



Building on Assessment – Day 2

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Rev 5/5/23 (ce)

Opening

Building on Assessment – Day 2



It became a great day when you joined us!

Presenter Name, Presenter@cpm.org



Sign in and make a name tag.



Take a puzzle piece and find your seat.
Introduce yourself to your team.

Opening

Outcomes



Participants will:

- + Plan, implement, and share competency assessment strategies that support the development of mathematically proficient students.
- + Reflect on the efficacy of their current formative assessment practice.
- + Plan formative assessments that supports summative assessments.
- + Develop assessment success criteria.

Opening

Agenda



Assessing for Learning & Developing Student Self-Awareness



- + Opening
 - + Co-Creating Observational Rubrics
 - + Feedback that Supports Student Ownership
 - + Writing Rubrics & Assessments
- + Peer & Self Assessment
 - + Closure

Opening

Effective Math Teaching Practices



Implement tasks that promote reasoning and problem solving.

Facilitate meaningful mathematical discourse.

Pose purposeful questions.

Support productive struggle in learning mathematics.

Elicit and use evidence of student thinking.

Opening



Be willing to take **risks**.

Have a **visionary** mindset.

Stay **engaged**.

Explore and reflect on your **beliefs**.

Give **grace** to others and yourself.

Change takes time, effort, and support!

Opening

Beliefs about Mathematics Assessment



PRODUCTIVE BELIEF		
N C T M	1	The primary purpose of assessment is to inform and improve the teaching and learning of mathematics.
	2	Assessment is an ongoing process that is embedded in instruction to support student learning and make adjustments to instruction.
	3	Mathematical understanding and processes can be measured through the use of a variety of assessment strategies and tasks.
	4	Multiple data sources are needed to provide an accurate picture of teacher and student performance.
	5	Assessment is a process that should help students become better judges of their own work, assist them in recognizing high-quality work when they produce it, and support them in using evidence to advance their own learning.
	6	Ongoing review and distributed practice within effective instruction are productive test preparation strategies.

C P M	7	Authentic assessment means assessing in a manner that mirrors the way the students have learned, and focusing on what the students know, rather than what the students do not know.
	8	Assessment, as with the learning, should focus on the big ideas and the connections to assess for understanding, and not on the fine grain-sized skills.
	9	Assessment and teaching should be seamlessly interwoven, and time should be spent on both. Because of the lack of time most teachers have, it is important to assess wisely, and use the supports that are in place.
	10	Assessment is the process of understanding student learning, and grading is evaluating that understanding. The bulk of the teacher's time should be spent on assessing rather than grading.

Opening Icebreaker



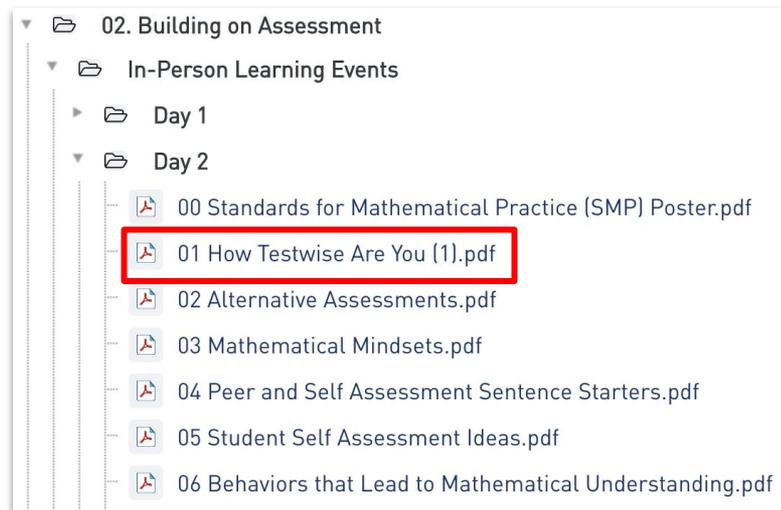
How Testwise Are You?



Individually
(5 minutes)



Team Discussion
(4 minutes)



Opening

How Testwise Are You? Answers



1. B: “can cause” indicates, “usually”. The others are absolutes
2. C: Longest answer
3. D: Only singular answer
4. A: Only one starting with a consonant - grammatical agreement
5. B: Only answer with two reasons
6. D: Only single answer and all other answers contain Krem
7. B: Use the answer from #4 to connect portar and raver
8. A: This answer includes all others
9. D: Longest answer



An Invitation to be Visionary

Engage as
fully as you
can.

