

How does the formative assessment process support ambitious teaching, and vice versa?

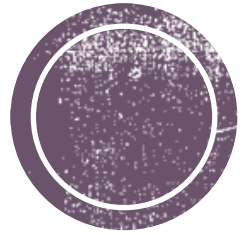
Margaret Heritage, Heritage Consulting

Caroline Wylie, ETS

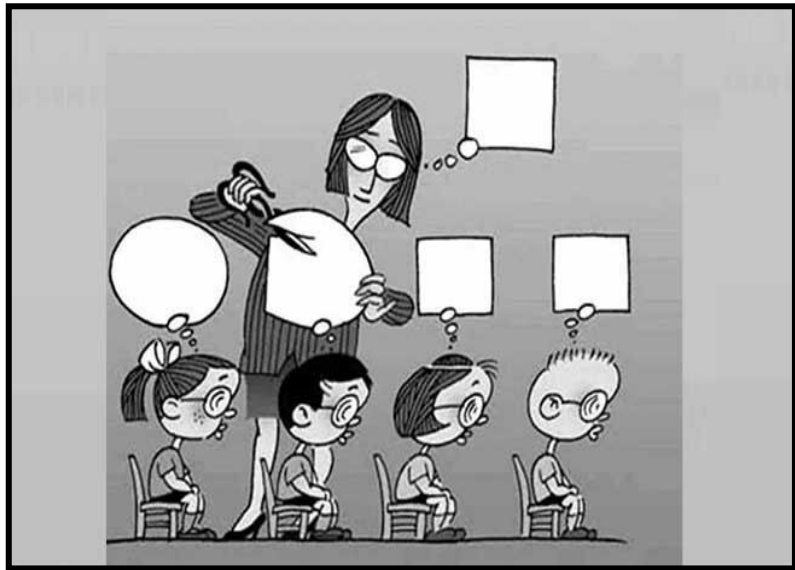
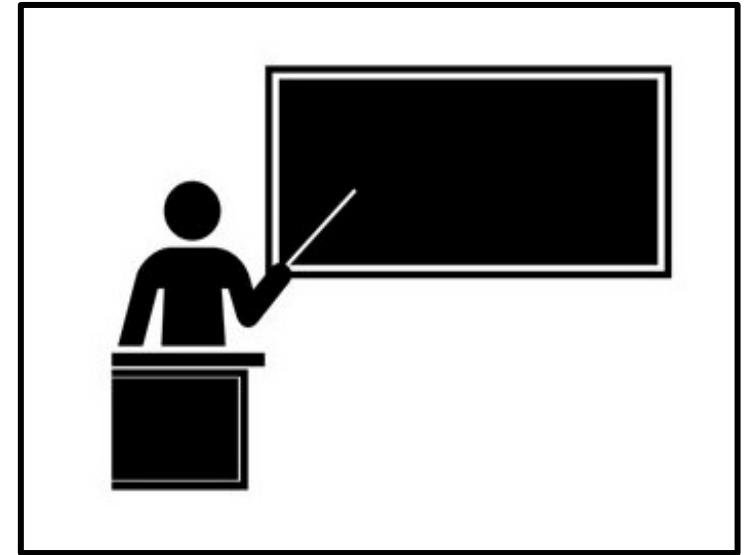
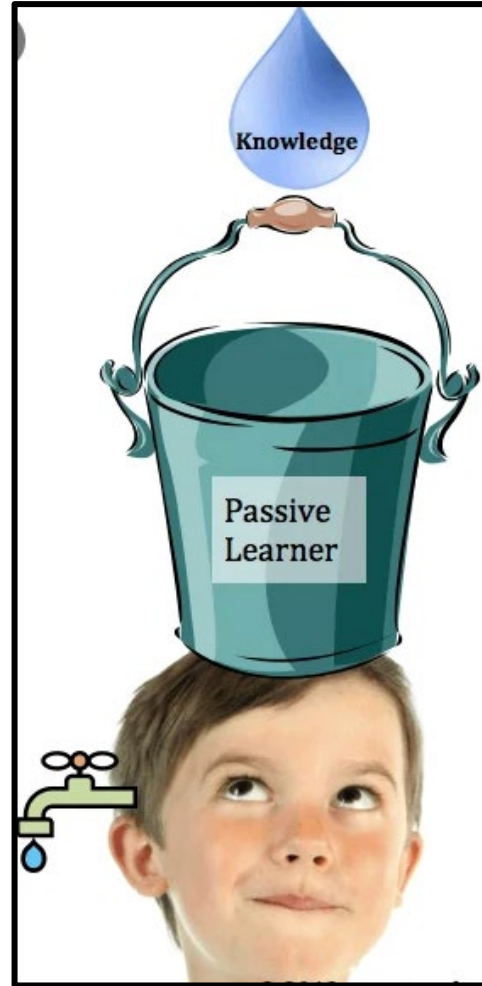




