



FORMATIVE ASSESSMENT & STANDARDS-BASED GRADING

For
Mandan Public School District

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Why we will always need teachers...

911 Emergency Call

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Norms for the Session

- This is YOUR valuable time...seek understanding, ask questions, participate
- Sidebar conversations at a minimum
- Misery is optional
- Minimize distractions
- Honor time frames
- Have fun!

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Outcomes (Handout page 2)

- Discover research on feedback, assessment, and grading.
- Solidify and practice the process of determining essential learning goals.
- Know, understand, and practice the development of proficiency scales aligned to essential learning goals.
- Review and discuss the development of high quality assessments and understand how they align to proficiency scales.
- Learn how to align grading and reporting practices to essential learning goals and proficiency scales.

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A few words about your handouts...

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Robert Marzano's position is quite simple: Schools can have a tremendous impact on student achievement if they follow the direction provided by the research.

Handout page 2

He Recommends Three Critical Interventions (COMMITMENTS)

A system of individual clear learning goals connected to student feedback and evaluation at the classroom, school, and district levels.

- Ensuring effective teaching in every classroom.
- Building background knowledge for all students.

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Assessment Process

Handout page 2

- First, prioritize essential learning goals from existing work or Common Core State Standards.
- Then, develop a proficiency scale for each essential learning goal.
- Next, create common assessments aligned to one or more proficiency scales.
- Finally, design and adopt a standards-based reporting system.
- Throughout the process, make sure there is horizontal and vertical alignment.

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The
St. Charles
School District

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Educational research suggests...
the single most influential component of an effective school is the individual teachers within that school.



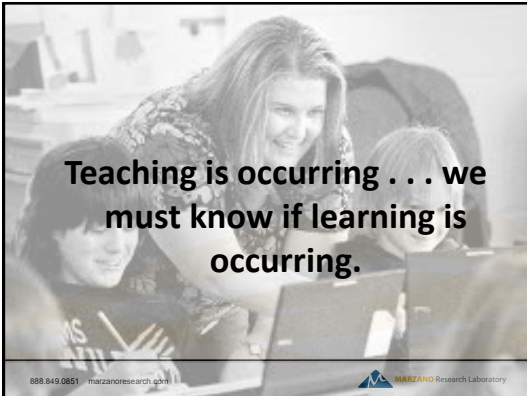
A Balanced Assessment System

Large Scale (Assessment <i>of</i>)	Mid-Scale (Assessment <i>for</i>)	Small-Scale (Assessment <i>for</i>)
<ul style="list-style-type: none"> Summative Norm-referenced OR criterion referenced Aptitude Achievement 	<ul style="list-style-type: none"> Formative Criterion-referenced Often teacher, grade level, building, or district created Achievement 	<ul style="list-style-type: none"> Questioning Day by day, minute by minute (William) Achievement
Essential Question: What have students already learned?	Essential Question: How can we help students learn more?	Essential Question: How can we help students learn more?

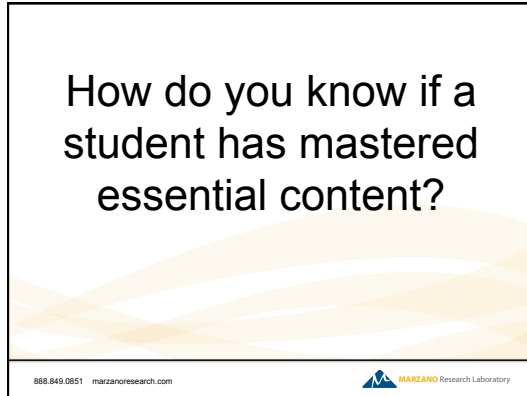
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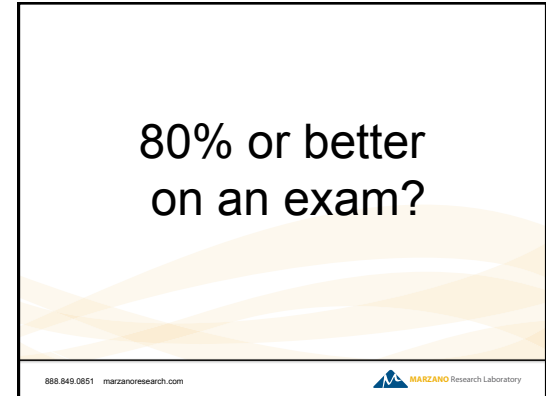
Teaching is occurring . . . we must know if learning is occurring.