Take risks
and be
vulnerable
as a learner.

Set your
intention for
the day!

Co-Creating Observational Rubrics



What competencies are valuable to be successful in a CPM classroom?

Team Task:

- + At your team's VNPS, brainstorm student competencies that foster success.
- + With 2 minutes remaining, determine your team's top three competencies.
- + Choose one person to share your team's top competencies.



Whiparound

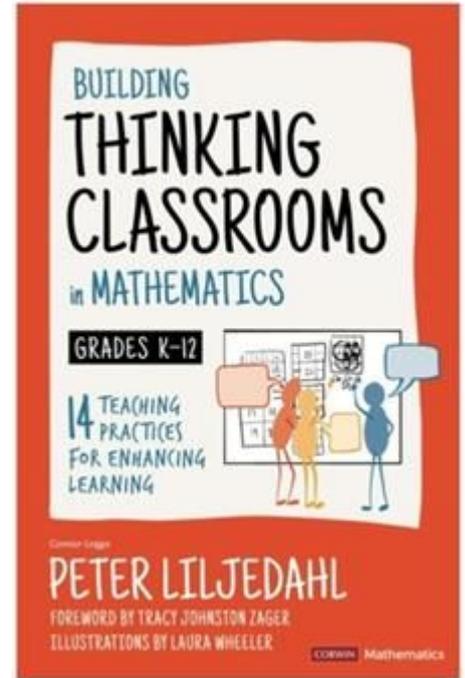
Co-Creating Observational Rubrics

Building Thinking Classrooms



*Regardless of geography, grade levels, or professional development setting, the same three competencies appear every time: **perseverance, willingness to take risks, and ability to collaborate.***

- *Building Thinking Classrooms,*
Peter Liljedahl



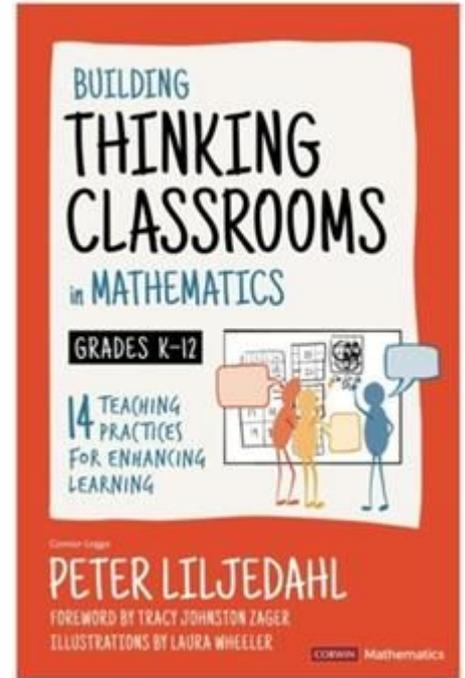
Co-Creating Observational Rubrics

Building Thinking Classrooms



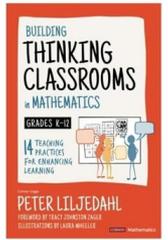
Is it our job, as teachers, to wait for students to come to us with these competencies in place, or is it our job to develop these competencies within the students that we have in front of us?

- *Building Thinking Classrooms,*
Peter Liljedahl



Co-Creating Observational Rubrics

Building Thinking Classrooms



If these competencies are so valuable, then we need to evaluate them—and how we evaluate them becomes the key question... We need to start evaluating what we value.

- *Building Thinking Classrooms, Peter Liljedahl*



• CLOSED MINDED
TO OTHERS' IDEAS

• OPEN TO OTHERS'
IDEAS

Co-Creating Observational Rubrics



Team Jigsaw

Collaboration

Perseverance

Risk-Taking

12:00



Team Task:

- + At your VNPS, brainstorm what your competency looks like.
- + Develop a shift rubric for your competency.

Note: *We encourage co-creating shift rubrics with your students.*

Co-Creating Observational Rubrics

Hosted Gallery Walk/Tuning Protocol



Presentations

Hosted Gallery Walk (2 min)



Tuning Protocol (2 min)

What suggestions would make the presentation or shift rubric stronger?