Warm-Up



Ambitious Teaching is Not...





Poll: Which Image Most Aligns with Your View of Ambitious Teaching?



A



B



C



D



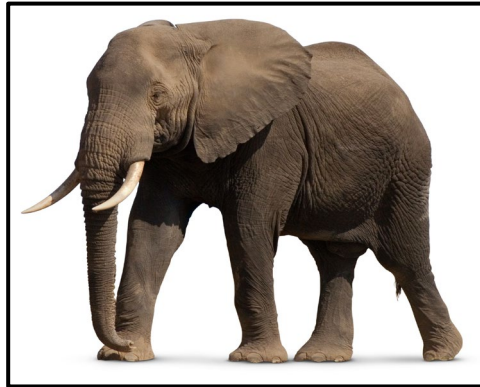


Poll: Which Response Most Characterizes Ambitious Teaching?

The teacher began the lesson by explaining to her class of second-graders that they were going to look at adaptation and try and answer the question, “Why do animals live where they live?”

Source: Cowie et al., 2018

Teacher asked “which animal is the odd one out?” First group of students said “elephant.”



A: No (moves to another group)

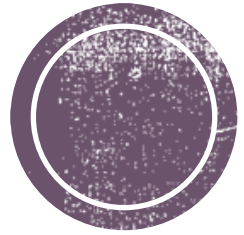
B: Does anyone else agree?

C: Does anyone else agree? Why?

D: What does the elephant have to help it survive in its environment?

E: Can you explain to us the reasons for your choice?





Poll: Is the Teacher Teaching?

- A** The teacher is using the student work time to catch up on grading papers.



- B** The teacher is confident the students can work together so she does not get in their way.



- C** The teacher has structured the task to encourage collaboration.



Is the teacher teaching in each example A through D?
Yes or No?

- D** The teacher emphasizes student-to-student discourse and monitors their discussions.





**Poll: Which Image Best Captures
a Source of Evidence in
Ambitious Teaching?**

A

B

D

III. Voices of the Children

What are their comments (C)?, their questions (Q)?, their dialogue (D)?

Dialogue:

Michael C.: The spines feel like they were made of plastic

Ruben: They feel fake but I like how they look like ninja stars.

Michael L.: I think the thorns on this cactus look like ninja stars because they are the cactus' weapon against animals.

Karen: They look like ninja stars and feel like plastic because if they didn't they would melt.

Fatima: The thorns on the Barrel Cactus are long and have a piece of cotton on the bottom ^{spines}

Cecilia: It looks like the ^{spines} were glued

Edwin: The tips of the spines curve like hooks I wonder if they hook for a reason?

Allon: They are like thorns on a rose.



C



What happens when a candle burns?

A: Molecules in the candle wax turn into heat and light in the flame

B: Atoms in the candle burn up and disappear

C: Molecules in the candle turn into carbon dioxide and water





**Write one word or
phrase that you think
best captures
ambitious teaching.**





Presentation



Overview

- What students need
- What is:
 - Ambitious learning
 - Ambitious teaching
 - The connection to formative assessment
- Examples of practice
- Supporting teacher practice





What Students Need



What are we preparing students for?



Educating students
for their future, not
our past.

