



Formative Assessment and  
*Standards-Based Grading*  
*An Introduction*


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What are the Purposes of Grades?			
1	2	3	4
Not at all			To a great extent
1. <b><u>Administration?</u></b>	<b>1 2 3 4</b>		
To what extent should grades be used to make administrative decisions such as whether students progress to the next grade level, class rank, whether credits are earned, etc.?			
2. <b><u>Feedback?</u></b>	<b>1 2 3 4</b>		
To what extent should grades be used to provide students and parents with feedback about student learning?			
3. <b><u>Guidance?</u></b>	<b>1 2 3 4</b>		
To what extent should grades be used to provide students with guidance relative courses they should take, occupations they should consider, and so on?			
4. <b><u>Instructional Planning?</u></b>	<b>1 2 3 4</b>		
To what extent should grades be used to plan instruction?			
5. <b><u>Motivation?</u></b>	<b>1 2 3 4</b>		
To what extent should grades be used to motivate students?			


What should influence grades?			
1	2	3	4
Not at all			To a great extent
1. <b><u>Academic Achievement?</u></b>	<b>1 2 3 4</b>		
To what extent should the student's academic performance be figured into the overall grade?			
2. <b><u>Effort?</u></b>	<b>1 2 3 4</b>		
To what extent should effort be figured into the overall grade?			
3. <b><u>Behavior?</u></b>	<b>1 2 3 4</b>		
To what extent should behavior be figured into the overall grade?			
4. <b><u>Class Participation?</u></b>	<b>1 2 3 4</b>		
To what extent should class participation be figured into the overall grade?			
5. <b><u>Attendance?</u></b>	<b>1 2 3 4</b>		
To what extent should attendance be figured into the overall grade?			

Learning Goals--Participants will increase understanding of the following:
<ul style="list-style-type: none"> <li>All aspects of the system of curriculum, instruction, and assessment must work together.</li> </ul>
<ul style="list-style-type: none"> <li>The flaws in the present system are significant and they profoundly influence students.</li> </ul>
<ul style="list-style-type: none"> <li>Research and anecdotal evidence support using formative assessment and grading practices.</li> </ul>
<ul style="list-style-type: none"> <li>The changes are possible and feasible.</li> </ul>

Learning Goals--Participants will increase understanding of, and ability to use, the following processes:
<ul style="list-style-type: none"> <li>Monitor and motivate student learning</li> <li>Create a formative system that focuses on learning</li> <li>Keep academic factors separate from non-academic factors</li> <li>Identify and track distinct academic topics</li> <li>Use a grading scale that provides consistent feedback and encourages students to continue learning.</li> </ul>



## Foundations for Success





Foundations for Success
<b>Clear guidelines for Collegiality and Professionalism</b>
<b>Research-based and Evidence-based Reflective practice</b>
<b>Shared Commitment to Instructional Goals</b>

Foundations for Success

Clear guidelines for

## Collegiality and Professionalism

### Sample Professional Norms

- 1. Community**– We demonstrate respect and support for all stakeholders.
- 2. Foundational Beliefs**– We use our Beliefs about Learning to guide our decisions.
- 3. Responsibility**– We accept responsibility for students' learning.
- 4. Efficacy**– We believe we can make a difference for all students.
- 5. Humility**– We seek out and use feedback from external sources.
- 6. Resourcefulness**– We seek out ideas for structures, resources, and methods to insure that all students will learn.
- 7. Creativity**– We create new structures, resources, and methods to insure all students will learn.

### Sample Beliefs About Learning–

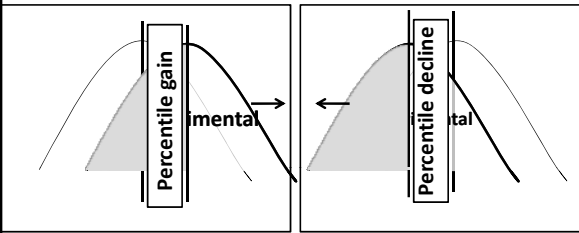
We will make decisions based on the following:

1. All students can learn.
2. Students learn in different ways.
3. Students learn in different timeframes.
4. Errors are inherent in the learning process.
5. If students don't learn the way we teach, we can find ways to teach they way they learn.
6. Assessment is a process for providing feedback that influences learning.
7. Poverty does not inhibit students' ability to learn.

