

Using Routines to Develop Students' Mathematical Reasoning

December Saturday Math

Presenters: Katie, Annelly, Allie

Agenda

Introduction and Norms

Number Talks

Other Routines

Wrap up

Norms

- **We take care of our own needs while recognizing our responsibility to the group.**
- **We listen with the intent to understand; we speak with the intent to contribute.**
- **We treat disagreement as a positive opportunity for learning.**
- **We are respectful and mindful of our own and others' strengths, challenges, and learning styles.**
- **We promote a collaborative, non-competitive, and reflective environment.**

Goals of the session

Teach our students to “reason mathematically and quantitatively” (Common Core math practice standard)

Become familiar with a variety of new and old math routines that we can incorporate into our daily practice, just 10 minutes a day

Turn & Talk

What do math routines mean to you? How do you feel about them? How are they a part of your practice currently, if at all? What do you hope to get out of this session?

Number Talks

A number talk is a short, ongoing daily routine that provides students with meaningful ongoing practice with mental computation and mathematical reasoning.

- Students are mentally solving problems
- Students are given thinking time
- Thumbs up show when they are ready
- Teacher is recording students' thinking
- Students create mathematical proofs

Number Talks Rotation

1. Find your color in your name tag.
2. Green Tag - K-2
3. Blue Tag - 3-5
4. Yellow Tag - 6-8
5. After 8 minutes groups rotate to the next Number Talks Station
6. Use the notecatcher to capture your ideas
7. Reflect: How does Number Talks promote mathematical reasoning?

Math Routines Stations: 30 min. Work time

1. Catch a Bug
2. Roll a Big One
3. Quick Images
4. Number Lines
5. Today's Number/Ways to Make A Number
6. True/False Equations

Goal: Understand the math routine and prepare to present/teach that routine to the whole group.

Optional chart: What, When, Why, and How is this routine taught?

Take-aways

How do you feel about math routines?

What are you excited to try next week?

Recommended Resources

