# Formative Assessment Processes Through the Disciplines

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# My journey towards implementing FA in my classroom.

**YEAR 1** – Participant in FAI online course

**YEAR 2** – Co-facilitator of hybrid face-to-face/online FAI course

**YEAR 3** – Participant in hybrid face-to-face/online SAIL course

# My journey towards implementing FA in my classroom.

Getting familiar with learning targets, success criteria, and getting students involved


Focus on student involvement in the learning with a focus on student feedback through VSGs



Recommitting to a year(s) of learning by thinking about my "why" :

- How do I reach all my students?
- How do I increase student autonomy in my classroom?

Focus on clear Learning targets/ success criteria, Eliciting Evidence and Deliberate Acts of Teaching through VSGs

# **Learning Goals & Success Criteria** – How do I communicate or work with students to create learning goals(targets) and success criteria in math class?

- **Learning Goals**
- **Success Criteria (mine)**
- **Success Criteria (co-created)**
- **Referring to the learning goals and success criteria *constantly***

**Learning Target**: **7.G.B.5** - Use facts about supplementary, complementary, vertical, and adjacent angles in multi-step problems to write and solve simple equations for an unknown angle in a figure.

| **Learning Goal** | **Success Criteria** |
|---|---|
| 1. Know the properties of vertical angles, adjacent angles, complementary angles, supplementary angles and angles on a point. | ☐ I can describe the properties of vertical angles, adjacent angles, complementary angles, supplementary angles, and angles on a point. (Lesson 1, Lesson 2) |
| 2. Understand how properties of angles are used to write and solve algebraic equations. | ☐ I can use the properties of angles to write and solve algebraic equations. (Lesson 1, Lesson 2) |

# Struggles: Creating Learning Goal and Success criteria (HS)

- Co-create Learning goals
- Co-create Success Criteria
  - Students need some scaffolding (Very Important for HS)
    - They understand the logic and the flow of the unit.
- Periodical revisit of the success criteria list through out the unit and use it as self assess tool.

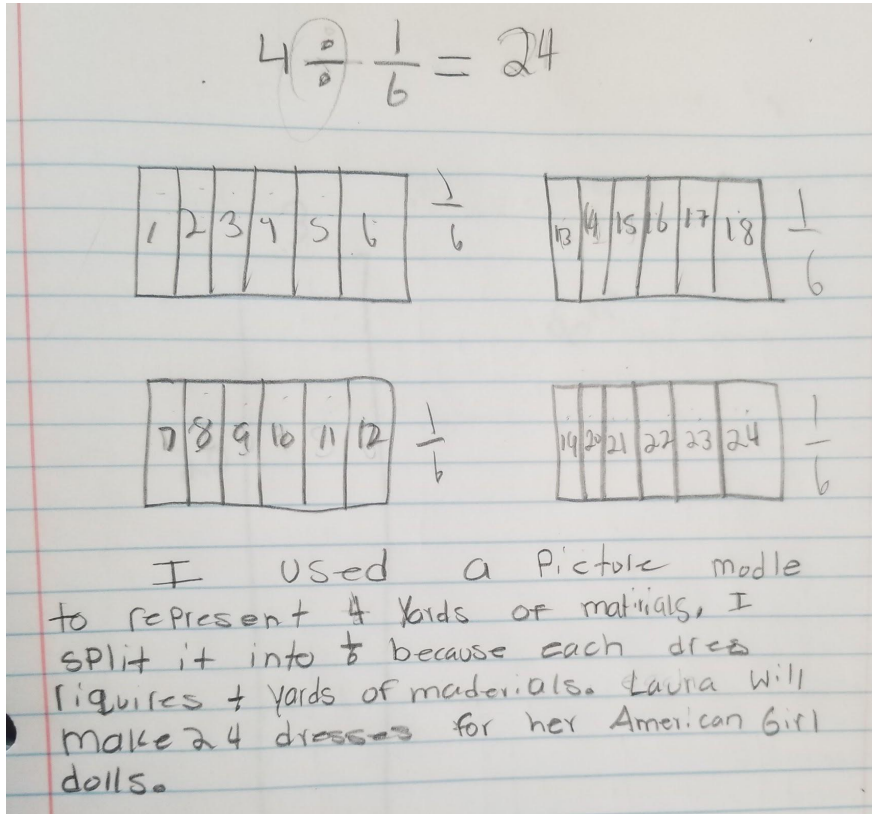
# **Learning Goals** – My Big Challenge

- Learning Goals and Success Criteria in Math has been my biggest challenge as I moved into 5th grade!