How do you know if a student has mastered essential content?



80% or better on an exam?



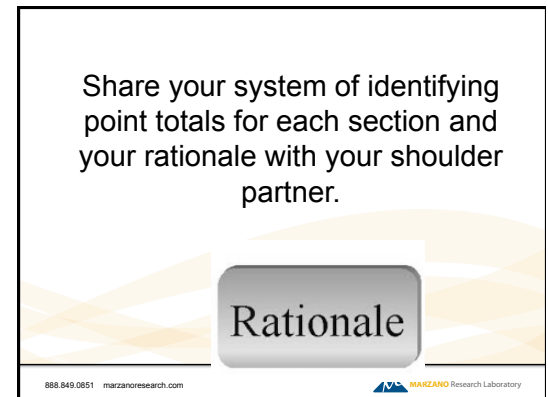
The Need for a New Scale



Handout page 3	
A. Items 1–10 Ten items that require recall of important but simpler content that was explicitly taught	Total for section = <input type="text"/>
B. Items 11–14 Four items that ask for application of complex content that was explicitly taught AND in situations similar to what was taught.	Total for section = <input type="text"/>
C. Item 15–16 Two items that ask for application in novel situations that go beyond what was explicitly taught	Total for section = <input type="text"/>
Total: /100	

Share your system of identifying point totals for each section and your rationale with your shoulder partner.

Rationale

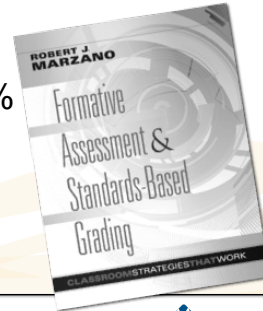


Now, please figure the total score on this assessment for a student who...

- Answered all of the simpler (Part A) items correctly.
- Answered one-half of the complex (Part B) items correctly.
- Answered none of the “go beyond” (Part C) items correctly.

Common Responses

30% - 80%



The problem with the 100 pt. scale

- Score range is a tremendous source of error.
- Teachers weight sections differently, often without reliability among one another.
- There is often little consideration as to how well the assessment items match varied levels of difficulty.



The first step to higher levels of student achievement...

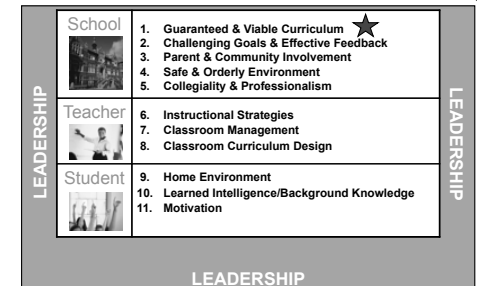
Get clear about what ALL students must know and be able to do.



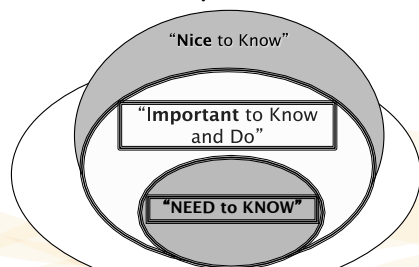
What's a guaranteed and viable curriculum?

- A "viable" curriculum is a well-articulated (K-12) set of knowledge and skills every child should learn.
- Viable also means we are able to teach this for understanding in the time available.
- A "guaranteed" curriculum means that we ensure it is taught in every classroom at every school.

Eleven Influences on Student Learning



A Guaranteed and Viable Curriculum is comprised of...



Adapted from McTighe & Wiggins

1. Prioritize Essential Learning Goals



An Important Action Step...

Identify priority learning goals within the curriculum (a.k.a essential learnings).



What is a learning goal (essential learning)?

- A learning goal is a statement of what students will know or be able to do.
- Emphasizes the knowledge or skills students would potentially gain.