Foundations for Success


## Research-based and Evidence-based Reflective practice

Keep in mind– For any instructional strategy

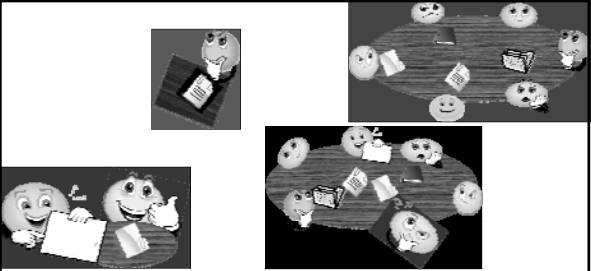


There are no “high yield” strategies.

There are only “high probability” strategies.




### Evidence-Based Reflective Practice




Supervisor

Peers



Foundations for Success

Shared Commitment to Instructional Goals

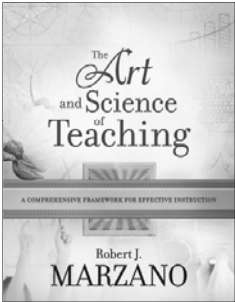


Shared Commitment to Instructional Goals

**What Instructional Goals?**

What are the areas of teacher expertise important to your school?

For Example



The Art and Science of Teaching

Areas of Instructional Goals

Learning Goals and Feedback

Rules and Procedures

Interacting with New Knowledge

Practicing and Deepen Understanding

Generating/testing Hypotheses (cognitively complex tasks)

Student Engagement

Adherence to Rules and Procedures

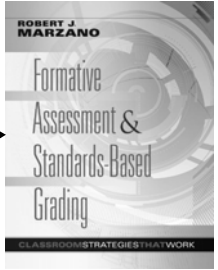
Teacher-student Relationships

High Expectations

Shared Commitment to Instructional Goals


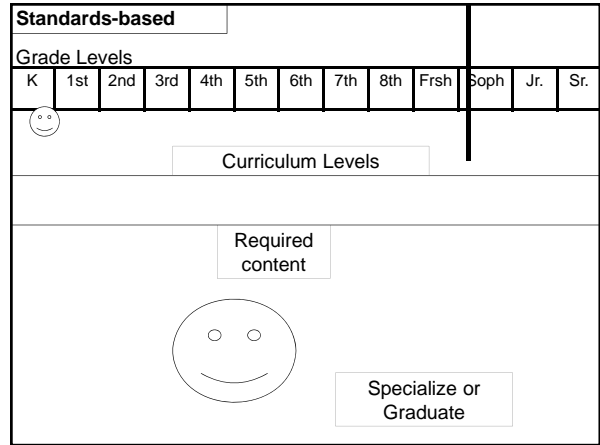
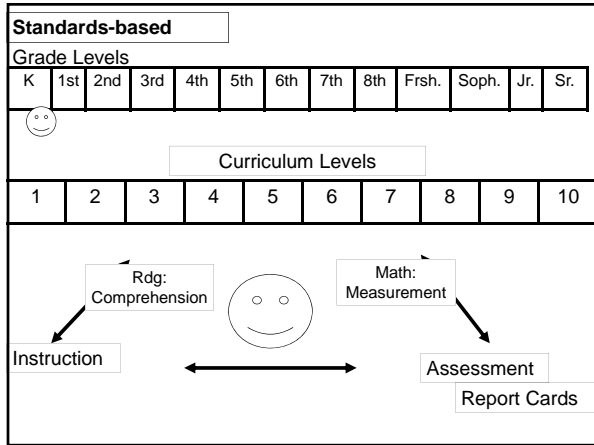
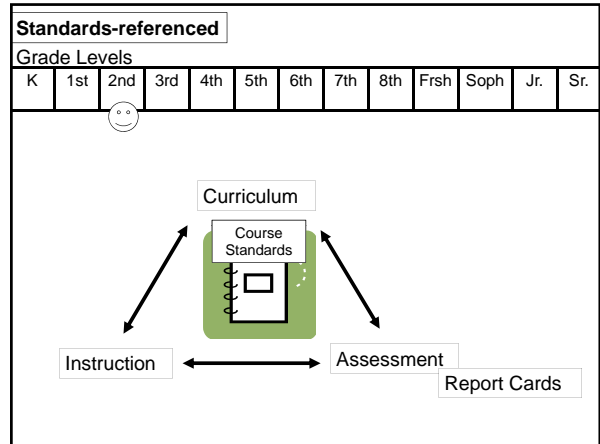
Learning Goals and Feedback