- Addressing my misconceptions and filling my own learning gaps as I begin to write Learning Goals
  - Reading AZCCRS Standards - Mathematical Practices - Explanations and Examples
  - Taking any assessments myself that students will be taking later on
  - Looking at Performance Level Descriptors

| | **Grade 5 Math: Sub-Claim A**<br>The student solves problems involving the Major Content for grade/course with connections to the Standards for Mathematical Practice. | | | |
|---|---|---|---|---|
| | **Level 5: Exceeds Expectations** | **Level 4: Meets Expectations** | **Level 3: Approaches Expectations** | **Level 2: Partially Meets Expectations** |
| **Addition and Subtraction Operations with Decimals**<br><br>5.NBT.7-1<br>5.NBT.7-2 | Adds or subtracts two decimals to hundredths using concrete models, drawings or strategies based on place value, properties of operations and/or the relationship between addition and subtraction. | **Adds or subtracts two decimals to hundredths using concrete models, drawings or strategies based on place value**, properties of operations and/or the relationship between addition and subtraction. | Adds or subtracts (without regrouping) two decimals to hundredths using concrete models, drawings or strategies based on place value and/or the relationship between addition and subtraction. | Adds or subtracts (without regrouping) two decimals to hundredths **(both decimals presented with the same number of decimal places)** using concrete models, drawings or strategies based on place value and/or the relationship between |

# **Success Criteria** – How do I communicate learning goals and create success criteria with students in math class?




(Student Exemplar)

**Co-creating Success Criteria in math was my goal this year:**

- Student work time first, then posting an exemplar (pictured) and creating criteria through that
- I model/think aloud and have students create from that
- Look at a finished task and think of skills we need to complete it

# **Mathematical Practices** and Formative Assessment

| Students: | Teachers: |
|---|---|
| • Make reasonable guesses to explore their ideas<br>• Justify solutions and approaches<br>• Listen to the reasoning of others, compare arguments, and decide if the arguments of others makes sense<br>• Ask clarifying and probing questions | • Provide opportunities for students to listen to or read the conclusions and arguments of others<br>• Establish and facilitate a safe environment for discussion<br>• Ask clarifying and probing questions<br>• Avoid giving too much assistance (e.g., providing answers or procedures) |

**Construct viable arguments and critique the reasoning of others**

***I can make conjectures and critique the mathematical thinking of others.***

I can ***construct***, ***justify***, and ***communicate*** arguments by...

- considering context
- using examples and non-examples
- using objects, drawings, diagrams and actions

I can ***critique the reasoning of others*** by...

- listening
- comparing arguments
- identifying flawed logic
- asking questions to *clarify* or *improve arguments*

# Lesson Planning in Math with FA

## Math Lesson Plan : 5/9/19

To be applied to lesson: **Unit 6.1 : Lesson 3**

**Standard Focus:** **6.G.A.1:** Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.

**Connection to future learning** - tomorrow's lesson will build on the strategies students identified and practiced today but with parallelograms

**Mathematical Practice:** **#3(Critique reasoning of others and justify thinking) and #4 (model with math)**

**Learning Goal(s)** *What is the learning intended by the end of this lesson?*

I am learning how to find the area of a polygon by using different reasoning strategies

**Success Criteria** *What will it look like when students meet the Learning Goal(s)?*

*I can identify different strategies to find the area of polygons by reasoning about the shape
*I can explain my chosen strategy and how it represents the area
*I can justify why I used a strategy using academic vocabulary

**Lesson Activities to Elicit Evidence**

*What will students do to progress towards the Learning Goal and meet the Success Criteria during the lesson? Structure activities to enable you to notice student progress and **elicit evidence** of learning.*

- Review learning from lesson 2, review our class created definition of area from yesterday

**Opener : Warm-Up & Class Discussion**

**Gathering Evidence** – What ways do I currently gather evidence in math of student learning or student struggles with math? How has my evidence gathering changed as I grow in my implementation of formative assessment.

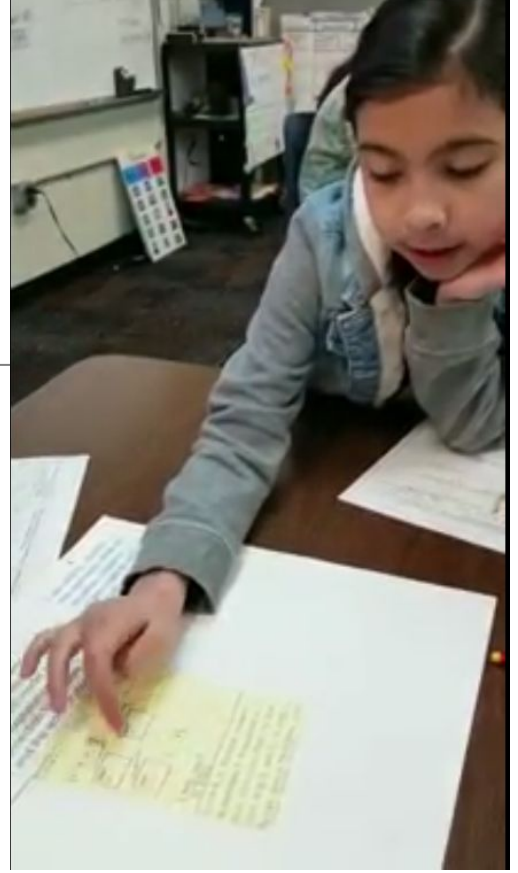
- **Collaborative work/discussions**
- **Class discussions**
- **Individual work/reasoning**
- **Peer Feedback**
- **Self-Assessment**

