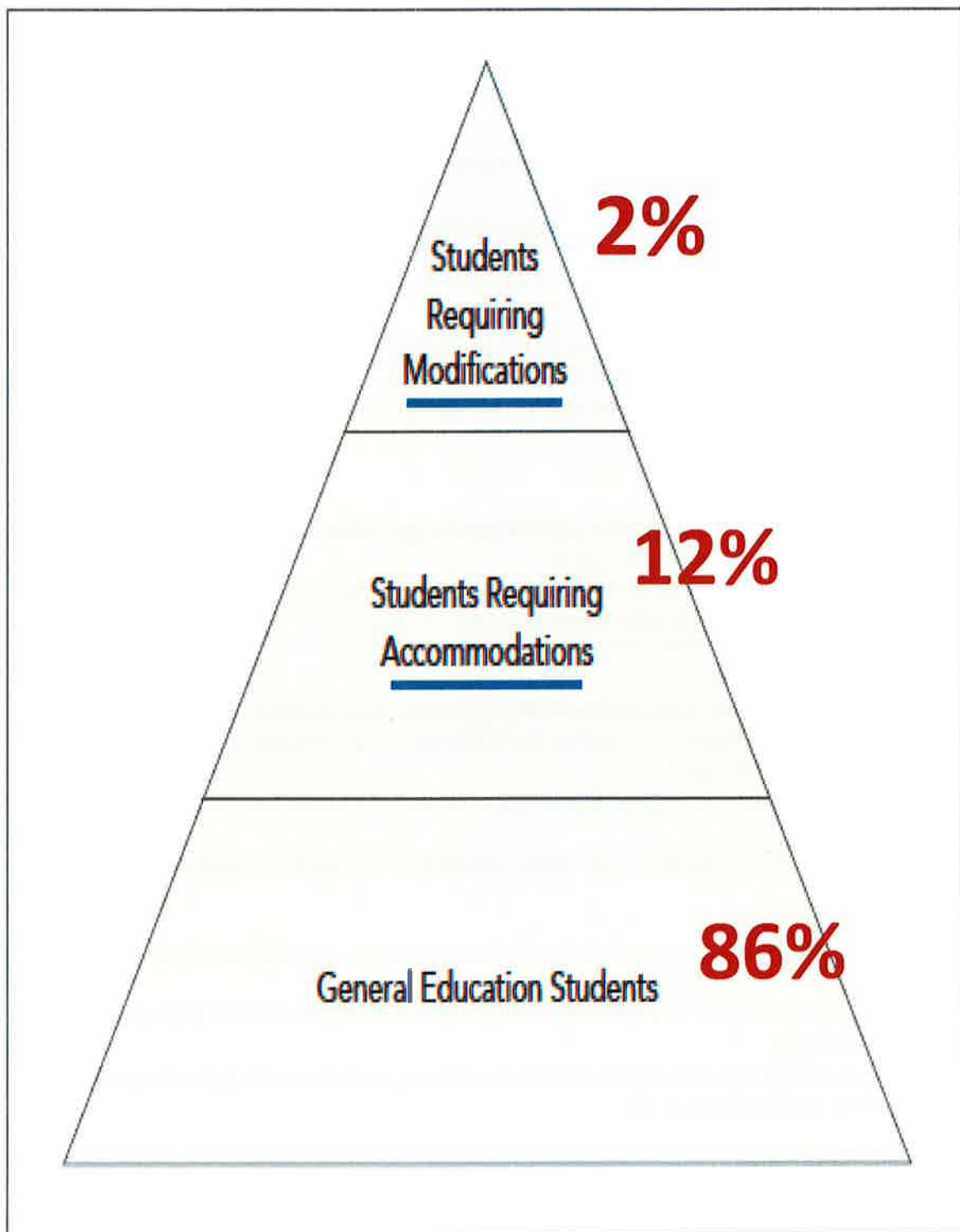


Figure 5.1: Levels of support.

U.S. Dept. of Education, Office of Special Education

Six Categories of Exceptional Learners

Chapter 5 - "A School Leader's Guide to Standards-Based Grading"

1) SPED with Accommodations

- Learning expectation is the same as for the general population.
- Left side of the scale does not change.
- Appropriate educators adjust the example activities in the right column of the scale to reflect the accommodations provided.

2) ELL with Accommodations

- Learning expectation is the same as for the general population.
- Left side of the scale does not change.
- Appropriate educators adjust the example activities in the right column of the scale to reflect the accommodations provided.

3) Gifted with Accommodations

- Learning expectation is the same as for the general population.
 - Left side of the scale does not change.
 - Appropriate educators adjust the description of the activities in the right column or raise the level of independence needed to perform tasks.
-

4) SPED with Modifications

- Learning expectation is lowered by modifying the prioritized standard.
- Modifying may occur by moving level descriptors up on the proficiency scale (score 2.0 becomes score 3.0, etc.).
- Appropriate educators change the example activities in the right column of the scale to make them simpler.
- Descriptors from lower grade-level scales may replace language on the grade-level scale.