Would you consider changing ____?

You might consider adding ____.

Could you explain your thinking about ____?

I noticed that ____.

Co-Creating Observational Rubrics

Assessing the Three Competencies



Your Task:

As a **course-alike team**:

- + **Discuss** the prompt, “What does _____ (competency) look like in a ____ (CC1, CCA, etc) classroom?”
- + **Determine** where to assess each competency in Chapter 1 of your course.
- + **Select** a spokesperson to stay at the VNPS and present.

Collaboration
Perseverance
Risk-Taking



Hosted Gallery Walk & Tuning Protocol

What was done well?

This part (____) is very clear.

The most interesting thing in this work is ____.

This (____) helped me understand what you meant by ____.

You're getting better at ____.

What can be improved?

This part (____) could be clearer.

Could you explain your thinking about ____?

I noticed that ____.

I'm not sure I understand ____.

Next steps...

Would you consider changing ____?

Do you think you could ____?

You might consider adding ____.

During revision, you might clarify ____.

Co-Creating Observational Rubrics

Standards for Mathematical Practice



Your Task

- + Align the math practices (at right) with the three competencies.
- + Locate the math practices correlation document in your eBook.
 - + Teacher tab → Standards Practices → Correlations

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Co-Creating Observational Rubrics

Closure



Title: Assessing Competencies



My plan for assessing collaboration, perseverance, and risk-taking in the upcoming school year is _____.

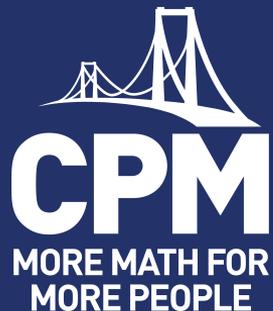


Consider:

- + Which competency will you focus on first?
- + What will success look like?
- + How is this an equitable assessment practice?

Take a Break

09:59



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Feedback that Supports Student Ownership



Learning Target

Participants will develop assessment success criteria.

Success Criteria (Know, Understand, Do)

- Participants know proficiency identifier language.
- Teams understand how to create rubric.
- Participants create a rubric.

Feedback that Supports Student Ownership



Peer Edit



- + Students complete a rough draft of their writing entry.
- + Students trade papers with a partner and read their partner's work.
- + Students use another color to make edits, provide comments and suggestions, ask clarifying questions, or provide praise.
- + Student 1 shares out to Student 2, what they like about the writing, and any additional notes or feedback.
- + Student 2 shares out to Student 1, what they like about the writing, and any additional notes or feedback.
- + Students make changes or additions to their rough draft thinking.

Feedback that Supports Student Ownership

Peer Edit: Prompt



“Negative pointing” is an effective marking strategy that helps students become more assessment capable.

In what ways do you **agree** with this statement?

In what ways do you **disagree** with this statement?

Feedback that Supports Student Ownership

Peer Edit: Prompt



“Negative pointing” is an effective marking strategy that helps students become more assessment capable.



In what ways do you **agree** with this statement?



In what ways do you **disagree** with this statement?

Feedback that Supports Student Ownership

Productive Assessment Belief



Assessment is a process that should help students become better judges of their own work, assist them in recognizing high-quality work when they produce it, and support them in using evidence to advance their own learning.

Principles to Actions, pg. 92

Feedback that Supports Student Ownership



Think, Ink, Share

What do you want students to demonstrate during an assessment?
(*Success Criteria*)

What characteristics would be included in a complete, high-quality response/solution?



Whiparound



Recorder/Reporter

Feedback that Supports Student Ownership

Rubric Categories



- + What is an efficient number of categories to effectively communicate feedback to students in a rubric?
- + What might be appropriate descriptors for each category?



Feedback that Supports Student Ownership



Writing a General Rubric

14:59



Task Manager

Watch the time.

Your Task:

- + **Individual** work time. (3 min)
- + Share **progress** with your team. (5 min)
- + Individual rough draft **editing**. (2 min)
- + **Collaborate** to create first draft rubric. (5 min)
- + Remember...
 - + *the **mathematical practices** (SMPs) that you want your students to demonstrate.*
 - + *the characteristics of **high quality responses**.*

Feedback that Supports Student Ownership

Applying Rubrics to Student Work



Learning Objective: *Students use their understanding of ratios and proportionality to solve a wide variety of percent problems, including those involving discounts, interest, taxes, tips, and percent increase or decrease.*

Marty purchased a jacket at a discounted price. The original price was \$90.
If the jacket was 20% off, calculate the discounted price of the jacket.