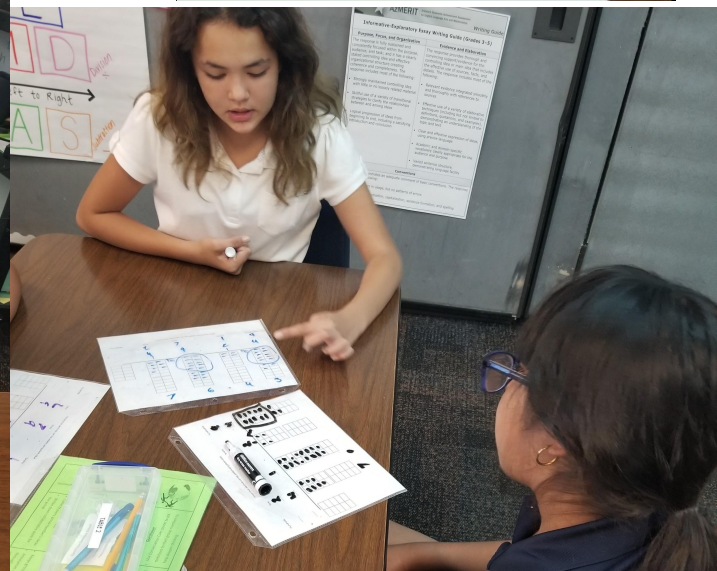
| 6.G.A.1<br>**Learning Target:** I am learning how to find the area of a polygon by using different reasoning strategies | Success Criteria:<br>I can identify different strategies to find the area of polygons by reasoning about the shape | Success Criteria:<br>I can explain my chosen strategy and how it represents the area | Success Criteria:<br>I can justify why I used a strategy using academic vocabulary |
|---|---|---|---|
| Christian Aguilar | | | |
| Sebastian Andrade | | | |
| Fernando Armenta | | | |
| Carlos Calixtro | | | |
| Aubrey Castro | | | |
| Cleiri Coronel | | | |
| Maria Dorame | | | |
| Karla Garcia | | | |
| Kevyn Gomez | | | |
| Eric Lizola | | | |
| Mitzael Lopez | | | |
| Mitzel Lopez | | | |
| Alejandra Lopez | | | |
| Alonzo Martinez | | | |
| Ayva Molina | | | |
| Elyana Montijo | | | |
| Andy Ramirez | | | |
| Irlanda Reyes | | | |
| Adrian Robles | | | |
| Bryan Rodriguez | | | |
| Alexis Romero | | | |
| Camila Vargas | | | |
| Luis Vega | | | |
| Juan Woodill | | | |
| Ramon Zazueta | | | |
| ✓ Proficient<br>▭ Partially Proficient<br>✠ Highly Proficient | Students to share/model their thinking or strategies: | | |

**Questions to elicit evidence during Opener:**
What do you think 'decompose' means? What 'rearranging' took place with these figures? Why did you decide to decompose the shape this way? What did decomposing and rearranging allow you to do? Do you see a connection between what we learned about area in 3rd grade?
What was different about how you found the Area of A and of B? Why?
**Questions to elicit evidence during Main Task:**
What do you notice about this shape? Is it solid? Does it have a piece missing? What can you do to

# Gathering Evidence

- Students engaging in content through academic talk
- Feedback (peer and self-assessment)
- Conferencing
- Noticing (tasks and talk)
- Questioning



