Applying the AfL Strategies in Math Workshop: What does it look like?

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Icebreaker

If you could only vacation in one spot for the rest of your life...
Where would it be? Why?
I can apply the Assessment for Learning Strategies to my instruction in math workshop.
Math Workshop Overview
Traditional Workshop Structure - Pacing Suggestions

Daily Review—(10–15 minutes, outside of Workshop Lesson)

Workshop Begins:

Opening—(5 minutes)

Mini Lesson—(5–20 minutes, depending on day sequence)

Explore—(30–40 minutes)

Closing—(5–10 minutes)

Math Blocks= 85 minutes
1–2 lessons
Longer mini lesson - Introduction of new concept 20-30 min.

2–3 lessons
10-15 min. mini lesson

3–5 lessons
5-10 min. mini lesson

15-20 min Closing

10-15 min closing

5-10 min. closing
Possible Workshop Formats

- Task and share structure
- Focus lesson, guided math, and learning stations structure
- Guided math and learning stations structure
- Direct teach, student practice
Seven Strategies Overview
Seven Strategies of Assessment for Learning

1. Provide a clear and understandable vision of the learning target
2. Use examples and models of strong and weak work
3. Offer regular descriptive feedback
4. Teach students to self-assess and set goals for next steps
5. Use evidence of student learning needs to determine next steps in teaching
6. Design focused instruction, followed by practice with feedback
7. Provide students opportunities to track, reflect on, and share their learning progress
AfL in Math Workshop

- Where are you in the process of incorporating Assessment for Learning strategies in your math workshop?
- Supports a cycle of learning and assessment
- AfL is a constant thread through content areas
  - Strategies stay the same even when the content changes
- The goal is to create independent and reflective students who use feedback to make decisions about their next steps.
Workshop with AfL
3rd Grade TEK

**TEK: 3.4** Number and Operations. The student applies mathematical process standards to develop and use strategies and methods for whole number computations in order to solve problems with efficiency and accuracy. The student is expected to:

**(A)** Solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction.
Opening

- Generates excitement
- Gets students ready for learning
- Provides opportunities for students to turn and talk
- Supports sense making and routines

Opening Examples

- Number Talk of Number Sense Routine
- Which one doesn't belong?
- Would you rather...
- Warm up with a problem or conceptual conversation
- Find the error/misconception
Opening with AfL

● Incorporate examples and models of strong and weak work
  ○ Find the error
  ○ What’s the misconception?

● After the opening – provide a clear and understandable vision of the learning target

● If the opening ties to the learning target for the day – students can self-assess
Opening
I Notice... I Wonder...

The Pie Problem

The week before Thanksgiving, Sweetie Pie’s Bake Shop sold many different flavors of pies. They sold the following amounts of each flavor.

- 207 Apple Pies
- 439 Pumpkin Pies
- 517 Pecan Pies
- 382 Banana Cream Pie
Learning Target

3rd grade math lesson

I can use problem solving strategies to solve one and two-step problems within 1,000.
Mini Lesson

- Select a mini lesson format based on the intended learning experience
- Selected structures support different needs
  - Task and share - task replaces the mini lesson, especially powerful when introducing a new unit, allows for discovery
  - Focus lesson, guided math, and learning stations structure - good for learning a new mathematical idea or introducing a new activity or game for learning stations
  - Guided math and learning stations structure - good after a whole-class focus lesson or when small group reteach is needed on a previous day’s topic
  - Direct teach and student practice (Must do/Can do) - traditional mini lesson needed for difficult skill or when whole-class misconceptions need to be clarified, allows for teacher modeling and gradual release
Mini Lesson with AfL

- Co-created criteria
- Strong and weak work
- Student self-assessment and goal setting
- Gather formative data
- Behind the scenes:
  - **Strategy 5** - Use evidence of student learning needs to determine next steps in teaching
  - **Strategy 6** - Design focused instruction, followed by practice with feedback
Mini Lesson

What makes a strong example of problem solving?

● First, order from weakest to strongest
● What reasons do you have for your ordering?
● What feedback would you give each of these students?
Explore

- Student actions depend on the format you choose
- Provide time for students to discover or practice
- Hands on and engaging
- Promote student collaboration and discussion
- Teacher actions – facilitator, work with small group, conference with individuals or partnerships
- Allow for productive struggle and problem solving
Explore with AfL

- Revisit learning target prior to sending kids off to Explore
  - Involve the students
- Use co-created criteria to sort and analyze strong and weak work
- Provide feedback
  - Teacher to student
  - Student to student
- Students set and refer to goals and self-assess throughout the Explore
- Behind the scenes:
  - **Strategy 5** - Use evidence of student learning needs to determine next steps in teaching (practice)
  - **Strategy 6** - Design focused instruction (practice opportunities), followed by feedback
Task:

1. Based on what you saw in the strong examples, work with your group to solve your problem.
2. Rotate through each example and identify what you notice about each piece of work that you like and don’t like?
3. Leave positive feedback or ways to improve if necessary.
Closings = Classroom Culture

- Not just an exit ticket - formative assessments can be inserted anywhere during the math workshop
- Anytime you check for understanding you are getting formative data

Closing Examples

- Wrap up using Math Talk
- Students sharing ways they solved, etc. (math talk)
- Students highlight a new way to complete activity/task
- Highlight struggles and how to overcome them
- Questions/Clear up final misconceptions
Close with AfL

- Restate the learning target with the students and make connections to task
- Encourage students to self-assess after the opportunity to practice
- Students set goals for the following day
- Use feedback to clarify misconceptions
  - Teacher to class
  - Student to student
- Have students track their progress after the day’s learning (strategy 7)
  - “Where am I now?”
  - Have students share their learning with peers
Closing:

Co-Creating criteria based on student learning throughout the explore and mini-lesson.
Part 3: Participants Plan and Practice

Participants plan and practice a section of the workshop based on their learning from the day.

- Pick an area to improve? Focus on? Tied to 1st 9 weeks lesson?

We could do this in multiple ways – depending on number of participants…

- Partner A/B (teacher, student)
- Partner A/B/C (teacher, student, coach)
- Etc.
Resources


Keep in Touch

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