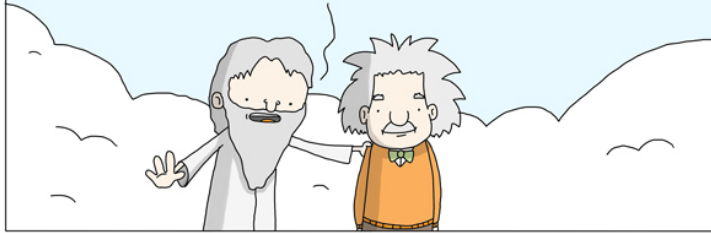


MR. EINSTEIN, I WILL GIVE YOU  
THE GIFT OF GREAT INTELLIGENCE...



MR. GUTENBURG, I WILL GIVE YOU  
THE GIFT OF INVENTIVENESS...



AND MR. MORGAN FREEMAN,  
YOU WILL BE BLESSED WITH...



...MY VOICE.



# Reflecting on Practice: Using Formative Assessment to Inform Instruction

## Unit 3 Session 9



“If students have left the classroom before teachers have made adjustments to their teaching on the basis of what they have learned about the students’ achievement,” he writes, “then they are already playing catch-up. If teachers do not make adjustments before students come back the next day, it is probably too late.”

Dylan Wiliam, October 2007, in *Ahead of the Curve: The Power of Assessment to Transform Teaching and Learning*, Douglas Reeves (Ed.), Solution Tree



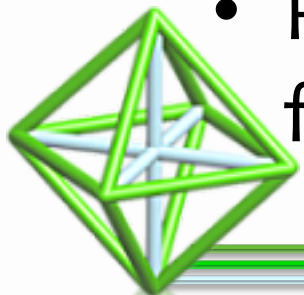
# Guiding Principles ...

- Don't keep doing the same thing when it isn't working.
- Use students as resources for each other
- Revisit your goals vs your activities and see if they are aligned or if there are other activities that would better meet your goals.
- Confront students with a variety of solutions including misconceptions and have them consider which ones make sense and why (i.e. provide good feedback)



# Key Strategies for Effective Formative Assessment

- Clarifying, sharing and understanding goals for learning and criteria for success with learners
- Engineering effective classroom discussions, questions, activities and tasks that elicit evidence of students' learning
- Providing feedback that moves learning forward



# E-I-G Framework

- **Evaluative:** student contributions viewed as right or wrong; if the expected response is not given, gaps filled by the teacher's response. Teacher strives to maintain a well-structured lesson that does not deviate.
- **Interpretive:** listen to a student's ideas with the primary purpose of accessing not assessing; opens up spaces for re thinking and revision; teacher is aware of and responsive to students
- **Generative** (Yackel,2003) Hermeneutive (Davis, 1996): interactively listen to students' ideas as part of the instructional process by engaging with them in the messy process of negotiation of meaning and understanding.

- In terms of **feedback**, let's look at Extremes – what does a purely Evaluative classroom look like? A purely Generative classroom?
- Pull examples from what you've seen or are thinking.



# Purely Evaluative

# Purely Generative





We are going to look at five different clips of classroom teaching.

Think about where the **responses** to student comments would be on the evaluative-interpretive-generative scale we used for listening.

Put your evidence on the post it note – then put your post it note for that classroom on the E-I-G scale.



Use a different color post it note to write evidence (in order of presentation)

- Pink = Interior Angles of a Polygon
- Light blue = What is an equation?
- Green = Fractions
- Blue = Tom
- Yellow = Lyle

Think about where the **responses** to student comments would be on the evaluative-interpretive-generative scale we used for listening. Put all your evidence on the post it note – then put your post it note for that classroom on the E-I-G scale.



# The bottom line for feedback:

- Is it generative?
- Does it **push** the students' thinking forward in the direction of your goals?



# On your own...

Suppose Abby's orange paint is made by mixing 1 cup red paint for every 3 cups yellow paint, and Zack's orange paint is made by mixing 2 cups red for every 5 cups yellow. Which paint mixture will be redder?



*Adapted from CCSSM Learning Progressions for Ratio/Proportion*


# Mixing Paint

1.1 1.2 1.3 Comparing R...2\_9

1	3
2	6
3	9
4	12
5	15
6	18
7	21

2	5
4	10
6	15
8	20
10	25
12	30
14	35

7	8	9
4	5	6
1	2	3
Submit		0
Clear	Reset	



With a partner, consider what misconceptions might arise when students do this problem.

Suppose Abby's orange paint is made by mixing 1 cup red paint for every 3 cups yellow paint, and Zack's orange paint is made by mixing 2 cups red for every 5 cups yellow.

Which paint mixture will be redder?

*Adapted from CCSSM Learning Progressions for Ratio/Proportion*



With your partner, select one or two misconceptions and develop two feedback statements/questions/actions you think would be generative.

Write your misconception and the statements/questions/actions in large font on a coloured sheet of paper.



Share posters across the table. Look at the suggestions and discuss whether the suggested feedback will be generative.

Choose your favorite suggestion from your table group and be ready to explain why the suggestion might push student thinking forward.





# Homework: Read

From the NCTM Research Brief read:

Providing feedback that moves learning forward

