

Please sit:

Closer to the front

Near friends

Near strangers

(aka new friends)

Presentation: [tinyurl.com/nctm18sbg](https://tinyurl.com/nctm18sbg)

# Building a Flexible Standards-Based Classroom within a Traditional School Setting

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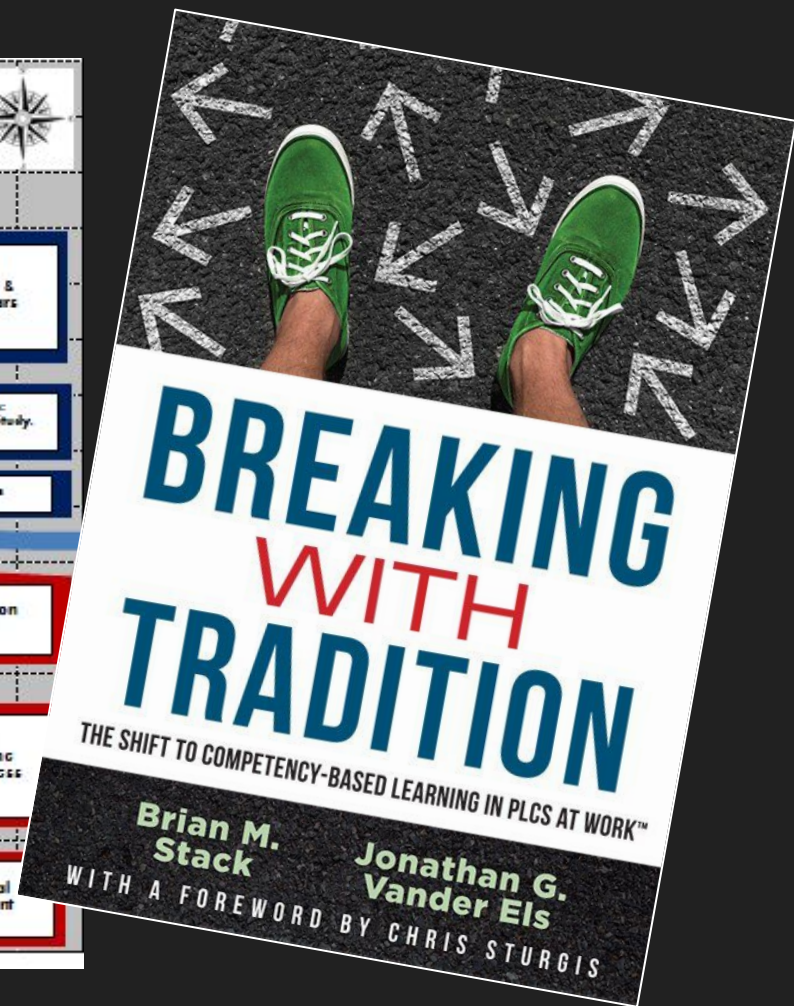
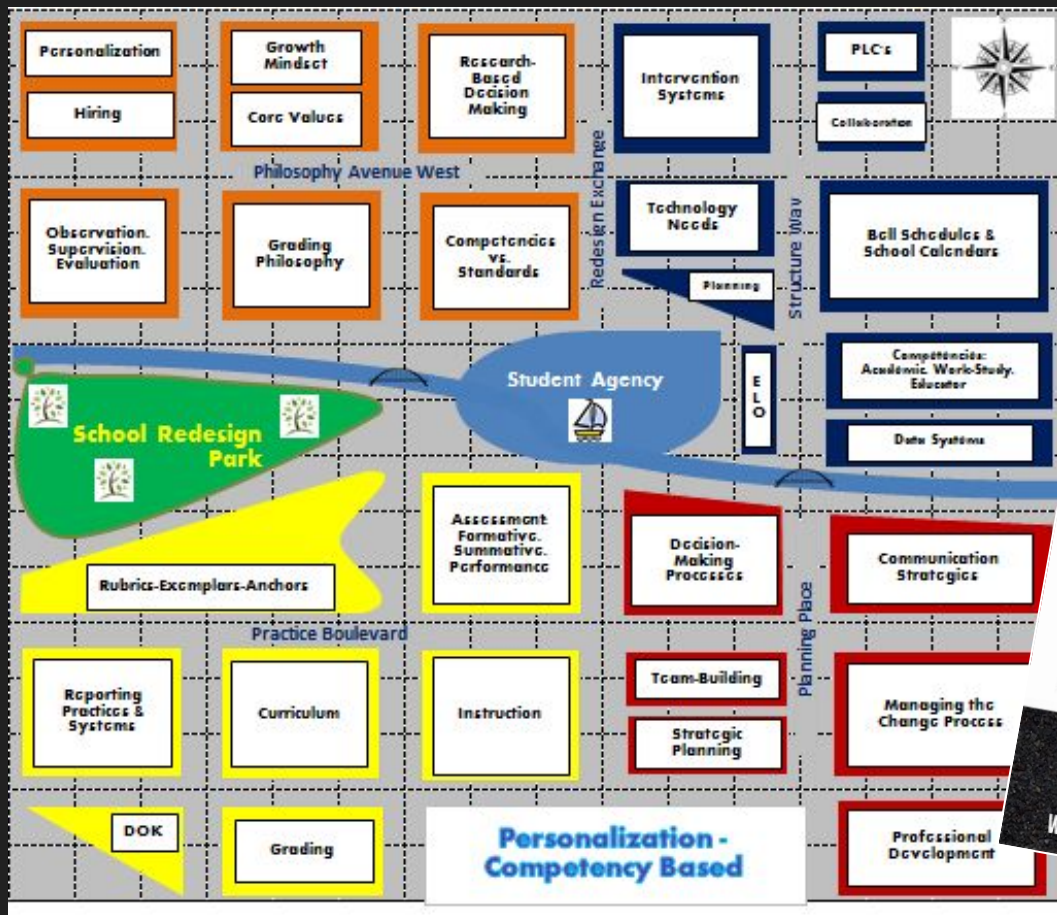
NCTM Annual Meeting