Be sure to explain your thinking. Represent your thinking in more than one way.
How do you know that your answer is correct?

- + Use the rubric to individually evaluate the student work.
- + As a team, come to consensus on rating for each sample.
- + Be prepared to share out struggles with rating the work and using the rubric.

Feedback that Supports Student Ownership

Rubric Revisions



Team Task:

- + **Reflect** on the effectiveness of your rubric.
- + Make **revisions** to strengthen your rubric.
- + Remember...
 - + *the **mathematical practices** (SMPs) that you want your students to demonstrate.*
 - + *the characteristics of **high quality responses**.*

Feedback that Supports Student Ownership



Closure

How will you **support** students in becoming **assessment capable learners** (recognizing and demonstrating high quality mathematics)?

How will your **assessment culture** (practices) shift to **maximize student learning** potential?



Assessment Capable Learners “are aware of their current level of understanding in a learning area.”

Developing Assessment Capable Learners

Writing Rubrics & Assessments



Task Managers
Watch the time.



Your Task



Collaborative Work (15 minutes)

As a team...

- + revise your rubric.



Swapmeet (20 minutes)

- + swap rubrics.
- + **Peer Edit** the rubric.

Writing Rubrics & Assessments

Dyad



- + Partners share without interruption.
- + Each partner shares for an equal amount of time.
- + Listening partner remains quiet and uses positive body language.

Writing Rubrics & Assessments

Proximity Partner & Dyad

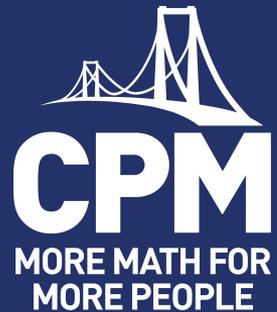


What are your takeaways or “aha’s” from this morning?



- + Co-Creating Observational Rubrics
- + Feedback that Support Student Ownership
- + Writing Rubrics & Assessments

Lunch Time



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Peer & Self Assessment



If we want students to take charge of their learning, we can't keep relegating them to a passive role in the assessment process.

Developing Assessment Capable Learners

Peer & Self Assessment

Reading



Learning Target

Participants will reflect on the efficacy of their current formative assessment practice.

Success Criteria (Know, Understand, Do)

- Participants know strategies that support peer and self assessment.
- Teams understand why peer and self assessments are important.
- Participants create an action plan for peer and self assessment.

Peer & Self Assessment

Team Whiparound



Mathematical Mindsets

Share your thoughts from the Graphic Organizer.

On the graphic organizer, record:

- + advantages
- + challenges
- + potential solutions

Peer and Self Assessment	
<p>Culture <i>a non-threatening atmosphere where students feel that they are able to speak, offer ideas and take risks without fear of reprisal or mockery.</i></p> <p>Advantages:</p> <p>Challenges:</p> <p>Solutions:</p>	<p>Positive Interdependence <i>students' recognizing that their individual success is inextricably linked to the success of every other member of the group</i></p> <p>Advantages:</p> <p>Challenges:</p> <p>Solutions:</p>
<p>Equity <i>Equity in the classroom requires putting systems in place to ensure that every child has an equal chance for success.</i></p> <p>Advantages:</p> <p>Challenges:</p> <p>Solutions:</p>	<p>Identity and Agency <i>identity (beliefs about oneself, mathematics, etc.) agency (the presentation of one's identity)</i></p> <p>Advantages:</p> <p>Challenges:</p> <p>Solutions:</p>

Peer & Self Assessment

Thinking Time



How will you **support** students in becoming **assessment capable learners** (recognizing and demonstrating high quality mathematics)?

How will your **assessment culture** (practices) shift to **maximize student learning** potential?



The **Learning Trajectory** can be used to select **Review & Preview problems** for **Peer & Self Assessment**.



Peer Assessment Using the Rubric



The rubric and success criteria were developed by you specifically to assess student learning.