Clearly understand the differences between learning goals (essentials) and learning activities.

What's the difference?

Handout page 4

Learning Goal

- A learning goal is a statement of what students will know or be able to do.
- A desired future state of competence in a subject area.

Learning Activity

- Tasks or learning progressions students are asked to do daily to move toward a learning goal.
- They are critical for getting to the end, but they are not the end.

Learning Goals

As a result of what we do today, you will be able to demonstrate that you:

- Understand the technique of foreshadowing in mysteries.
- Can revise writing to improve use of descriptive adverbs.

Activities and Assignments

Today

- Read Chapter 2 in...
- Finish adverb assignment...
- Work on myth...



State Learning Goals in a Specific Format

Content knowledge can be organized into two broad categories

Declarative knowledge or Procedural knowledge

- Declarative knowledge is informational in nature.
- Procedural knowledge involves strategies, skills and processes.

State Learning Goals in a Specific Format

The format for writing a declarative or procedural learning goal is:

- Students will understand _____
- Students will be able to _____

Learning Goal

The learner will tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.

WHAT?

Activity

Periodically during the day, have the students tell and/or write the time also indicating how they are doing at that particular time of the school day.

HOW?

Declarative or Procedural?

Learning Goal

- Students will understand the characteristics of the barter system.

WHAT?

Activity

After a class discussion about the barter system, students will participate in a class simulation called "Barter Day" in which each student will trade an item brought from home with other students.

HOW?

Declarative or Procedural?

FINAL FOLIOS SEEM TO RESULT FROM YEARS OF DUTIFUL STUDY OF TEXTS ALONG WITH YEARS OF SCIENTIFIC EXPERIENCE.

FINAL FOLIOS SEEM TO RESULT FROM YEARS OF DUTIFUL STUDY OF TEXTS ALONG WITH YEARS OF SCIENTIFIC EXPERIENCE.

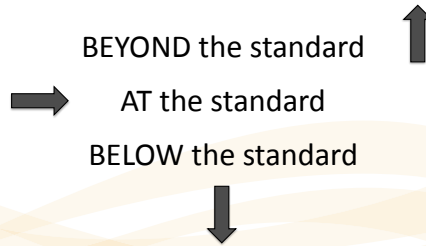
2. Develop a proficiency scale for each essential learning goal.



Handout page 5
Let's move priority learning goals to a very usable format that provides instructional information and serves as a foundation for assessment development...

Proficiency Scales.

Three Levels of Performance Related to Every Learning Goal:



Proficiency 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
2	No major errors or omissions regarding the SIMPLER details and processes BUT major errors or omissions regarding the more complex ideas and processes
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

Proficiency 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
2	No major errors or omissions regarding the SIMPLER details and processes BUT major errors or omissions regarding the more complex ideas and processes
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



Learning Goal

Proficiency Scale

4	In addition to exhibiting level 3 performance, in-depth inferences and applications that go BEYOND what was taught in class
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0	Even with help, no understanding or skill demonstrated

Proficiency Scale

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2	No major errors or omissions regarding the SIMPLER details and processes BUT major errors or omissions regarding the more complex ideas and processes
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



Prerequisite

Vocabulary

Proficiency 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
2	No major errors or omissions regarding the SIMPLER details and processes BUT major errors or omissions regarding the more complex ideas and processes
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

Proficiency Scale


4	In addition to exhibiting level 3 performance, in-depth inferences and applications that go beyond what was taught in class
3.5	In addition to exhibiting level 3 performance, partial success at 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
2.5	No major errors or omissions regarding any of the simpler information and/or processes and partial knowledge of the more complex information and processes
2	No major errors or omissions regarding the simpler details and processes BUT major errors or omissions regarding the more complex ideas and processes
1.5	Partial knowledge of the simpler details and processes, but major errors or omissions regarding the more complex ideas and processes
1	With help, a partial knowledge of some of the simpler and complex details and processes
.5	With help, a partial knowledge of some of the simpler details and processes but not of the more complex ideas and processes
0	Even with help, no understanding or skill demonstrated

You don't always have to completely recreate the wheel!