Washington Convention Center

Fri, 4/27/18 8:00 AM - 9:00 AM

Session 1404, Room: 145 AB (Theater, 552 Seats)

Amanda  
would not  
come in  
Classroom  
"I gotta fart"



# Roadmap

- Examine our personal philosophies of grading and assessment
- Discuss the definition of “standards-based grading”
- Preview ways to embed SBG in the most restrictive environments
- Smooth the transition for parents, students, and yourself

Welcome to  
Traditional High School  
in Anywhere, USA

What does it mean for a  
student to pass your class?

Turn and talk  
to a partner.

What is the purpose of a final grade in your class?

Sort the slips of paper from most to least important with a partner.



# Norming Our Grading System



## **Content Grades:**

This grade represents a student's progress towards mastery of content standards. This could also be called the “traditional” math grade. Typically, these skills are not very transferrable.



## **Practice Grades:**

This grade represents a student's progress towards the math practice standards. These could be seen as an “application” grade. Typically, these skills are transferable to other fields.



## **Scholarship Grades:**

This grade represents a student's progress towards the transferable qualities of being a “productive student”. Typically, these skills are transferable to all other academic settings.



## **Completion Grades:**

This grade represents the completion of a specific task. Often an “all or nothing” grade to elicit a specific behavior.



0%

15%

50%

35%





# What is Standards Based Grading?

“ Standards based grading involves measuring students' proficiency on well-defined course objectives ”

**Tomlinson & McTighe, 2006**

**Integrating Differentiated Instruction & Understanding by Design**

# What is Standards Based Grading?

1. Based on learning goals and performance standards. One grade per goal.
2. Standards are criterion or proficiency-based. Criteria and targets are made available to students ahead of time.
3. Measures achievement only OR separates achievement from effort/behavior. No penalties or extra credit given.
4. Selected assessments (tests, quizzes, projects, etc.) are used for grading purposes.
5. Emphasize the most recent evidence of learning when grading.