*How can students use the **rubric** for **peer assessment**?*



Numbered Heads

1

Study
Team &
Teaching
Strategies

2

Sentence
Frames

3

Heatmap

4

Shorthand
Editing

Peer & Self Assessment

Peer Assessment: 4 Corners Jigsaw



4 Corners Task:



- + Make sense of the assigned method.
- + Describe the method:
 - + What will the students be doing?
 - + How will this assessment method help students recognize high-quality work?
 - + How will the teacher implement this in the classroom?

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<p>STTS</p> <p>Many Study Team and Teaching Strategies can be used to facilitate peer editing. Here are some examples:</p> <ul style="list-style-type: none">+ Glow and Grow+ Hit Points+ Pairs Check+ Peer Edit+ Players-Coach+ Reciprocal Teaching+ Suspend+ Tuning Protocol+ Turn and Talk+ Two Stars and a Wish	<p>Describe the strategy:</p> <ul style="list-style-type: none">+ What will the students be doing?+ How will the STTS help students recognize high-quality work?+ How will the teacher implement these STTS in the classroom?	
Sentence Stems	Heat Map	Shorthand Editing

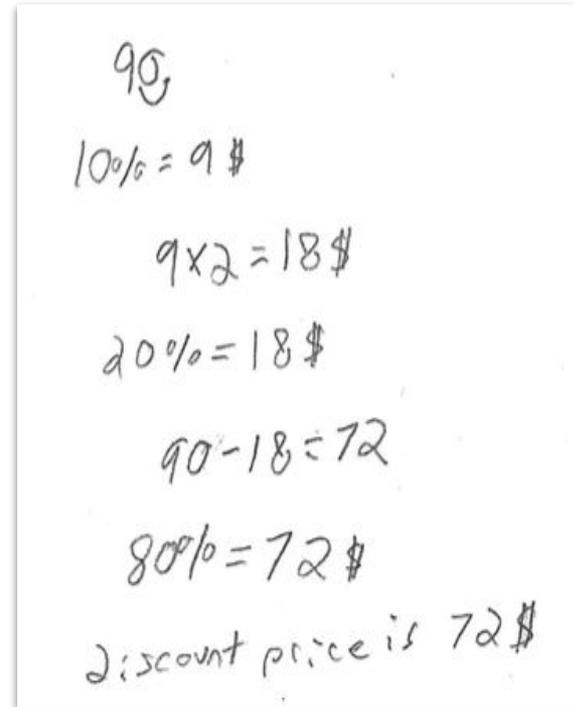
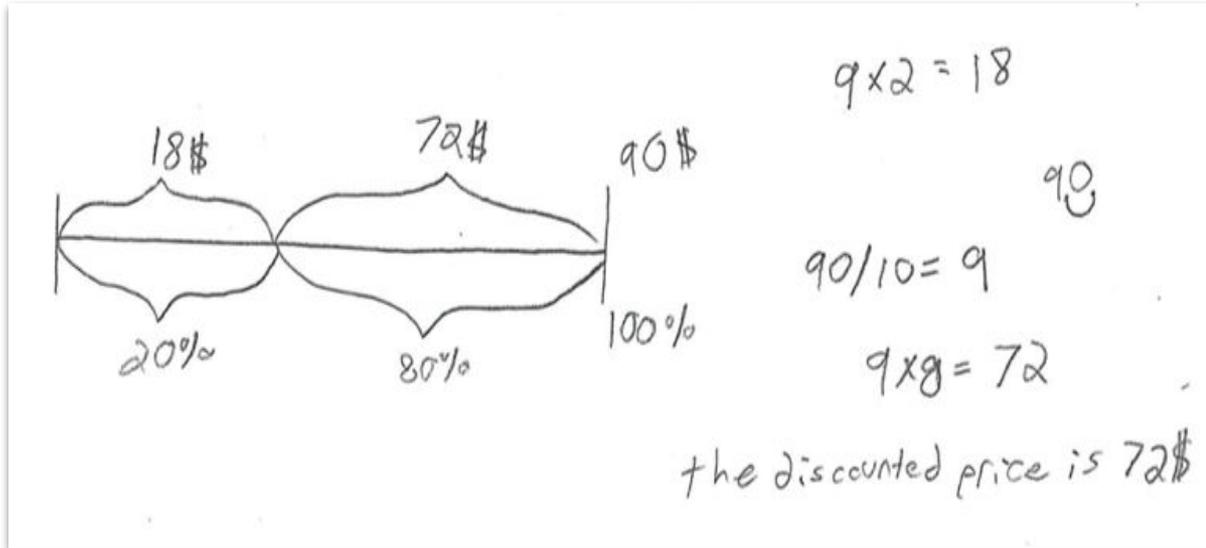
MORE MATH FOR MORE PEOPLE

Peer & Self Assessment

Peer Assessment: Rubric

Marty purchased a jacket at a discounted price. The original price was \$90. If the jacket was 20% off, calculate the discounted price of the jacket.