- Website
<http://www.marzanoresearch.com>
- FREE resources
 - Classroom tools
 - Proficiency scale bank
 - Scales for CCSS




Handout page 6

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Handout page 15


Learning Goal Unpacking Template

Essential Learning Goal	Skills and Knowledge
Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.	

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Learning Goal Unpacking Template

Essential Learning	Skills and Knowledge
Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.	<ul style="list-style-type: none"> • Define analog, digital, a.m., p.m. • Count by 5s to 60 • Tell time to the hour, half-hour, and quarter-hour • Write time using the correct format

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Handout page 6

START HERE →

Scale Worksheet

Score 4.0 – more complex

Demonstrations of learning that go above and beyond what was explicitly taught

The student will:

Score 3.0 – the learning goal or expectation

The student will:

Score 2.0 – the simpler stuff

Foundational knowledge, simpler procedures, isolated details, vocabulary

The student will:

Score 1.0


With help, the student can perform Score 2.0 and 3.0 expectations

Score 0.0

Even with help, the student cannot perform expectations


→ **THEN HERE**

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Scale Worksheet

<p>Score 4.0 – more complex</p> <p><small>Demonstrations of learning that go above and beyond what was explicitly taught</small></p> <p>The student will:</p> <ul style="list-style-type: none"> • Solve real-world problems involving elapsed time
<p>Score 3.0 – the learning goal or expectation</p> <p>The student will:</p> <ul style="list-style-type: none"> • Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.
<p>Score 2.0 – the simpler stuff</p> <p><small>Foundational knowledge, simpler procedures, isolated details, vocabulary</small></p> <p>The student will:</p> <ul style="list-style-type: none"> • Define analog, digital, a.m., p.m. • Identify the hands on an analog clock • Count by 5s to 60 • Tell time to the hour, half-hour, and quarter-hour • Write time using the correct format
<p>Score 1.0</p> <p><small>With help, the student can perform Score 2.0 and 3.0 expectations</small></p>
<p>Score 0.0</p> <p><small>Even with help, the student cannot perform expectations</small></p>

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How are proficiency scales used to offer feedback to students and allow them to track their own progress?



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It is critical that we use scales frequently with our learners to ensure that they understand what they need to know and be able to do.

What evidence of scale use exists?

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2



I am not sure if I get it.

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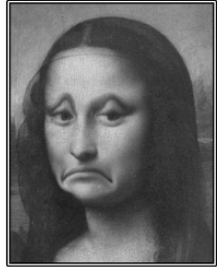
1



I don't get it.

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0



I don't get it at all!

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Having Students Chart Progress on Learning Goals

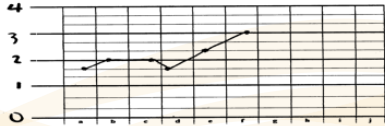
- o 14 experimental-control studies conducted at Marzano Research Laboratory
- o This practice is associated with a 32-percentile point gain in student achievement.

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Keeping Track of my Learning

Name: J. H.
 Learning Goal: Understand and use decimals and percents.
 My score at the beginning: 2 My goal is to be at 3 by Nov. 30th
 Specific things I am going to do to improve: Work 15 min three times a week.

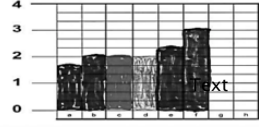
LEARNING GOAL: Decimals and Percents



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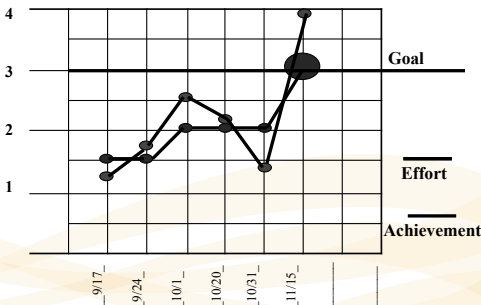
Tracking My Own Learning

Student Name: J. H. Date: _____
 Learning Goal: I will understand and use decimals and percents.
 My score at beginning: 2 My goal: 3 by Nov. 30th



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My Progress in Writing Process—Content and Organization



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Examining Effort and Preparation