**Ken O'Connor, 2002 (4th ed in 2017)**

**How to Grade for Learning: Linking Grades to Standards**

**Corwin**

# What is Standards Based Grading?

1. Entries in the grade book are limited to course or grade level standards
2. Extra credit will not be given at any time
3. Multiple opportunities to demonstrate their understanding
4. Grade book entries from multiple points of data emphasizing the most recent
5. Multiple opportunities to practice standards independently. Practice assignments are for providing feedback. Practice assignments, including homework, will not be included as part of the final grade

**Matt Townsley, 2014**

**What is the Difference between Standards-Based Grading (or Reporting) and Competency-Based Education?**

**Competency Works**

# What is Standards Based Grading?

“ A traditional system done in the spirit of SBG is much, much better than an SBG system done poorly ”

**Frank Noschese, 2013**

**The Spirit of SBG**

<https://fnoschese.wordpress.com/2013/06/26/the-spirit-of-sbg/>

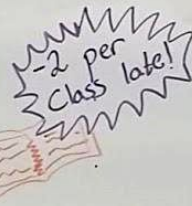
“Measures achievement or separates achievement from effort/behavior”

## SCHOLARSHIP STANDARDS

5/5 - Reflections

5/5 - Homework + Videos

10/10 - Notebook Check



## CONTENT STANDARDS

10/10 - Completed a challenge

9/10 - Mastered the Skill

8/10 - Some procedural errors

7/10 - Some conceptual errors

5/10 - Many conceptual errors

0/10 - Weak understanding

- Retest twice
- One standard per day
- No tutoring "day-of"
- 2 weeks!

## PRACTICE STANDARDS

① Understand & Persevere ⑤ Use tools Strategically

② Abstract & Contextualize ⑥ Be Precise

③ Justify & Critique ⑦ Organize & Structure

④ Model, Revise, Retry ⑧ Use Patterns





“Standards are criterion or proficiency-based. Criteria and targets are made available to students ahead of time.” “No extra credit”

**10/10 Above Mastery:** you have mastered the skill and correctly applied it to a challenging and novel situation

**9/10 Mastery:** you have demonstrated a full understanding of the concepts involved, have clearly showed all steps of your reasoning, have used notation correctly, and have no errors

**8/10 Some procedural errors:** you have demonstrated a full understanding of the concepts involved, but you may have made a procedural error that was not related to this standard

**7/10 Some conceptual errors:** you have demonstrated partial understanding, but are unclear on one minor concept.

**5/10 Weak understanding:** you have attempted to answer the question, but are unclear about multiple minor concepts, or one major concept. Student should retake.

**0/10 No understanding:** You left the problem blank or made no mathematical attempt.

**“Standards are criterion or proficiency-based. Criteria and targets are made available to students ahead of time.” “No extra credit”**

**10/10 Above Mastery: Wow!**

**9/10 Mastery: Yes!**

**8/10 Some procedural errors: Yes, but...**

**7/10 Some conceptual errors: Kinda...**

**5/10 Weak understanding: Not really.**

**0/10 No understanding: Check for a pulse!**

# Standard 1: I can graph a linear equation in any form

**10/10 Above Mastery:** All correct with challenge

- 10) If the line  $Ax + By = C$  has  $A > 0$ ,  $B > 0$ , and  $C > 0$ , what can you conclude about the slope of the line?
- A) The slope is positive      B) The slope is negative  
C) The slope is 0      D) There is not enough information

**9/10 Mastery:** All correct except challenge

**8/10 Some procedural errors:** Reverses the sign of the slope in one graph

**7/10 Some conceptual errors:** Continuously confuses  $x=3$  and  $y=3$

**5/10 Weak understanding:** Continuously graphs the slope and the y-intercept incorrectly.

Geometry

Name \_\_\_\_\_

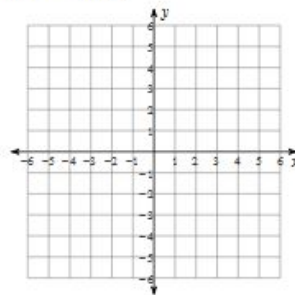
Coordinate Algebra Test (Standards 1, 2, 3)

Date \_\_\_\_\_

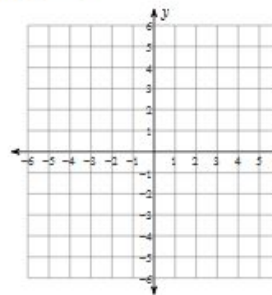
(STANDARD 1: I can graph a linear equation in any form)

Sketch the graph of each line.