Learning Goals and Feedback





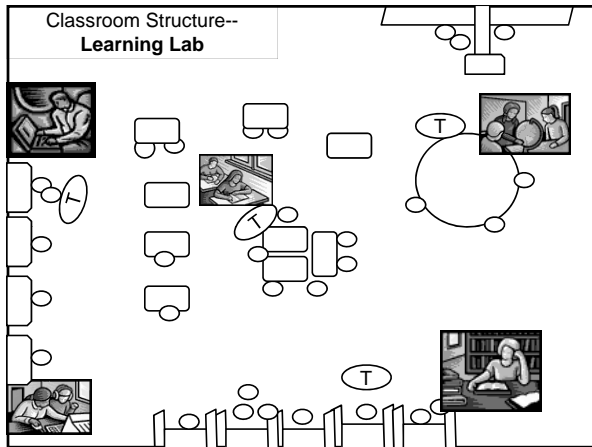
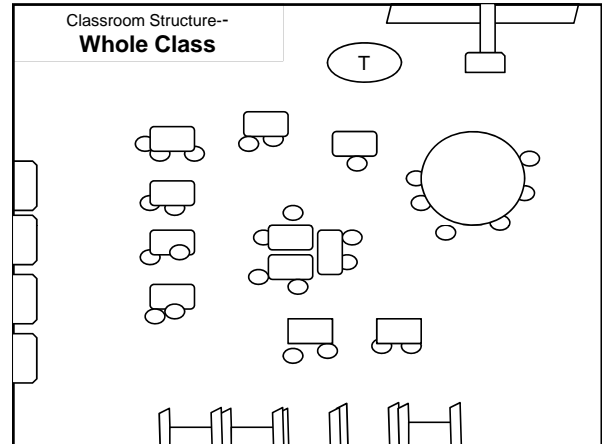
## The Vision for Formative System

Formative Classroom?

Topics	Quarter 1	Quarter 2	Quarter 3	Quarter 4
1	2.0	3.0	3.0	3.0
2	2.0	2.5	2.5	2.5
3	2.0	2.0	2.0	3.5
4	1.5	2.5	3.0	3.0
5	3.0	3.0	3.0	3.0
6	4.0	4.0	4.0	4.0
7		2.0	2.0	3.0
8		2.0	2.5	2.5
9		2.5	3.0	3.0
10	3.0	3.0	3.0	3.0
11		3.5	3.5	3.5
12			3.0	3.0
13			3.5	3.5
14			2.0	2.5
15			3.0	3.0
16	3.5		3.5	3.5
17				3.0
18				4.0
19				2.0
20				3.0

Monday	Tuesday	Wednesday	Thursday	Friday
Whole Class.	→		Learning Lab	Learning Lab
Monday	Tuesday	Wednesday	Thursday	Friday
Whole class	→			
Monday	Tuesday	Wednesday	Thursday	Friday
Learning Lab	→			Whole Class.



**Time Based**

**System Requirements**

1. Must be in-class the entire year.
2. Must behave appropriately.
3. Must complete the work assigned them.
4. Must figure out what each individual teacher expects of them.
5. Can be moved on to next curriculum level without adequate knowledge if they are successful at 1-4

**UNINTENDED Consequences**

1. Students succeed (sometimes at minimal levels) if they can figure out and are willing to follow the rules.
2. Many students who do not figure out the rules or are unwilling to follow them get so far behind relatively quickly that they have a high probability of dropping out

**Performance Based**


**System Requirements**

1. Must demonstrate competence in important content knowledge.
2. Must behave appropriately if they wish attend classes; if they cannot or will not, there are alternative settings for learning.
3. Must take some responsibility for their own learning, but have diverse resources available to them to achieve success.
4. Acquires important knowledge at particular curriculum level and then moves to next level.