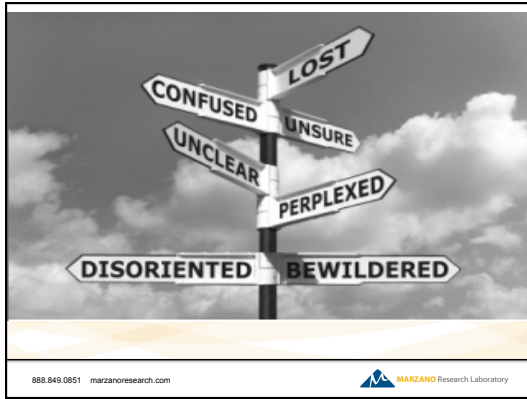
4	To be sure I accomplish my goal, I'm trying harder and preparing more than I think is necessary.
3	I'm trying hard enough and preparing well enough to accomplish my goal.
2	I'm trying hard but not preparing as well as I could.
1	I'm not trying very hard or preparing very well.
0	I'm not really trying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

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The Importance of "Yet"



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Create common assessments aligned to one or more proficiency scales.

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An important idea . . .

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

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Atmospheric Processes and Water Cycle	
Handout page 17	
4	Infer relationships regarding atmospheric processes and the water cycle
3	An explanation of: <ul style="list-style-type: none"> •How the water cycle processes impact climate changes •The effects of temperature and pressure in different layers of Earth's atmosphere
2	<ul style="list-style-type: none"> •Recognize and recall basic terms such as: climatic patterns, atmospheric layers, stratosphere, troposphere. •Recognize or recall isolated details such as: <ul style="list-style-type: none"> • Precipitation is one of the processes of the water cycle. • The troposphere is one of the lowest portions of the Earth's atmosphere.

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Three levels 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

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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?

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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.

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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?

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Response Patterns and Corresponding Scale Score

- Student answers L2 items correctly, but not L3 and L4. **(2.0)**
- Student answers L2 and L3 items correctly, but not L4. **(3.0)**
- Student misses all items, but with help can answer some correctly. **(1.0)**
- Students misses all items even when helped. **(0.0)**

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Response Patterns and Corresponding Scale Score

- Student answers all L2 items correctly, and some of the L3 items correctly, but not all.

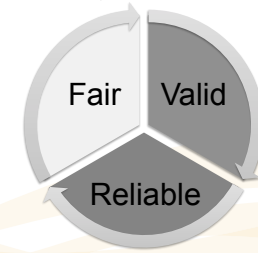
(2.5)

Student answers some of L2 items correctly, some L3 items correctly, and all L4 items correctly.

(???)

Can we make a confident inference about the learning that has occurred in relation to the priority learning goal(s)?

Quality Assessment



You can *never* rely on a single assessment.



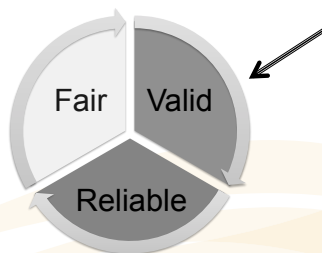
All assessments have a measurement error.

$$\text{Observed score} = \text{true score} + \text{error}$$

What are some sources of assessment error?

- Student not feeling well day of assessment.
- Poor test questions
- Visual and verbal distractions
 - Fire drill, bee in the room, window open, SNOW!!!
- Too many assessments on the same day!
- Biological accidents
- Biased test questions
- Inadequate opportunity to learn

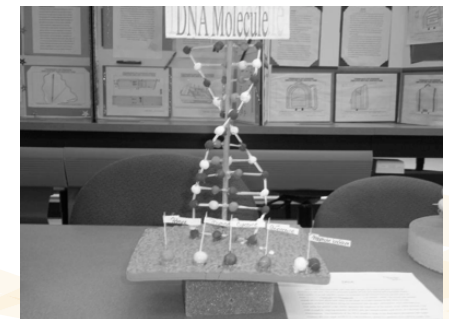
Quality Assessment




Definition of Validity...

Truthfulness: Does the test measure what it purports to measure?

Let's look at an example...