1)  $y = -2x + 4$








2)  $x = -3$



“Standards are criterion or proficiency-based. Criteria and targets are made available to students ahead of time.” “No extra credit”

$$8 + 1 / 10$$

“Based on learning goals & performance standards. One grade per goal”

03/15/2018	Content Standards	 Content Standard 20: Points, Lines, and Planes								5/10	50	50	<a href="#">View</a>
03/15/2018	Content Standards	 Content Standard 21: Naming Geometric Figures											
03/15/2018	Content Standards	 Content Standard 22: Geometric Vocabulary											
03/15/2018	Content Standards	 Content Standard 23: Missing Angle and Segment											
03/13/2018	Math Practice Standards	 Application Standard: Geometry Pictionary											

Unit 1A, Basic Figures and Notation Assessment  
Geometry  
Mr. Janes - TRMHS

Name: \_\_\_\_\_

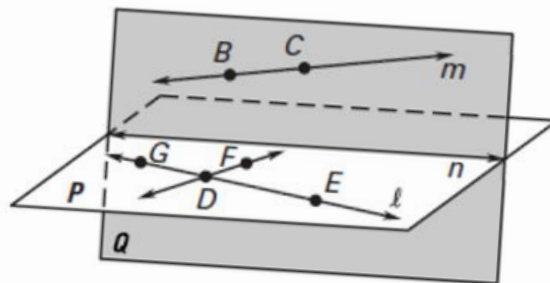
Date: \_\_\_\_\_ Class Period: \_\_\_\_\_

Please write all answers on the lines provided. Be sure to read all directions and check your work. Good luck!

**Standard 20: I can understand and apply the notions of points, lines, and planes.**

\_\_\_\_ / 10

Use the diagram to answer questions 1 and 2.



1. Name a point **collinear** with point D and point E

**“Based on learning goals & performance standards. One grade per goal”**

03/15/2018	Content Standards	Content Standard 20:	5/10	50	50	View																
03/15/2018	Content Standards	Practice Standard: I can use precise language to explain my ideas _____ / 10																				
03/15/2018	Content Standards	Practice Standard: I can justify and critique mathematical arguments _____ / 10																				
03/15/2018	Content Standards	Practice Standard: I can change strategies, rely on my group, and persevere when struggling _____ / 10																				
03/15/2018	Content Standards	As you are completing the Geometry City task, the teacher will grade your group twice: first by interviewing your group and later by listening to your group. Your teacher may also subtract points at any time if the group is off-task.																				
03/13/2018	Math Practice Standards	<table><tr><th>0</th><th>5</th><th>8</th><th>10</th></tr><tr><td>Group members... ...do not use vocabulary terms</td><td>Group members... ...attempt to use precise vocabulary terms</td><td>Group members... ...use precise vocabulary terms most of the time</td><td>Group members... ...always use precise vocabulary terms</td></tr><tr><td>...do not explain their ideas</td><td>...attempt to explain their ideas, but rely on intuition</td><td>...explain their ideas using</td><td></td></tr><tr><td>...do not clarify or challenge</td><td></td><td></td><td></td></tr></table>					0	5	8	10	Group members... ...do not use vocabulary terms	Group members... ...attempt to use precise vocabulary terms	Group members... ...use precise vocabulary terms most of the time	Group members... ...always use precise vocabulary terms	...do not explain their ideas	...attempt to explain their ideas, but rely on intuition	...explain their ideas using		...do not clarify or challenge			
0	5	8	10																			
Group members... ...do not use vocabulary terms	Group members... ...attempt to use precise vocabulary terms	Group members... ...use precise vocabulary terms most of the time	Group members... ...always use precise vocabulary terms																			
...do not explain their ideas	...attempt to explain their ideas, but rely on intuition	...explain their ideas using																				
...do not clarify or challenge																						

## Turn & Talk

What constraints might you encounter when assessing with standards?

What solutions would make sense for you, your students, and your families?



“Separates achievement from effort/behavior”

## Geometry Scholarship Reflection

\* Required

### Tier 1 Goals

Reflect on the questions below

Reflect on your timeliness today: \*

☐ I was on time to class and started the warm up in less than a minute late to class, including materials (1 point)

☐ I was more than a minute late to class, including materials (0 points)

Scholarship Goal Setting Document  
Geometry & Statistics  
Academy of Science and Innovation

Name: \_\_\_\_\_  
Date: \_\_\_\_\_ Class: \_\_\_\_\_

The best way to improve in any field is to reflect in order to analyze your practice, find room for growth, and the most efficient way to improve. Math class is no different! Please read the goals below and identify three goals that will help you grow the most. If you feel there are more than three you want to focus on, choose goals close to the list.