**INTENDED Consequences**

1. All students do not have to figure out the rules from teacher to teacher.
2. To catch up or move ahead at an accelerated pace, students do not have to spend a specific amount of time in class. Rather, they must demonstrate competence in important content.
3. There are fewer dropouts and more students completing graduation.





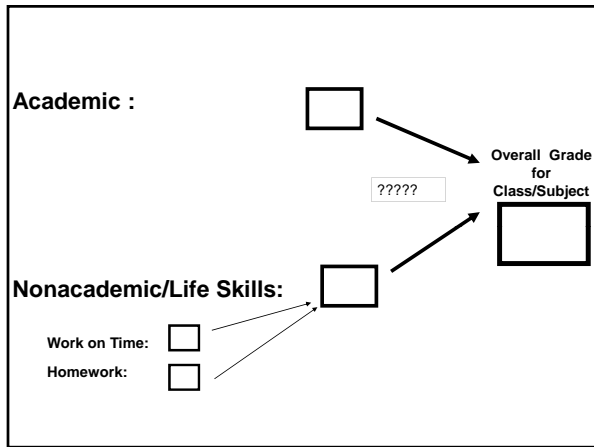
## Grading Implications



## Grading

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Separate Academic from Non-academic/Life Skills



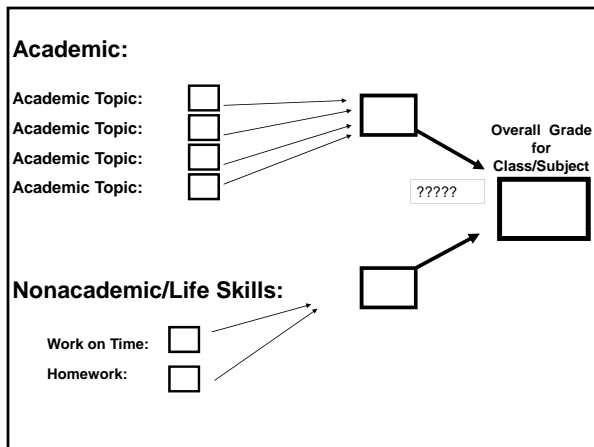
## Grading

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Separate Academic from Life Skill Factors

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Track Progress Toward Learning Goals




Standard Topics	Colonization				Conflicts in Hist				Writing Org.			Work On Time			
<i>Assessments</i>	Assess. 1 --10/1				Assess. 1 --10/1	Assess. 4 -- 10/2	Assess. 6 --10/28	Assess. 7 10/30	Assess 3 --10 11	Assess. 11/1	Assess. 10 11/4			Wk. 10/1	Wk. 10/8
	Assess. 2 --10/7														
	Assess. 3 10/11														
	Assess. 4 -- 10/21														
	Asses 5 --10/25														
<i>Students</i>														Wk. 10/15	Wk. 10/23
<b>Josh</b>	2.5	3.0	3.0	3.5	1.5	2.5	2.5	3.0	2.0	2.0	2.0				
	3.5			3.5											
<b>Jamal</b>	1.0	2.0	3.0	3.5	2.5	2.5	3.0	3.0	1.5	2.5	3.0				
	3.5			3.5											
<b>Janie</b>	3.5	4.0	4.0	2.0	4.0	2.0	2.0	2.0	2.0	2.0	2.0				
	4.0			4.0											

- No averaging in zeroes for missing work...
- No decreasing score on assessment for late work...