Be sure to explain your thinking. Represent your thinking in more than one way. How do you know that your answer is correct?



Peer & Self Assessment

Peer Assessment



Revisit the Graphic Organizer

Peer and Self Assessment	
<p><u>Culture</u> <i>a non-threatening atmosphere where students feel that they are able to speak, offer ideas and take risks without fear of reprisal or mockery.</i></p> <p>Advantages:</p> <p>Challenges:</p> <p>Solutions:</p>	<p><u>Positive Interdependence</u> <i>students' recognizing that their individual success is inextricably linked to the success of every other member of the group</i></p> <p>Advantages:</p> <p>Challenges:</p> <p>Solutions:</p>
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Peer & Self Assessment

Self Reflection: What's Next



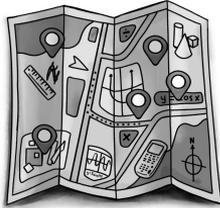
- + A next step for me...
- + The most interesting thing in this work is...
- + One area of this work that I found easy was...
- + I don't yet understand...
- + I have the following question about...
- + I'm still not sure how to...
- + The next steps in learning...

Peer & Self Assessment

Assessment Action Plan



Title: Peer Assessment



My plan for incorporating peer assessment in the upcoming school year is _____.

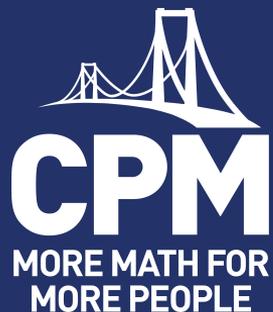


Consider:

- + What effect will this action have on your assessment culture?
- + How will peer assessment support students with recognizing and demonstrating high quality mathematics?
- + How will it support my knowledge of students' learning?

Take a Break

09:59



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Peer & Self Assessment



Learning Target

Participants will plan formative assessments that supports summative assessments.

Success Criteria (Know, Understand, Do)

- Participants know strategies that support ownership in the assessment process.
- Teams understand self-assessment strategies.
- Participants create and plan for self assessments.

Peer & Self Assessment

Self Assessment Additional Examples

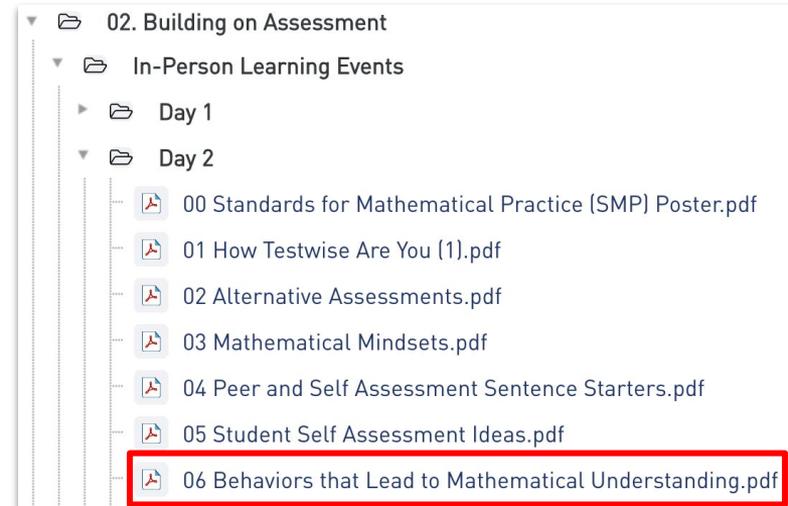


Examine additional examples in the PL Portal File Cabinet.

*These examples were created
by CPM teachers.*

What do you **notice**?
What do you **wonder**?