Andreas Schleicher (2018)

Director for Education and Skills at
the OECD



The Future of Education and Skills: Education 2030 (OECD, 2018, p. 20)

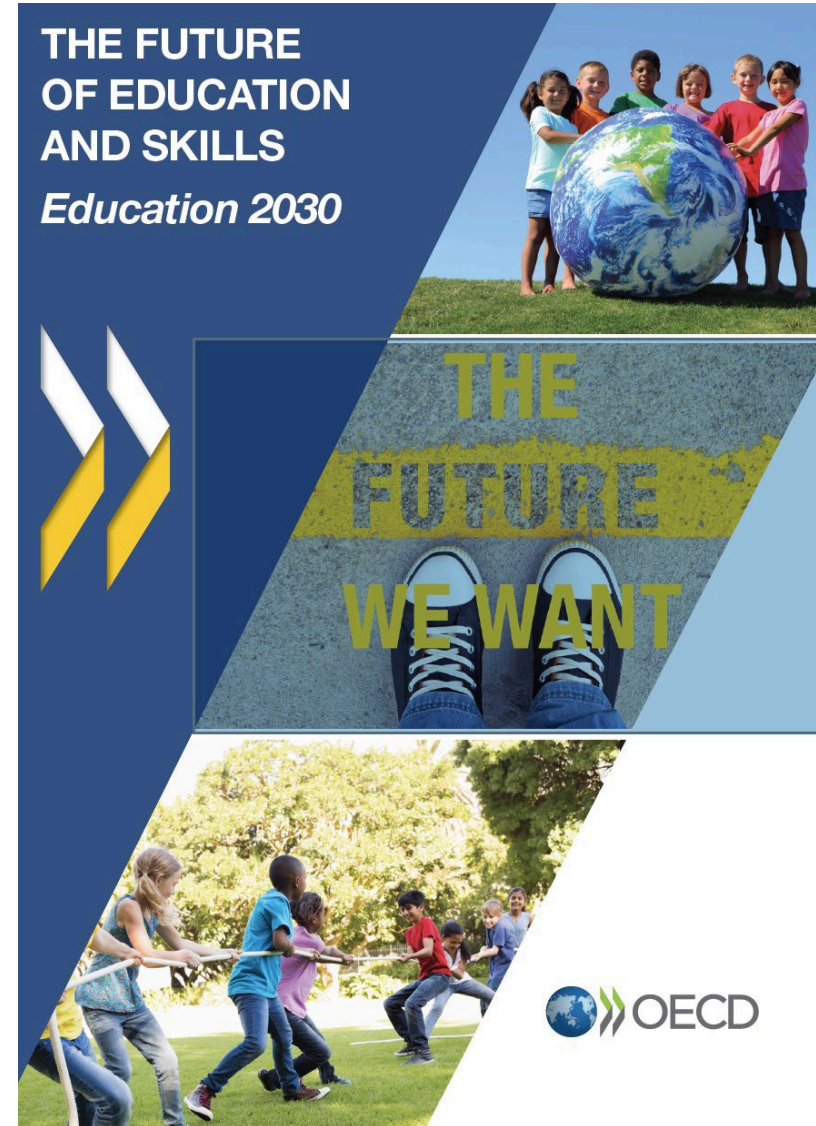
Schools are facing increasing demands to prepare students for rapid economic, environmental and social changes, for jobs that have not yet been created, for technologies that have not yet been invented, and to solve social problems that have not yet been anticipated. Education can equip learners with the agency, the competencies and the sense of purpose to shape their own lives and contribute to the lives of others. Children entering school in 2018 will be young adults in 2030. So, change is imminent.



Transformative Competency (OECD, 2018)

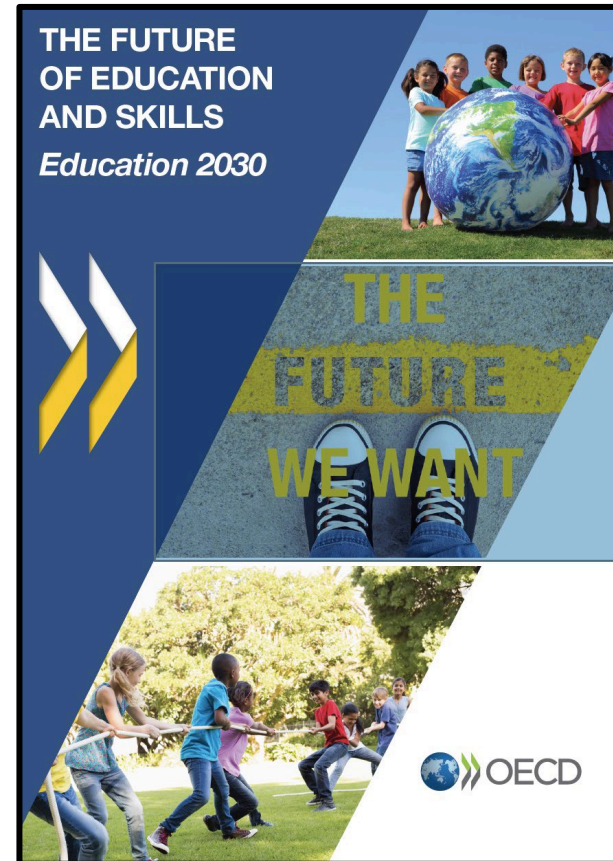
Individuals who can:

- think for themselves
- work with others



What Students Need (OECD, 2018)

- Cognitive and metacognitive skills
 - Critical thinking
 - Creative thinking
 - Self-regulation
- Social and emotional skills
 - Empathy
 - Self-efficacy
 - Collaboration





What is ...

- Ambitious learning?
- Ambitious teaching?
- The connection to formative assessment?

What are students doing?	What are teachers doing?
Thinking critically and creatively; apprenticing to a discipline	Planning activities and tasks in multiple modes that require students to engage with powerful disciplinary ideas and practices, ask questions, reason, solve problems, use understanding in new ways, apply the tools of the discipline; asking questions that promote reasoning and further thinking and support making connections among ideas; connect to students' funds of knowledge; scaffolding what is ripening
Engaging in discourse with the teacher and with each other to advance thinking	Structuring activities for student talk to explore disciplinary ideas through reasoning, explaining, analyzing, evaluating, arguing, and justifying; orchestrating and catalyzing a variety of responses from students and helping them to clarify, compare, challenge, and defend their various views to one another; steering discussions with a light touch to advance thinking and analytic practices; scaffolding what is ripening
Thinking metacognitively and developing self-regulated learning processes	Creating a shared understanding of learning goals and success criteria; providing feedback; providing opportunities for developing and using skills in self-assessment; helping students to set, monitor and revise goals; scaffolding what is ripening
Learning with and from each other	Establishing and sustaining norms of a collective orientation to learning (e.g., respectful listening, giving others time to think, building on each other's ideas, collaboration, peer feedback); modeling active listening and positive interactions

Formative Assessment

Formative assessment is a **range of practices** that encourage both teachers and learners to **seek evidence** of the ways in which students are developing their knowledge, skills, and understanding with the **intention of using the evidence to inform ongoing learning.**

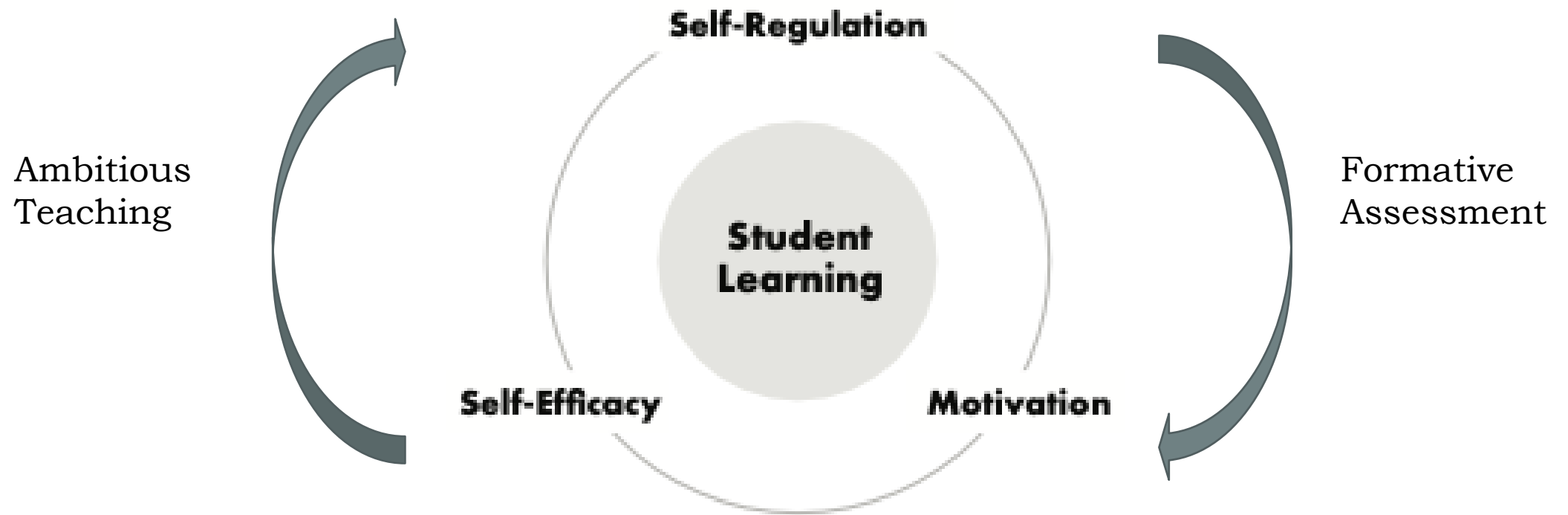
Formative assessment requires a dynamic approach to assessing learning with **assessment opportunities designed into the ongoing learning activities and interactions in the classroom.**