DNA Molecule Project Scoring Guide	
25 points	DNA molecule elements present (the model is an accurate representation)
10 points	Accurate and appropriate labeling of DNA parts
40 points	Innovation and creativity
75 points	TOTAL points possible
*10 bonus points = project submitted one week prior to due date	
** 5 bonus points = project submitted at least one day prior to due date	

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Nonfiction Reading Expectation

In reading this six weeks you have a minimum requirement of reading two nonfiction books. One of the books must be a biography or an autobiography. The second book must be a nonfiction about any subject of interest to you such as tigers, astronomy, World War I, medicine, or computers. After you read these two books, you must select one of them for the class expectation.

For the expectation, you must either dress up as the character in your biography/autobiography or as a character presenting information about the subject in your nonfiction. I will schedule presentations the last week of the six weeks. You will need to come prepared on your scheduled day ready for me to video tape you in front of the class as you present. I will be grading you on the following criteria:

(10 pts) 1. thorough introduction to person or subject and an appropriate conclusion


(10 pts) 2. costume
-well thought out and thorough
-original/creative
-must include at least one prop

(10 pts) 3. 10 important facts or events about the subject or person

(10 pts) 4. stage presence
-standing tall and holding still
-looking at the audience
-speaking loudly and clearly
-using an interesting voice
-having a rehearsed presentation

(10 pts) 5. memorized 2-4 minutes presentation

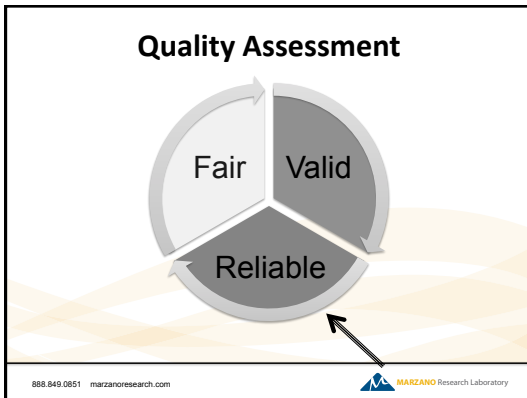
Total Points = 50 points

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“Building high-quality classroom assessment is just common sense.”




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Definition of Reliability...

The measure of how consistent a test is in measuring the same thing each time.

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250 Studies With Classroom Assessments Denoted

- Classroom-based assessments have a reliability of .45.
 - Without careful assessment design and attention to quality criteria.
- This is compared to national and statewide assessments with reliability closer to .75.

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Reliability Considerations

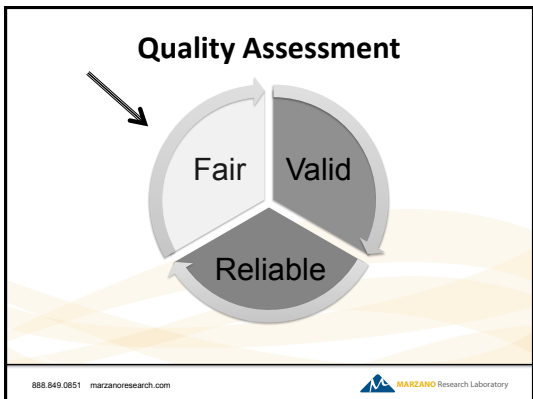
- Does the assessment provide enough opportunities for students to demonstrate what they know about the intended learning?

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How Many Items Do I Need?

- ✧ More items at score 3.0 than score 2.0
- ✧ More items at score 2.0 than score 4.0
- ✧ One or two items at score 4.0 is usually enough

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Issues of Fairness

- Fairness: Assessment level is appropriate.
- Fairness: Students have an opportunity to learn.
- Fairness: Assessments are as free from bias as possible.

Types of Bias

Handout page 18

- 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.

Fairness - Format

- Directions
- Enough space
- Visually appealing

All assessments should be reviewed for issues of validity, reliability, and fairness.

See the Assessment Review Checklist on handout page 20.

What if you already have assessments for your unit of study?

- Don't throw anything out!
- **Back-map** the existing assessment to your proficiency scales to ascertain alignment and item levels.

Sample 5th-Grade Numeration Assessment

M.5.N.1. Students will solve addition and subtraction problems using whole numbers that apply to real-world situations.