# How have the formative assessment processes improved the teaching and learning of math for me and my students?

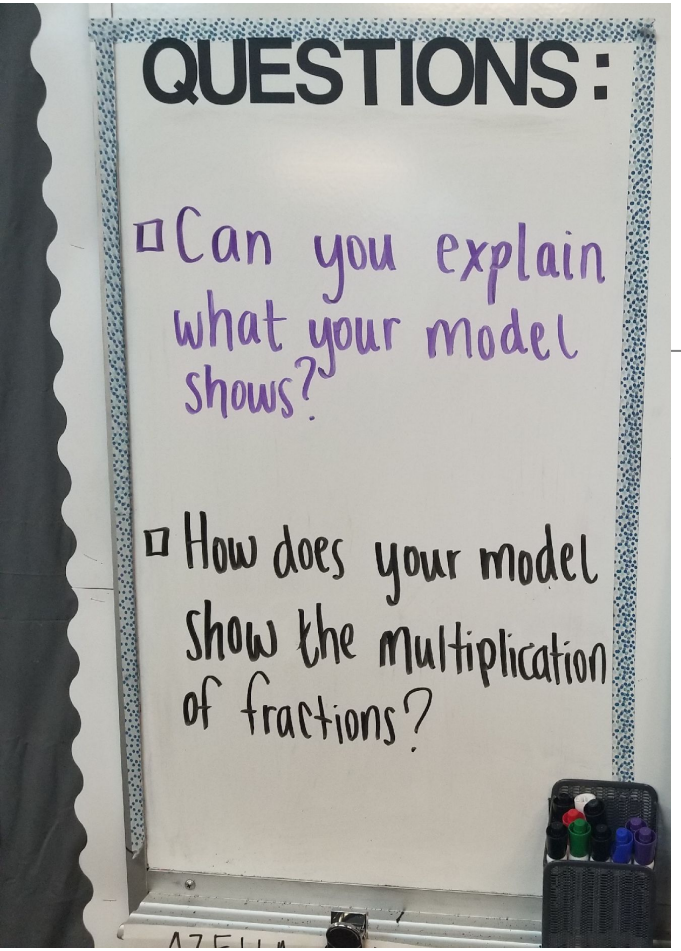
- **Learning is more focused**
- **Success criteria is clearer and more intentional**
- **Deliberate teacher moves to move learning forward**
- **Feedback is constant part of teaching and learning**

# How have the formative assessment processes improved the teaching and learning of math for me and my students?

- **I…**
  - have a deeper understanding of math standards and content
  - have a clearer picture of where my students fall on each standard
  - have more evidence and data on student learning in math than ever before

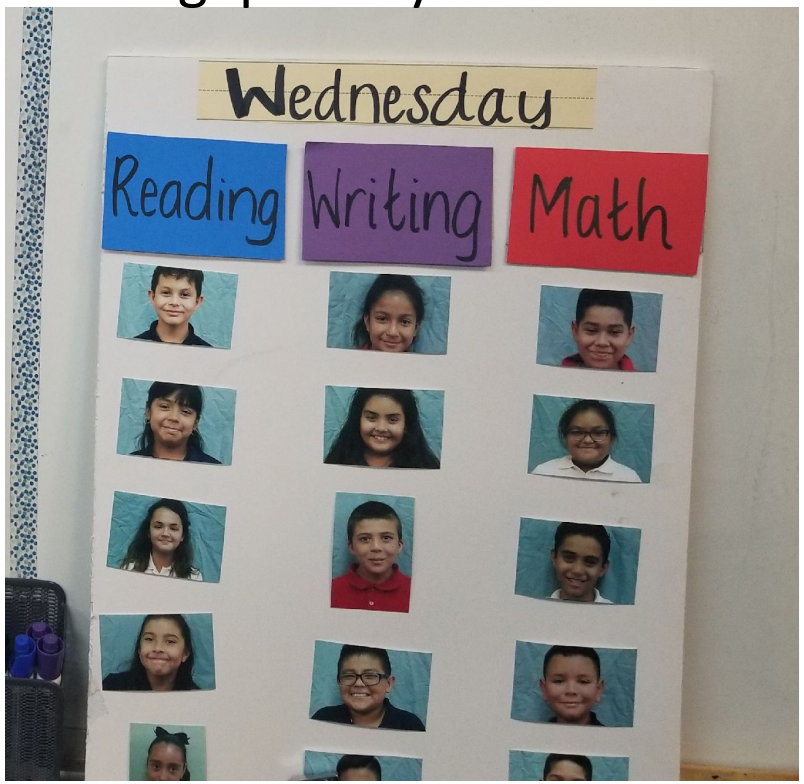
- **Students…**
  - justify their thinking in math (not perfect, but definitely getting there!)
  - are able to tackle more complex math tasks and ideas
  - math identity has shifted
  - who struggle feel more success

# Resources




**Co-created Questions** - promotes academic discourse throughout lessons and used to create an equitable environment for ELL students

**Conferencing schedule** - keeps me accountable with my students and helps me give consistent feedback and close gaps daily




| My Self-Assessment / My Next Steps | Teacher Feedback: |
|---|---|
| Peer Feedback: | |

**Reflection Form** - keeps students accountable when learning routines of self-assessing and giving feedback (temporary)

# Questions?

# Contact Us!

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