Evidence of learning for both teacher and student use is generated from these classroom activities, is explored, and then **acted upon during the learning.**

(Heritage & Harrison, 2019).



Formative Assessment Practices	Formative Assessment Designed into Ambitious Teaching
<ul style="list-style-type: none"> • Clear learning targets and success criteria • Eliciting evidence of learning • Interpreting and using evidence • Self- and peer assessment 	<p><u>Planning activities and tasks in multiple modes that require students to engage with powerful disciplinary ideas and practices, ask questions, reason, solve problems, use understanding in new ways, apply the tools of the discipline; asking questions that promote reasoning and further thinking and support making connections among ideas; connect to students’ funds of knowledge; scaffolding what is ripening</u></p>
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Examples of Practice

ELA, Science and EL

1. AP English Language and Composition

Round 1:

Students wrote an essay, discussed models and identified criteria of a successful essay.

In groups, students reviewed each other's essays and used the rubrics to grade each other's essays.

EPIC FAIL
...in the teacher's words



Source: Julie Eilersten, Hamilton High School



Supporting Self-Regulation in this Example

“Prior to the next peer feedback session, I reminded students of our ultimate goal: to have ownership of their own writing, strengths and weaknesses; to obtain suggestions for improving their own writing; and to have control as writers about what feedback to use.”



AP English Language and Composition(cont.)

Round 2:

Teacher presented the learning goal: Learn how evidence and claims, along with sophisticated diction and syntax, are used to compose an argument to best support your position.

Teacher and students co-created success criteria that targeted structure, claims, counterarguments, fluency, transitions and vocabulary.

Co-generated a more expansive set of questions to ask their peer reviewer for feedback:

- *What clarification do I need in my argument?*
- *“What other background or context do I need to orient my reader to the text?”*