Complete the definition:

1. A sum is _____.

2. A difference is _____.

3. Write the word form of each number.
a. 5,671,210

4. Write the standard form for each.
a. 7,000,000 + 40,000 + 3,000 + 20 + 7

5. 6,342,984 ○ 6,432,984

6. 5,342,752 5,384,982,762 5,825,701 5,827,902,872

7. Round 342,287,976 to the nearest million.

8. Estimate the sum of 355,291 + 628,902 by rounding each number to the nearest thousand.

9. Arrange the number cards to create the largest possible number. Use each card one time.

7 9 2 3 4 0 5 0 7 2 3

Process for Backmapping an Existing Assessment

Handout page 21

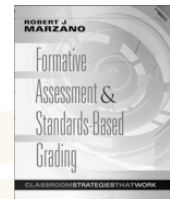
1. Teachers identify the proficiency scale or scales that need to be measured by the existing assessment.
2. Teachers examine each assessment item to determine the level of the proficiency scale that it corresponds with and label it appropriately.
3. Teachers identify assessment items that do not correspond 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.

Design and adopt a standards-based reporting system.



Please consider...

Grades are one type of feedback that we provide to our learners.



Some Grading Perspectives...

Grading is not essential for learning.

- o "Teachers don't need grades or reporting forms to teach well. Further, students don't need them to learn."

Thomas R. Guskey, (Ed.) *Communicating Student Learning: ASCD Yearbook 1996*, ASCD, Alexandria, VA, 1996, 14.

Some Grading Perspectives...

Grading is not essential for learning.

- o Checking *is* essential.
- o Checking is diagnostic – teacher as an *advocate*.
- o *Grading is* evaluative – teacher as a *judge*.

Guskey, T.R. Using Assessments to Improve Student Learning, Workshop Presentation

Some Grading Thoughts...

Grading is subjective and emotional.

- o Teachers claim grades are objective because they are calculated—often by a computerized program.
- o Teachers use their own discretion about:
 - Different types of knowledge and skills that are important;
 - How to weight sections on an assessment;
 - What goes into a final grade.

Marzano, R. (2000). *Transforming classroom grading*, Virginia, ASCD.

More About Grading...

• Grading has a research base.

- Sizable literature on grading exists, but teachers' practices have changed little.

O' Connor, *How to Grade for Learning*, (2002).

Determining Grades

Handout page 23

1. Examine the student's performance on assignments and assessments.
2. Give more weight to recent information (that is, information from later in the unit).
3. If necessary, discuss the content with the student to shed light on his or her learning progress.
4. Limit the use of zeros.

- Other considerations:

Are our grades precise (valid)?

- Linked to learning--essentials and proficiency scales ←
- Behavior/Employability skills are separated from academic skills
- Based upon quality assessment information

Are our grades precise (valid)?

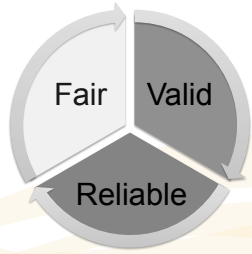
- Linked to learning--essentials and proficiency scales
- Behavior/Employability skills are separated from academic skills ←
- Based upon quality assessment information

Douglas County School District, 2003				
Indicators	A Consistently exceeds expectations	B Consistently meets expectations	C Inconsistently meets expectations	D Does not meet expectations
Completes work <i>Punctuality Neatness Makes up work</i>	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 and 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.
Is prepared to learn <i>On time Has materials</i>	Always in class on time. Brings needed materials to class and is always ready to work.	Very few tardies. Almost always brings needed materials to class and is ready to work.	Some tardies. Usually brings 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 <i>Works well with others Shares ideas</i>	Routinely shares information or ideas when participating in discussion or groups. A 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.
Follows classroom expectations <i>On task Follows rules</i>	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

Are our grades precise (valid)?

- Linked to learning--essentials and proficiency scales
- Employability skills are separated from academic skills
- Based upon quality assessment information ←

Quality Assessment



Are our grades reliable (consistent)?

- Consistent among colleagues ←
- Figured carefully and thoughtfully

McREL Study

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

(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)

(Marzano, *Transforming Classroom Grading*, 2000)

Are our grades reliable (consistent)?