...LATE AND MISSING WORK IS TRACKED UNDER "NON-ACADEMIC FACTORS" AND CAN INFLUENCE OVERALL GRADE

- There is no accumulation of points; the score for a topic represents the student's level of learning up to that point,
- Students are re-assessed as often as needed—and as long as it is feasible

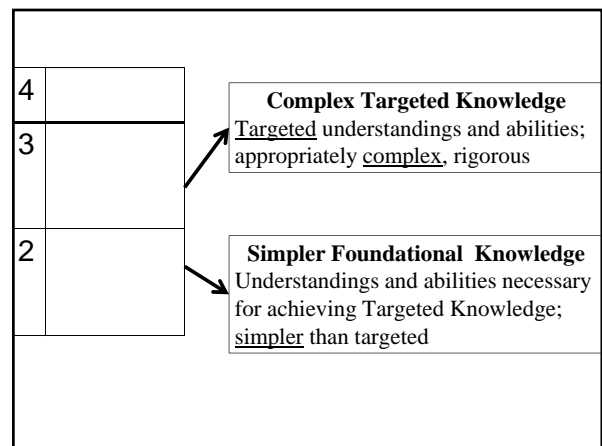


Using a scale that represents learning

You just can't rely on the 100-point scale

On a test for a particular topic, there are..

<b>A. Items 1–10</b> Ten multiple choice items that require basic understanding/skill important to the topic but <u>simpler foundational content</u>	Total for section =
<b>B. Items 11–14</b> Four short constructed-response items that ask for demonstration of understanding/skill for the <u>complex targeted content</u>	Total for section =
<b>C. Item 15–16</b> Two items that ask for demonstration of in-depth understanding/skill that <u>goes beyond</u> what was targeted in the teaching	Total for section =
<b>Total</b>	<b>=100</b>



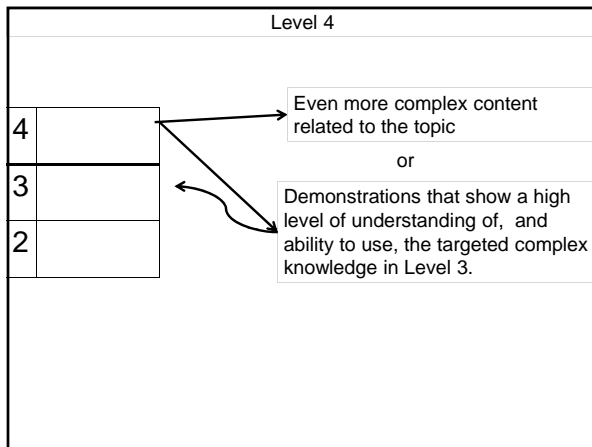


Scale	
4	In addition to 3, in-depth understanding /skill that <u>go beyond</u> what was targeted in the teaching
3	The simpler AND the complex understanding/ skill
2	Simpler, foundational understanding/skill
1	With help, partial understanding/skill of some of the simpler and complex
0	Even with help, no understanding or skill demonstrated.

4	In addition to 3, in-depth understanding /skill that <u>go beyond</u> what was targeted in the teaching
3.5	<i>All of simpler and complex plus partial 4</i>
3	The simpler AND the targeted complex understanding/ skill
2.5	<i>All of simpler; partial complex</i>
2	Simpler, foundational understanding/skill
1.5	<i>Partial simpler</i>
1	With help, partial understanding/skill of some of the simpler and complex
0	Even with help, no understanding or skill demonstrated.

Topic Grade 8: Atmospheric Processes & Water Cycle	
	Have developed an understanding of <ul style="list-style-type: none"> <li>• Water cycle processes (condensation, precipitation, surface runoff, percolation, evaporation) impact climate changes</li> <li>• Temperature and pressure have different effects in different layers of Earth's atmosphere</li> </ul>
	Have developed an understanding of Terms, such as climactic patterns, atmospheric layers, stratosphere, troposphere. Details, such as <ul style="list-style-type: none"> <li>✓ Precipitation is one of the processes of the water cycle</li> <li>✓ The troposphere is one of the lowest portions of the earth's atmosphere</li> </ul>

	Have developed an understanding of <ul style="list-style-type: none"> <li>• Plants and animals can live in different environments because of their internal and external features <i>e.g., describing the external features that allow plants to live in water, describing the internal features that allow bears to survive through winter</i></li> <li>• Adaptation is an evolutionary process influenced by many things</li> </ul>
	Have developed an understanding of Terms: adaptation, internal feature, external feature, environment, evolution Details <ul style="list-style-type: none"> <li>✓ Cactus plants can living the desert are examples of adaptation</li> <li>✓ Giraffes' ability to get food in high places is an example of adaptation.</li> </ul>



