I've Got Next: Engaging All Students with Multiple Response Strategies
Learning Goals

To create a definition of “student engagement”

To explore a variety of strategies that will increase student engagement and achievement

To identify ways these strategies can be implemented in the classroom
Focal Points for Multiplication

Grade 3
Number and Operations and Algebra: Developing understandings of multiplication and division and strategies for basic multiplication facts and related division facts

Grade 4
Number and Operations and Algebra: Developing quick recall of multiplication facts and related division facts and fluency with whole number multiplication

Grade 5
Number and Operations and Algebra: Developing an understanding of and fluency with division of whole numbers
NCTM Mathematics Teaching Practices

- Establish mathematics goals to focus learning.
- Implement tasks that promote reasoning and problem solving.
- Use and connect mathematical representations.
- Facilitate meaningful mathematical discourse. Pose purposeful questions.
- Build procedural fluency from conceptual understanding.
- Support productive struggle in learning mathematics.
- Elicit and use evidence of student thinking.
Rotating Trios

LET'S
Rotating

GO!!
Trios
Participation Norms

- Be fully present.
- Minimize distractions.
- Minimize “air time.”
- Take a chance.
- Celebrate accomplishments.
Discourse Norms

- Listen.
- Be involved.
- Contribute ideas.
- Participate by asking questions.
- Develop understanding, if not at the beginning, by the end.

Krusi, 2009
Mathematics Norms

• Look for patterns in order to make generalizations.
• Make connections among models, representations, and algorithms.
• Communicate using academic vocabulary.
• Use mistakes as opportunities to support new learning about mathematics.

Yackel & Cobb, 1996
Equity Sticks
What is student engagement?
How do you know if your students are engaged?

Results Now:

- 1,500 classrooms
- 85% / (-)50%
- 15%
Teacher-Directed Learning

- Paying attention
- Taking notes
- Listening
- Asking/Responding to questions
- Following requests
- Reacting
Student-Directed Learning

- Reading critically
- Problem Solving
- Performing
- Student Interaction
“Students who are engaged are involved, but not all students who are involved are engaged.”

- Phillip Schlechty
What's the best way to teach multiplication?

Option 1: Teaching in isolation using manipulatives

Option 2: Connecting the concept of multiplication to addition using manipulatives

Option 3: Relationship of multiplication and division

Option 4: Teaching using a combination of representations
Why Student Engagement?

- Increased academic achievement
- Increased on-task behavior
- Decreased behavioral challenges
Activate Student Engagement

- Help students collaborate with others.
- Allow independent work time, before sharing with others.
- Use questions to encourage discussion and debate.
- Acknowledge the importance of mistakes in learning.
- Use multiple response strategies.
Don’t Fumble
“Hot Potato”

Directions:
1. Put students in small groups.
2. Play music and stop.
3. Who ever has the ball selects a word wall word (screen) and tell one thing know about a particular word.
4. Play the music again.
5. Select a new word and repeat process.
Factor
Product
Equal Groups
Multiple
Array
Equation
Repeated Addition
Expression
Area Model
Partial Product
Let's get in the Huddle

After completing this activity, which components of student engagement did we activate?
Types of Student Engagement

- Teacher Influence
- Student Choice
- Wait Time
Teacher Influence

A teacher communicates positive demeanor
- Demonstrating enthusiasm
- Display intensity

Students’ perceptions
- Welcomed
- Accepted
- Supported
Student Choice

Teachers provide choice to students in four ways:

- Choice of tasks,
- Choice of reporting formats
- Choice of learning goals
- Choice of behaviors
“Wait time is the period of silence between the time a question is asked and the time when one or more students respond to that question.”

- TeacherVision, 2015
Teammates Consult

“Math Discourse”
Teammates Consult

- All pencils and calculators are set aside.
- Participates read the problem.
- Allow each person individual think/wait time.
- The problem is discussed by the team for clarity.
- Possible strategies are shared.
- Teacher give okay for pencils to be picked up and written work to begin.
Let's get in the Huddle

How did this activity support student engagement?
No more than 10 minutes goes by without students saying, writing, doing – making learning meaningful!

-Sarah McKibben
Rebound the Ball

“Carousel Around the World”

- Each table receives a different math word problem
- Each team will get a different color marker
- Team will read the problem and then solve it one way
- Next team will solve the same problem but a different way
- Then they will participate in a gallery walk

Logan scored 48 points in every basketball game...
Let’s get in the Huddle

What questions would you pose to encourage your students to discuss or debate about the strategies they used?
“The ultimate engagement is to put the learner in charge of learning.”

-Ben Johnson, Blogger
Door Prizes

1,683
1,000
56
225
1,089
42
16
627
400
2,750
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