Each class, you will reflect on your three goals with a google form. You will be asked to rate yourself using the found in the rubric below. At the end of the reflection, you will think about what you can do to improve on these reflections will be used as part of your scholarship grade, and I will conference with you periodically on reflection and growth. If you feel that you are having difficulty with your goals, or believe you have mastered your goals, please meet with me to discuss changing your goals before the next unit.

Goal	Not There... Yet! (0 points)	Getting There (½ point)	Met Goal (1 point)
Punctual	I was more than a minute late to class, including getting my materials	I was less than a minute late to class, including getting my materials	I was on time to class and started the warm up in less than a minute
Prepared	The teacher needed to remind me to go get my materials	I asked the teacher to get my materials or provide extra materials	I had all of my materials and was ready to start of class
Focused	I was not focused during class	I was focused during class	I was focused during class



*“Separates achievement from effort/behavior”*





## Turn & Talk








Did you include scholarship standards  
in your ideal grading system?

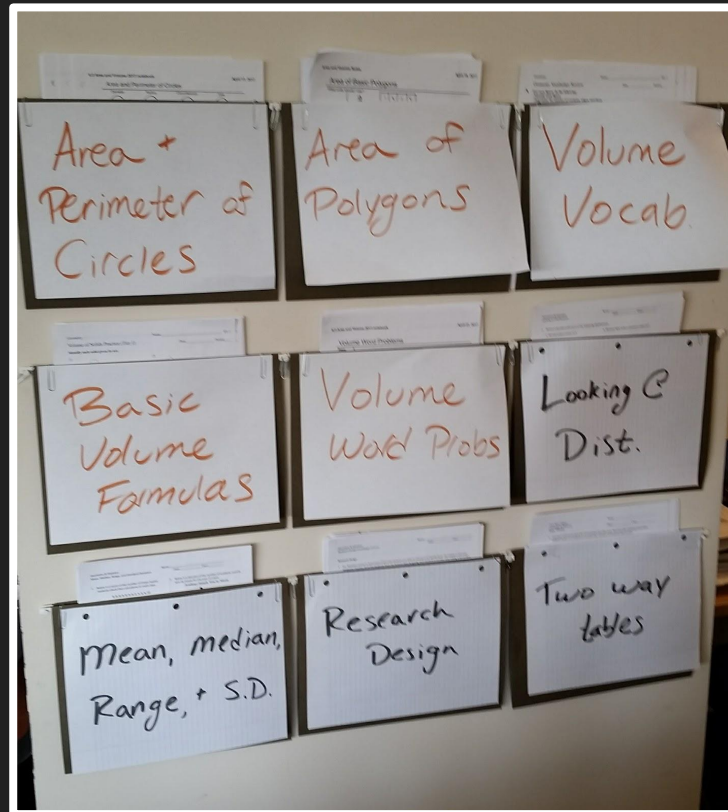
If so, how would you assess them?

# “Multiple opportunities to practice standards independently”

 **Unit 2C: Triangles and Quadrilaterals**


 4 sections


-  **Video and Worksheet: Intro to Triangle and Quadrilateral Vocabulary [Standard 19]**
-  **Video Check: Triangle and Quadrilateral Vocabulary [Standard 19]**
-  **Video: Properties of Quadrilaterals [Standard 20]**
-  **Video: Properties of Quadrilaterals Through Transformations [Standard 20]**
-  **Worksheet: Properties of Quadrilaterals HW [Standard 20]**
-  **In-Class: Properties of Quadrilaterals, Tier 1 [Standard 20]**
-  **In-Class: Properties of Quadrilaterals, Tier 2 [Standard 21]**
-  **In-Class: Properties of Quadrilaterals, Tier 3 [Standard 21]**
-  **Video Check: Properties of Quadrilaterals [Standard 20]**
-  **Video Check: Algebra and Quadrilaterals [Standard 21]**