*Are there other methods that
could work in your classroom?*



Peer & Self Assessment

Teammates Consult



- + All pencils are set aside (no writing).
- + Individually examine the Table of Contents for your course.
(2 min)
- + As a team, discuss which content/standard(s) you will focus on for a peer/self assessment.

In what ways can the Teammates Consult STTS support effective formative assessment?

Peer & Self Assessment

Closure



Use the Learning Trajectory to:

- + select questions.
- + decide when to peer/self assess.

Include multiple opportunities.

Anticipate high quality student work (success criteria).

Plan for implementation.

Peer & Self Assessment

Closure



1. Choose a summative assessment topic from the Learning Trajectory.
2. Write a summative assessment item.
3. Align the generic rubric to item(s).
4. Identify formative assessment opportunities.
5. Plan the peer edit process.
6. Plan the self-assessment process.

Peer & Self Assessment

Assessment Action Plan



Title: Self Assessment



My plan for incorporating self assessment in the upcoming school year is _____.



Consider:

- + What effect will this action have on your assessment practice?
- + How will self assessment support student learning?
- + How will it support my knowledge of students' learning?



What have we learned?



Closure

Day 2 Outcomes



Participants will:

- + plan, implement, and share competency assessment strategies that support the development of mathematically proficient students.
 - + (Co-Creating Shift Rubrics for the Competencies)
- + reflect on the efficacy of their current formative assessment practice.
 - + (Peer Editing and Self Reflection Learning Logs)
- + plan formative assessments that supports summative assessments.
 - + (Peer/Self Assessment Planning)
- + develop success criteria for their formative assessment
 - + (Rubrics, Peer Editing, Self Assessment)

Closure

Self-Assessment



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BUILDING ON ASSESSMENT LEARNING EVENT – SELF-ASSESSMENT

Equity and Questioning

Things to Remember:

1. Examine and reflect on equitable assessment practices. (AP5)

Closure

Hot Potato



- + One person starts with the hot potato (paper).
- + Record one topic/strategy from the workshop and pass the hot potato to the next person.
- + Repeat this process until all topics/strategies are recorded.

Closure

Hot Potato



Connections to Student Learning

Select a topic/
strategy/idea
that you
learned.

Discuss:
How will _____
impact your
assessment
culture?

Repeat the
process with a
new topic or
strategy.

Closure

Hot Potato



Connections to Student Learning



What is one key idea/thought your team discussed?



The Recorder/Reporter will share. (30 sec)

Closure



How can the Study Team & Teaching Strategies support effective, formative assessment?

Ambassador	Fishbowl	I Spy	Math Chat	Reciprocal Teaching	● Think-Ink-Pair-Share (T.I.P.S)
Carousel: Around the world	Fortune Cookie	● Jigsaw: 4 Corners	● Notice & Wonder	Red Light, Green Light	Think-Pair-Share
Carousel: Station Rotation	● Gallery Walk	● Numbered Heads	Participation Quiz	Silent Appointment	Traveling Salesperson
Carousel: Index Card	Give One, Get One	Pairs Check (Chat)	● Peer Edit	Silent Debate	● Tuning Protocol
● Dyad	● Hot Potato	Participation Quiz	Pick Three	● Swapmeet	Walk and Talk
Elevator Talk	Hot Seat	Listening Post	● Proximity Partner	● Teammates Consult	● Whiparound

Closure

Effective Math Teaching Practices



Implement tasks that promote reasoning and problem solving.

Facilitate meaningful mathematical discourse.

Pose purposeful questions.

Support productive struggle in learning mathematics.

Elicit and use evidence of student thinking.

Closure

Beliefs about Mathematics Assessment



PRODUCTIVE BELIEF		
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	8	Assessment, as with the learning, should focus on the big ideas and the connections to assess for understanding, and not on the fine grain-sized skills.
	9	Assessment and teaching should be seamlessly interwoven, and time should be spent on both. Because of the lack of time most teachers have, it is important to assess wisely, and use the supports that are in place.
	10	Assessment is the process of understanding student learning, and grading is evaluating that understanding. The bulk of the teacher's time should be spent on assessing rather than grading.

Closure



- + Parking Lot
- + Attendance & Feedback
 - **In the Portal**
- + The focus of Day 3 is **Formative Assessment** and **Implementation Planning**
- + Continuing Education Credit



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