Peer feedback, self-assessment, reflection and revision



Source: Julie Eilersten, Hamilton High School



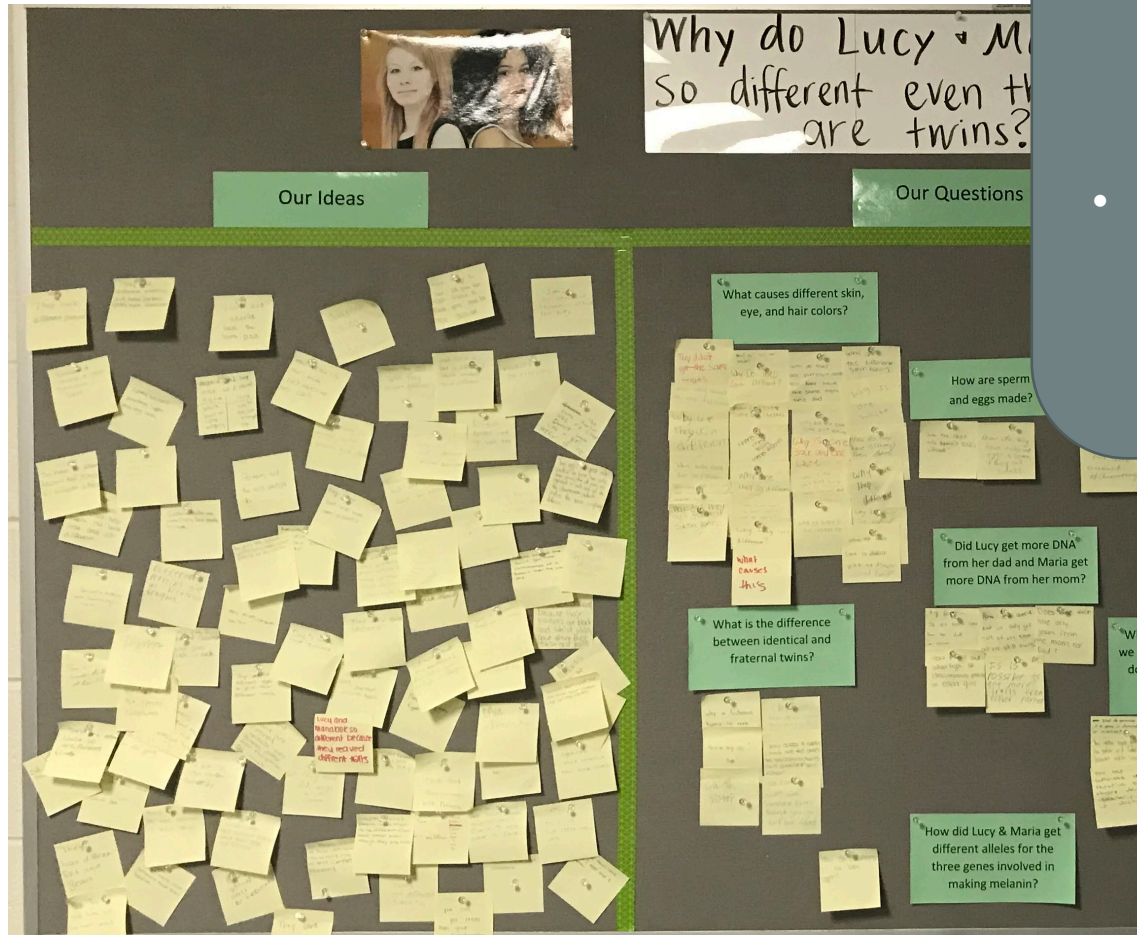
Ambitious Learning, Teaching and Formative Assessment in the Example

- Shared and co-developed learning goals/success criteria
- Eliciting student thinking through peer feedback and self-reflection
- Engaged in disciplinary discourse by co-creating genre specific feedback needs
- Thinking critically, creatively and metacognitively
- Engaging with disciplinary ideas and practices
- Structuring student talk
- Scaffolded supports from the teacher (in round 2)



2. Initial Brainstorming Unit

(with permission from Wendy Johnson, Kentucky NGSS)



Note: the initial unit brainstorming is reflected on the board. The board was created as the learning unfolded throughout the unit.

Expressing Ideas Tool:

What **do you** think explains why Lucy and Maria look so different even though they are twins?

1. Describe the differences in Lucy's (left) and Maria's (right) physical traits.



2. Lucy and Maria are fraternal twins. How are fraternal twins formed?

3. What do we know about Lucy's and Maria's parents that might help us explain the girls' physical traits?

4. What do you think causes different skin, eye, and hair colors?

5. How does DNA influence Lucy's and Maria's physical traits? How did the girls get their DNA?

6. Now put your ideas together to answer the question: What do you think explains why Lucy and Maria look so different even though they are twins? Write one or two complete sentences based on your current ideas.

7. What questions do we need to answer during this unit in order to be able to fully explain why Lucy and Maria look so different?