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Generating Summative Topic  
and Cross-Topic Academic Scores

Summative Score for a Topic:					Summative scores
Academic Topic:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Academic Topic:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>
Academic Topic:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Academic Topic:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>

### Assigning a Topic Summative Score

Academic Topic

1. Average or Percent
2. Assessment Event
3. Trend Score (Power Law)
4. Growing Preponderance of Evidence

### 1. Average

Academic Topic

$\square + \square + \square + \square = \square$

$\square / 4 = \square$

### 1. Percent

Academic Topic

Pts. Poss.  $\square + \square + \square + \square = \square$

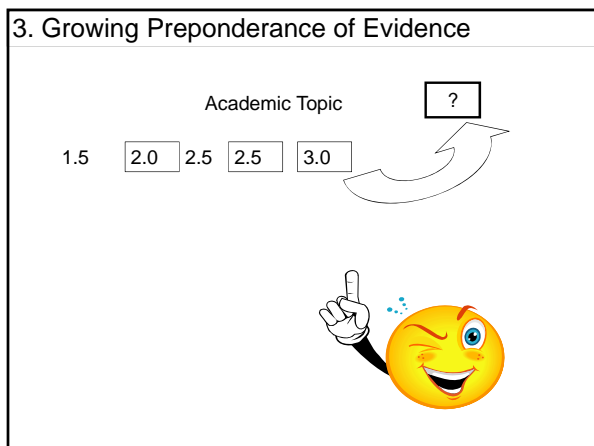
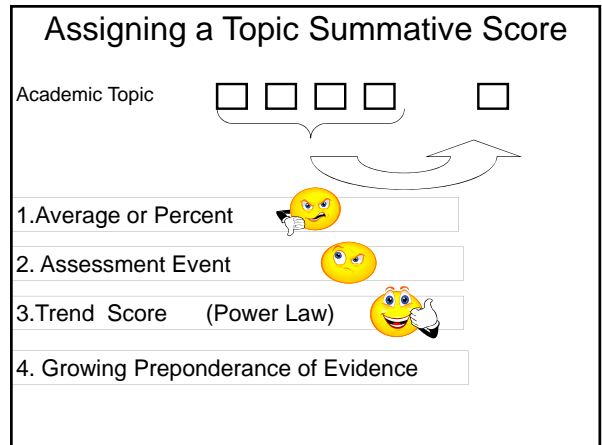
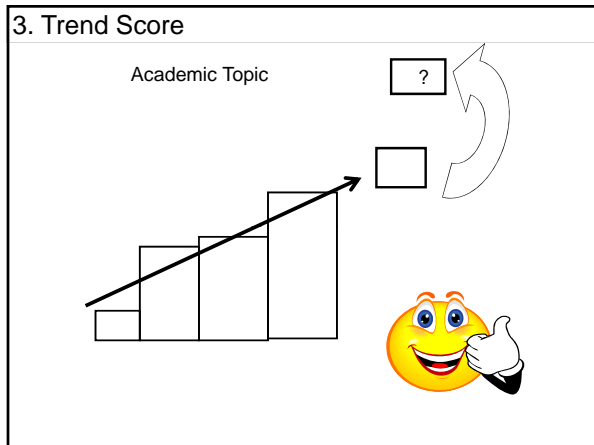
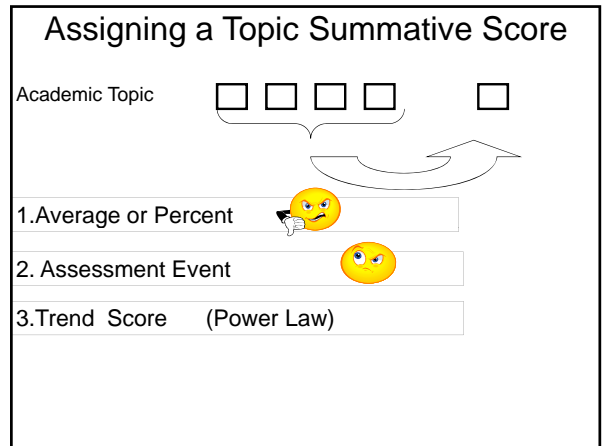
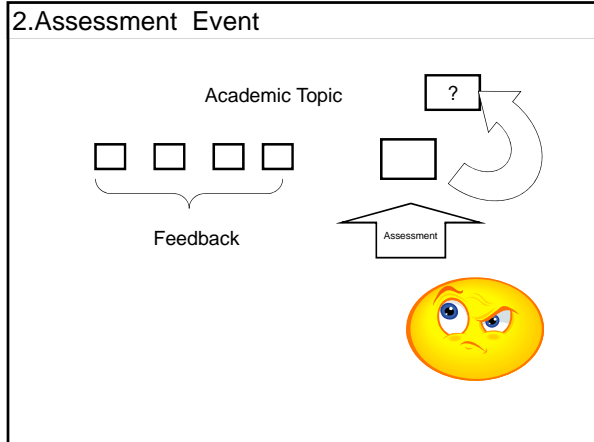
Pts. Earned  $\square + \square + \square + \square = \square$