5) ELL with Modifications

- Learning expectation is lowered by moving level descriptors up on the proficiency scale (score 2.0 becomes score 3.0, etc.).
- Appropriate educators change the example activities in the right column of the scale to make them simpler.
- When example activities require students to read text, students read in their native language or less complex pieces of text.

6) GT with Modifications

- Each level of the scale is modified to increase the rigor and complexity of the expectations.
- Modifying may occur by moving level descriptors downward on the proficiency scale (score 3.0 becomes score 2.0, etc.).
- Appropriate educators change the example activities in the right column of the scale to make them more complex.
- Example assessment tasks require students to extend their thinking through the development of products that demonstrate higher levels of thinking.

Scale With Accommodations for Students With Disabilities

Pages 2 and 3

Learning expectation is **exactly the same** as for general education students.

Adjust the example activities to reflect accommodations for the specific student.

3.0 The student will apply knowledge of organizational patterns found in informational text, such as: Sequence Cause and effect Compare and contrast Fact and opinion Description Proposition and support	When the teacher provides the student with a folder containing an informational text (of no more than three paragraphs) cut into paragraphs, the student reads (or listens to) and organizes the text, then identifies (from a list of possible structures) the structure used by the author (for example, main idea with supporting detail, sequence, compare and contrast, fact and opinion). The student classifies short selections of text using a graphic organizer; texts may be read to the student.
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Modified scales for gifted students increase the rigor and complexity at each level of the scale.

- Shift the expectations downward, OR
- Create a new, more complex 3.0 goal and adjust the 2.0 and 4.0 goals accordingly, OR
- Require gifted students to achieve 4.0 level expectations.

Which method would work best for your gifted students? Discuss with your table group.

READING

Themes and Central Ideas

Grade 2

Score 4.0	In addition to score 3.0 performance, the student demonstrates in-depth inferences and applications that go beyond what was taught.		
	Score 3.5	<i>In addition to score 3.0 performance, partial success at score 4.0 content</i>	Sample Activities
Score 3.0	The student will: Determine the central message, lesson, or moral of stories from diverse cultures, including fables and folktales (RL.2.2) Describe the central idea of a multiparagraph grade-appropriate text, as well as the focus of specific paragraphs within the text (RI.2.2)		After reading a self-selected fable or folktale, the student will complete a tri-fold paper activity. The student will fold a 9 x 11 inch piece of paper into thirds and label sections with the words: <i>Summary, Illustration, Moral</i>. The student will fill in the necessary information below each heading to demonstrate understanding of the text.
	Score 2.5	<i>No major errors or omissions regarding score 2.0 content, and partial success at score 3.0 content</i>	
Score 2.0	The student will recognize or recall specific vocabulary, such as: Central idea, culture, diverse, fable, focus, folktale, lesson, message, moral, paragraph, story, text The student will perform basic processes, such as: Recount grade-appropriate stories, including fables and folktales from diverse cultures (RL.2.2) Identify the central idea of a multiparagraph grade-appropriate text (RI.2.2) Recognize or recall the central message, lesson, or moral of grade-appropriate stories, including fables and folktales		The student will use a hand-shaped template to capture the central idea and paragraph ideas of a text. After reading a teacher-determined text, the student will record the central idea on the palm of the hand and the focus of each paragraph on the fingers.
	Score 1.5	<i>Partial success at score 2.0 content, and major errors or omissions regarding score 3.0 content</i>	
Score 1.0	With help, partial success at score 2.0 content and score 3.0 content		

Marzano's Taxonomy – Useful Verbs	
Recognize • recognize (from a list) • select (from a list) • identify (from a list) • determine (true / false)	Retrieval
Recall • name • list • describe • state • identify who, where, or when • describe what	
Executing • use • demonstrate • show • make • draft • complete	
Integrating • summarize • paraphrase • describe the key parts of • describe the relationship between • Explain the ways in which • describe how or why • describe the effects	Comprehension
Symbolizing • use models • symbolize • depict • represent • draw • illustrate • show • diagram • chart	
Matching • compare and contrast • categorize • sort • differentiate • discriminate • distinguish • create an analogy or metaphor	Analysis
Classifying • classify • organize • sort • identify different types or categories • Identify a broader category	
Analyzing Errors • edit • revise • identify errors or problems • evaluate • identify issues or misunderstandings • assess • critique • diagnose	
Generalizing • form conclusions • Create a principle, generalization, or rule • trace the development of • generalize • what conclusions can drawn • what inferences can be made	
Specifying • make & defend • predict • what would have to happen • develop an argument for • judge • under what conditions • deduce	Knowledge Utilization
Decision-Making • select the best among the following alternatives • which of the following would best • what is the best way • decide • which of these is most suitable	
Problem-Solving • solve • adapt • develop a strategy • figure out a way • how would you overcome • how will you reach your goal under these conditions	
Experimenting • experiment • generate & test • test the idea that • what would happen if • how would you test that • how can this be explained • how would you determine if • based on the experiment, what can be predicted	
Investigating • investigate • research • find out about • take a position on • how & why did this happen • what would happen if • what are differing features of	

Notes

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