Ambitious Learning, Teaching and Formative Assessment in the Example

- Co-developed questions about what the class was interested in learning
- Eliciting student understanding – whether from previous science units or other sources of knowledge that students had
- Use scientific language and engages students in an inquiry process (apprenticeship)
- Thinking critically, creatively and metacognitively
- Asking questions
- Connecting ideas
- Structuring student talk



Supporting Self- and Co-Regulation in this Example

- Students ideas and questions to drive inquiry for the unit within a structure that the teacher provides
- Questions and answers become a public record of the work and progress of the class



3. Grade 3 Mathematics Class

- Partner discussion among students
 - Image A: 7 cookie halves
 - Image B: 5 whole cookies
- Share out gives the teacher evidence of student initial thinking about fractions and their use of mathematical language

Problem: Ms. Carrasco bought a pack of graham crackers with 5 crackers inside. She wanted to share them equally with her 3 children. How many crackers did each receive?



Learning Goal: As mathematicians, we are learning how to partition a whole into equal parts and explain our solutions.

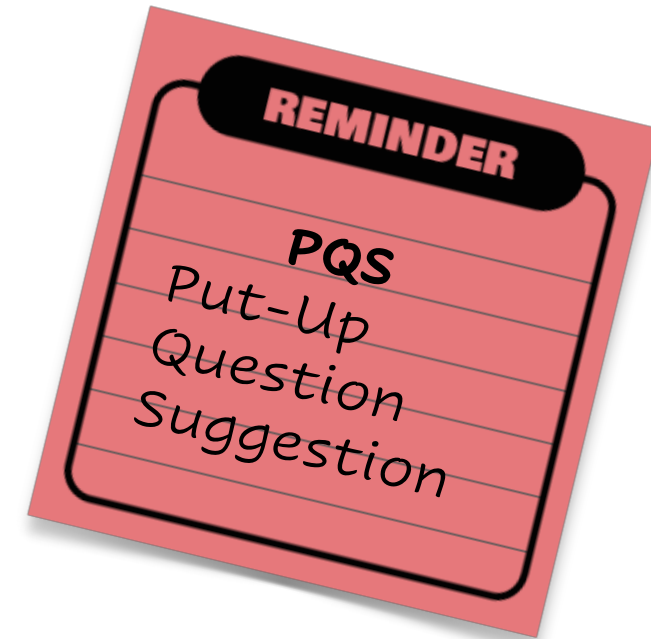
Success Criteria:

- I can model and explain how a whole can be partitioned into equal shares
- I can describe the unit form for the equal parts that make up the whole
- I can represent and explain why the unit fraction matches the equal parts



3. Grade 3 Mathematics Class

- Students develop an understanding of the problem
 - Create a representation with manipulatives or diagrams
- Students discuss how to solve the problem as a group
- Students work individually
 - Use manipulatives, drawings, diagrams, discussions
- Record a solution, share with a peer for feedback, and revise if necessary



Ambitious Learning, Teaching and Formative Assessment in the Example

- Shared understanding of learning goals
- Students engage with disciplinary ideas in multiple modes
- Multiple opportunities for eliciting evidence of student thinking – whole group, small group, individual
- Scaffolded opportunities for both language and mathematical thinking
- Rich use of disciplinary discourse: explanations, justifications



Supporting Self-Regulation in this Example

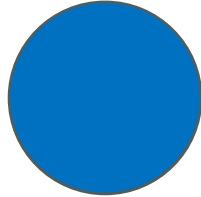
- Students select representation
- Peer feedback
- Use of feedback



Breakout Group Discussions



What squares with your thinking?



What is circling around?