- Consistent among colleagues
- Figured carefully and thoughtfully ←

Don't average scores within single measurement topics . . .

- Why? Discuss this with your group.
- Averaging doesn't take into account learning has occurred between assessments within a specific learning goal.
- Averaging can weigh down progress students are making in knowledge gain within a specific learning goal.

One student's scores within a single learning goal:

- F1 = 1.0 (no items correct)
- F2 = 2.0 (all 2 correct, no 3 or 4)
- F3 = 2.5 (all 2 and a few 3 correct, no 4)
- F4 = 3.0 (all 2 and 3 correct, no 4)
- F5 = 3.0 (all 2 and 3 correct, no 4)
- F6 = 3.0 (all 2 and 3 correct, no 4)
- ◆ Summative Score on Learning Goal 1 = **3.0**
- ◆ If Averaged: Summative Score = **2.42**

Average Summative Scores Across Multiple Measurement Topics:

- Average for a "final" grade across different measurement topics:
 - Scales lead to more accurate summative scores within a single topic...
 - Averaging summative scores across multiple topics is more reflective of learning...
 - Grades become more reflective of learning!

Averaging Across Learning Goals

- Summative Score 1 = 3.0
- Summative Score 2 = 3.5
- Summative Score 3 = 2.5
- Summative Score 4 = 3.5
- Summative Average = **3.12**

Standards Referenced Grading

- Moving from proficiency scales to traditional type grades.
- Use a conversion table if you report in traditional formats.

Convert the Standards Based Score to a Traditional Grade

- 3.75 - 4.0 = A+
- 3.26 - 3.74 = A
- 3.00 - 3.25 = A- (3.12 falls here)
- 2.84 - 2.99 = B+
- 2.67 - 2.83 = B
- 2.50 - 2.66 = B-
- ◆ Traditional Grade Reported = A-

Level 3.0 should = "lowest A"

- Represents the learning goal we are working to achieve for mastery.
- Assessments aligned with scales measure the standard with better validity.
- Getting a higher A means you have to do more, go above and beyond the standard.

3.50 - 4.00 = Advanced
2.50 - 3.49 = Proficient
1.50 - 2.49 = Basic
Below 1.50 = Below Basic

↓ ↓ ↓
3.00 - 4.00 = A = 95%
2.50 - 2.99 = B = 85%
2.00 - 2.49 = C = 75%
1.50 - 1.99 = D = 65%
Below 1.50 = F = 60%

Making Standards Useful, Marzano & Haystead

Conversion 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%

Assigning Summative Scores

- A grade of "A" would be awarded to a student scoring at the Score 3.0 level because that is the grade-level learning target.
- A score of 4.0 would translate to a grade of "A+."
- While it could be argued that this distinction in the grade earned is quite subtle (an A+ is not greatly different from an A), it is important to remember that the learning is of greater importance than the grade.

What About the Use of Zeros?

- Zeros have a large effect when the mean is used to measure central tendency.
- The use shows lack of proportionality between 0 and the 60-to-70% passing score. Other grading ranges have smaller scales.
- Zeros often convey inaccurate information. Was work poor, or was it missing? Are you sure the student knows nothing?
- It typically doesn't work in creating student responsibility. It demotivates most students.

—Marzano, *Transforming Classroom Grading*, (2000)

O'Connor, *How to Grade for Learning*, (2002)

What Instead?

- Use incomplete grade.
- If student doesn't obtain proficiency; he/she continues to work with the content and skills until they become proficient.
 - Workshop time
 - Rotating study hall
 - Saturday School

It is critical that the reporting system reflects the “learning,” not the “work”.

Something to think about...

Linda Stevens, director of assessment, Lake Washington, WA described those challenges:

This is not a task for the faint of heart. . . . All reform on a district-wide scale is tough, but moving a system to true standards-based grading is extraordinarily tough, long-term work and requires district leadership to tenaciously do the right thing for students. Waging war against the status quo requires the willingness to tackle layer after layer of difficulties in order to lead the way to new and purposeful assessment and grading practice.

- (personal communication, September 14, 2012)