# “Multiple opportunities to practice standards independently”


 **Unit 2C: Triangles and Quadrilaterals**


 4 sections


-  **Video and Worksheet: Intro to Triangle and Quadrilateral Vocabulary [Standard 19]**
-  **Video Check: Triangle and Quadrilateral Vocabulary [Standard 19]**
-  **Video: Properties of Quadrilaterals [Standard 20]**
-  **Video: Properties of Quadrilaterals Through Transformations [Standard 20]**


 **Mathematics teacher** **of Quadrilaterals HW [Standard 20]**

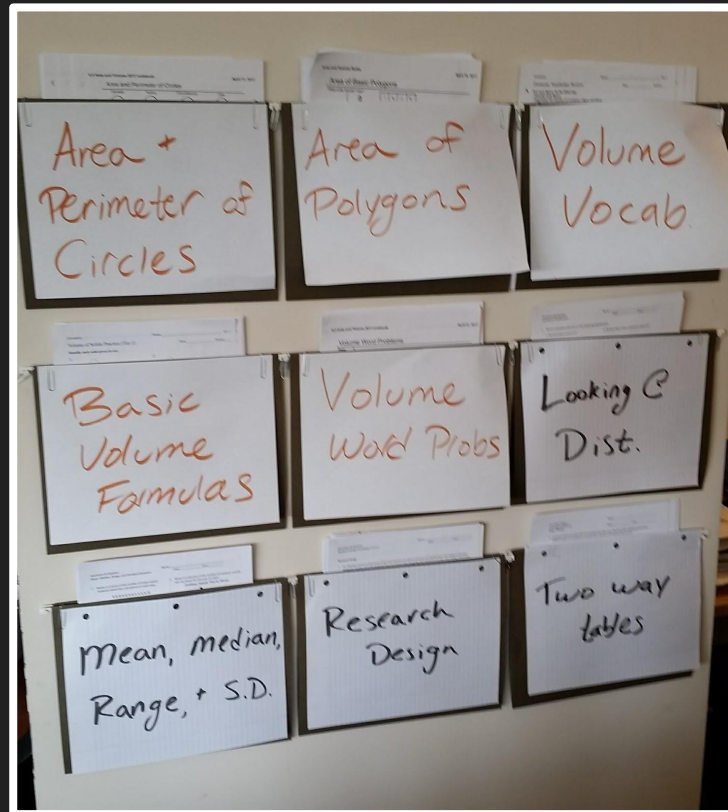
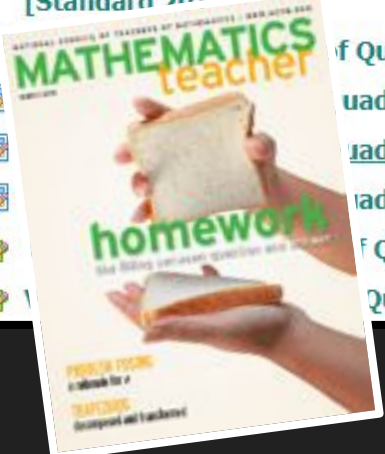
 **Quadrilaterals, Tier 1 [Standard 20]**

 **Quadrilaterals, Tier 2 [Standard 21]**

 **Quadrilaterals, Tier 3 [Standard 21]**

 **Quadrilaterals [Standard 20]**

 **Quadrilaterals [Standard 21]**



## Turn & Talk

What structures could you add to your class to encourage and facilitate independent practice?

“Multiple opportunities to demonstrate their understanding”

## When Can I Retake a Geometry Standard?

Lunch Block	Monday	Tuesday	Wednesday	Thursday	Friday
Lunch 1	Unavailable	Room 319 Janes	Unavailable	Room 319 Janes	Room 319 Janes
Lunch 2	Unavailable	Room 319 Janes	Unavailable	Room 319 Janes	Room 319 Janes
Lunch 3	Unavailable	Room 319	Room 319	Room 319	Room 319

- ~~1. You can only re-test a standard twice~~
2. Only one standard can be re-tested per day
3. You cannot receive tutoring right before you re-test a standard

Assignment Comments:

Attempt 1: 5

Attempt 2: 8

Attempt 3: 9

# "Multiple opportunities to demonstrate their understanding"

The image shows a classroom wall with a yellow background, displaying student work on various math topics. The work is organized into two rows of posters and whiteboards.