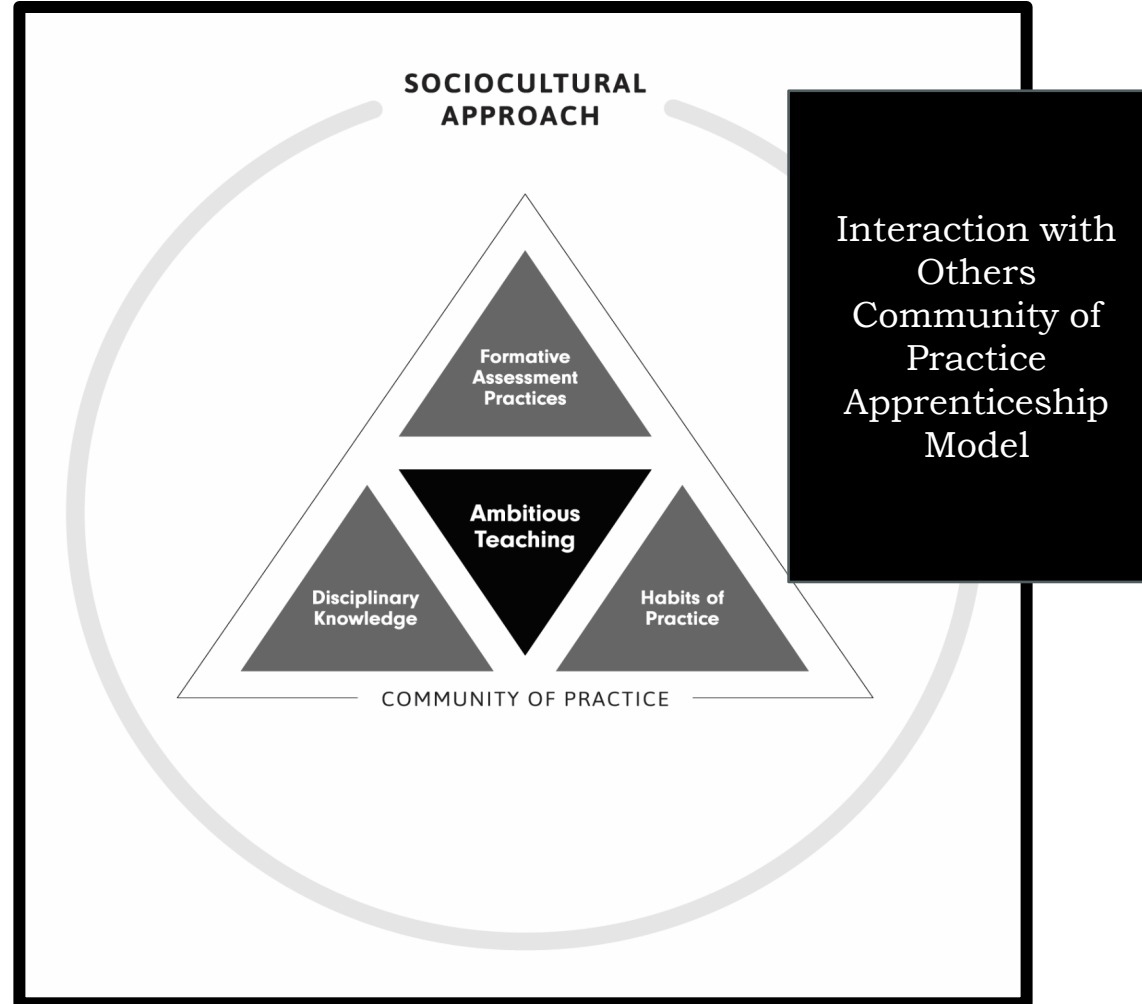
What questions do you have?





Supporting Teacher Practice





(Heritage & Wylie, 2020)



Features of a Supportive Learning Environment

1. Is content focused
2. Incorporates active learning
3. Supports collaboration
4. Use models of effective practice
5. Provides coaching and expert support
6. Offers feedback and reflection
7. Is of sustained duration



Teacher Leaders

“I see becoming a teacher leader as a hybrid between two of the things I enjoy most.

One being in the classroom teaching and the other continuing to develop my own skills as I help develop others.

I'm fortunate to be at a school that has a different mindset around what teacher leadership is. Here, the administrator recognizes that the most important place to be is the classroom. She also recognizes the importance of teachers fostering growth amongst each other. This creates an environment of learning for all.”



Supporting other teachers develop and deepen formative assessment practices through roles such as:

- Resource provider
- Instructional specialist
- Curriculum specialist
- Classroom supporter
- Learning facilitator
- Mentor



Role for School and District Leaders

- Supporting a learning community
- Supporting risk taking
- Finding and protecting time for teachers
- Maintaining a focus and commitment to ambitious teaching and formative assessment
- Too many initiatives at one time can result in “massive failure” (Fullan, 1991, p. 71)
- Overload is the greatest enemy of improvement (Fullan & Hargreaves, 1996)





Final Takeaways



Takeaways

- Preparing students for a future that looks different from the present.
- Formative assessment occurs during learning.
- Ambitious teaching and learning and formative assessment are mutually supporting.
- Transforming classrooms takes time, reflection, persistence and support.





Questions



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