$\square / \square = \%$

### Assigning a Topic Summative Score

Academic Topic


1. Average or Percent
2. Assessment Event





Student #1		Student #2		Student #3	
1.0	3.5	2.5		3.5	
1.5	<b>3.5</b>	<b>3.0</b>		<b>4.0</b>	
<b>2.0</b>		3.5			
2.5		<b>4.0</b>			
<b>3.0</b>					


## Assigning a Topic Summative Score

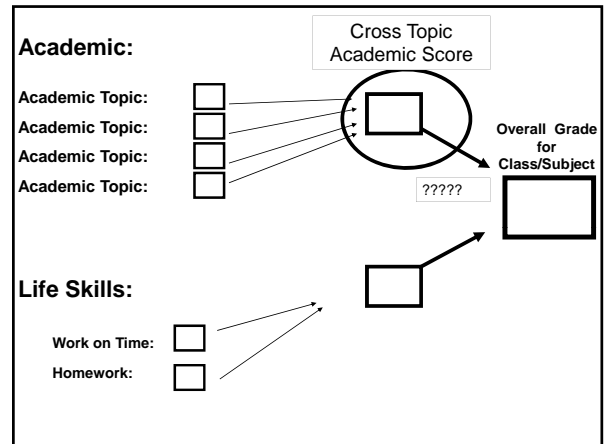
Academic Topic

1. Average or Percent 

2. Assessment Event 

3. Trend Score (Power Law) 

4. Growing Preponderance of Evidence 



### Cross-Topic Academic Score

Compensatory

"...performance on one measurement topic can 'compensate' for performance on another."

### Cross-Topic Academic Score -- Compensatory

Average		Weighted Average
Topic 1= 2.0	3.00- 4.00 = A 2.50-2.99 = B 2.00-2.49 = C 1.50-1.99 = D Below 1.50= F	Topic 1= 2.0
Topic 2= 2.0		Topic 2= 2.0 X 2
Topic 3= 3.5		Topic 3= 3.5 X 2
Topic 4= 4.0		Topic 4= 4.0 X 3
Topic 5= 1.5		Topic 5= 1.5
<b>Average is 2.6</b>		<b>Average is 3.1</b>

Pros and Cons?

### Cross-Topic Academic Score

Compensatory

"...performance on one measurement topic can 'compensate' for performance on another."

Conjunctive

"...one grade does not 'pull up' another...overall grades are determined by score patterns."

### Cross-Topic Academic Score-- Conjunctive

A	No topic score below a 3.0	with at least one 4
B	No topic score below a 2.5	with at least one 3
C	No topic score below a 2.0	with at least one 3
D	No topic score below a 1.5	
F	Some topic scores below 1.5	

A	No topic below 2.5 and	majority at 3.0 or above
B	No topic below 2.0 and	majority at 2.5 or above
C	No topic below 1.5 and	majority at 2.0 or above
D	No topic below 1.0 and	majority at 1.5 or above
F	Some topics below 1.0 or	majority not above 1.5

Pros and Cons?