**Top Row (Posters):**

- Poster 1:** Titled "Understand Properties of Transformations". It includes diagrams of a triangle being translated and rotated.
- Poster 2:** Titled "Specify a Composition of Transformations". It shows a sequence of transformations applied to a shape.
- Poster 3:** Titled "Use Algebraic Transformations". It includes the transformation  $(x, y) \rightarrow (x+2, -y)$  and lists names like Sabrina S, Lohela, and Joey.
- Poster 4:** Titled "Understand and apply the notion of parts, lines, & planes". It includes diagrams of geometric figures and lists names like Sabrina S, Lohela, and Joey.
- Poster 5:** Titled "Describe & Sketch with Symbols and notation". It includes a list of names and a small diagram.
- Poster 6:** Titled "Describe & Sketch with Symbols and notation". It includes a list of names and a small diagram.
- Poster 7:** Titled "Describe & Sketch with Symbols and notation". It includes a list of names and a small diagram.

**Bottom Row (Whiteboards):**

- Whiteboard 1:** Contains a small diagram of a triangle.
- Whiteboard 2:** Contains a small diagram of a triangle.
- Whiteboard 3:** Contains a small diagram of a triangle.
- Whiteboard 4:** Contains a small diagram of a triangle.
- Whiteboard 5:** Contains a small diagram of a triangle.
- Whiteboard 6:** Contains a small diagram of a triangle.
- Whiteboard 7:** Contains a small diagram of a triangle.

A long metal rod is placed horizontally across the bottom of the posters.



**“Emphasize the most recent evidence of learning when grading.”**

Edit: Video Check: Properties of Quadrilaterals

Assignment

Students

Standards

Publish

Classes

Select Classes

1 Class: B32(A) Geometry - H

Assignment Name\*

Video Check: Properties of Quadrilatera

Created By: Schoology SIS Adapter

Category \*

Content Standards (F...

Score Type

Points

Score

+ Extra Points

+ Weight

Score Entry Points\*

5

Count in Final Grade

Due Date

Wednesday 4/4/2018

Description

B I U A- A- Size [icons]

No description

Delete

Duplicate

Save

Save and Close



## Turn & Talk

What structures could you add to your class to encourage students to persevere and re-try?

## Places where Traditional and SBG Clash

- Rubrics with a total point value of 4
- Passing criteria based on number of standards mastered
- Report Cards that don't display categories
- Marking Periods with permanent grades
- Tendency to treat standards in isolation

# Making the Transition for Students

- Keep it focused on learning and growth
- Support the conditions necessary for students to succeed
- Make failure cheap
- Make learning accessible
- Celebrate success

# Making the Transition for Parents

- Have your policies in ink and write a letter to parents
- Have your ideas ready for Open House
- Showcase the resources students have to succeed
- Use the standards as an asset during parent communication
- Focus on learning and growth

# Making the Transition for You

- It's okay to not have standards for the whole year planned out
- It's okay not to grade everything
  - Assess only what you value
  - Use technology (if possible)
  - Focus on feedback, not grades
- It's okay to change policies to meet the needs of your class

# Sources of Inspiration

Frank Noschese: <https://fnoschese.wordpress.com/category/standards-based-grading-2/>

Matt Townsley: <http://mctownsley.net/standards-based-grading/>

Dane Ehlert: <https://whenmathhappens.com/standards-based-grading/>

Dan Meyer: <http://blog.mrmeyer.com/2007/the-comprehensive-math-assessment-resource/>

John Stevens: <http://www.fishing4tech.com/fishin-solo-blog/i-failed-my-standards-based-grading-reflection>

Sam Shah: <https://samjshah.com/tag/standards-based-grading-sbg/>

Matt Vaudrey: <http://mrvaudrey.com/2012/09/09/sbg-standards-based-grading/>

Dylan Kayne: <https://fivetwelvethirteen.wordpress.com/2015/07/28/standards-based-grading-skepticisms>

## Daniel Schneider:

<https://mathymcmatherson.wordpress.com/2013/04/27/assessments-the-collateral-damage-of-sbg/>

## Bruce Jackson:

Anna Blinstein: <http://borschtwithanna.blogspot.com/2017/04/formative-feedback.html>

Marissa Walczak: <https://laviemathematique.wordpress.com/2017/11/27/weekly-summaries-updated-11-27-17/>

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