Developing Strong Relationships While Teaching Mathematics Conceptually
REMOTE LEARNING CHAT

Starting the School Year:
Developing Relationships while
Teaching Math Conceptually (K-5)
July 14, 2020
Glad you are here!

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Walnut Creek Elementary School
Henry County Schools

Collaborative Partners:
Katie Breedlove - District Math Instructional Lead Teacher
Marga Kirschner - Title I Math Coach
TOPICS OF DISCUSSION

01 Developing Relationships Virtually
   Teachers can continue to connect with students despite the distance between them. (Zimny, 2020)

02 How to teach math conceptually
   Requires discourse that promotes reasoning and problem solving. (NCTM, 2014)

03 Q&A
   Open up to questions – post in CHAT box
“Often people will make the mistake of looking at online learning from the perspective of what's available in terms of technology and then figuring out how to use that as a teacher. It's more important to look at how **YOU** want to teach and what's out there to help you do that.”

–Mike Flynn (2020)
Developing Relationships Virtually

Maintain strong relationships and support students’ needs
Building Relationships

**Students**
- Scavenger Hunt
- Pet Show and Tell
- “All About Me” bags
- “All About Your Teacher” PowerPoint and Kahoot

**Parents**
- Weekly Simple Individual Contact
- Share pictures of class activities
- “All About My Child” Google Form
Welcome to Ms. Martinez’s 1st Grade Class!

Tell Me About Your Child

Child’s Name *

Short answer text

Getting to Know You Activities

- **Google Form - Parents complete**
  - Interests / Personality / Concerns
  - Favorite color, food, super hero, princess, etc.
- **All About Me Bags: Model / Kahoot!**
- **Remote Learning Brain Break - Scavenger Hunt**

End of the Year Scavenger Hunt

- **Find something:**
  - Purple
  - Soft
  - Round
  - An object with 3 colors
Quarter 1 - August 3, 2020 - October 9, 2020

Lesson: 4th Grade Math Learning Standards published at Grade 4 standards. All students will have an opportunity to learn activities designed to meet the needs of all learners. The focus in Math will be on:

- 4th Grade common core standards
- 4th Grade State standards
- 4th Grade Math Intervention

Unit 1: Operations and Algebraic Thinking

Lesson 1: Add and subtract fractions and mixed numbers with unlike denominators by finding a common denominator and equivalent fractions to produce like denominators.

Step-by-Step Student Instructions for Lessons

- Students are expected to use the provided lessons to learn the material. Each lesson is designed to help students understand the concepts and apply them to real-world situations.
- Students are expected to complete the assignments on time and submit them for grading.
- Students are encouraged to ask questions and seek help if needed.

Day 1

- Students will review the instructional objectives associated with each lesson.
- Students will begin to use their Quik Math accounts.
Keys to Connectivity

How do YOU want to teach?

Be available

Email / Phone calls

Digital Whiteboard

Letters

Google Classroom

### Developing Relationships Virtually

<table>
<thead>
<tr>
<th><strong>Pledge</strong></th>
<th><strong>Virtual Norms</strong></th>
<th><strong>Morning Message</strong></th>
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<tbody>
<tr>
<td>Maintain sense of normalcy</td>
<td>Develop community agreements to guide virtual class interaction (Henry, 2020)</td>
<td>Helps students stay connected to you and their classroom (Responsive Classroom, 2020)</td>
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<tr>
<th><strong>Daily Check-Ins</strong></th>
<th><strong>Build Trust!</strong></th>
<th><strong>Clear Expectations</strong></th>
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<td>maintain sense of belonging, significance, and fun (Responsive Classroom, 2020)</td>
<td>Be in contact with parents and students daily.</td>
<td>Including cultural strategies is key to creating true learning community (Henry, 2020)</td>
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Our Daily Check-In
Each student posts a response to a question posed by the teacher. Each classmate is to respond positively to two others.

Stacy Salter  Jul 7, 12:32
Happy Monday! Did anyone do anything interesting this weekend that they want to share?
Suggestions for Other Ways to Connect Using Google Forms

<table>
<thead>
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<tr>
<td><a href="https://bit.ly/StudentTeacherConferenceRequest">https://bit.ly/StudentTeacherConferenceRequest</a></td>
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<tr>
<td><a href="https://bit.ly/ParentTeacherConferenceRequest">https://bit.ly/ParentTeacherConferenceRequest</a></td>
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How to teach math conceptually

Establishes the foundation and is necessary for developing procedural fluency (NCTM, 2014)
Building Rigor AND Relationships

- Cube Conversations
- Esti-Mysteries
- Splat!
- Which One Doesn’t Belong
- Number Talks
- OpenMiddle

Provide tasks that include thought-provoking puzzles where there are no answers provided and there are many different entry points. This promotes discourse and allows students to see things from another’s perspective.

https://stacyrsalter.weebly.com/math-routines.html
Number Talks
Dot Cards

- Fosters conceptual math thinking
- **SMP 3** - Construct viable arguments and critique the reasoning of others
- **SMP 6** - Attend to precision
- Turn and Talk – students typically talk with each other but can talk with a family member at home.

\[
\begin{align*}
9 + 9 &= \\
9 + 10 &= \\
9 + 11 &= 
\end{align*}
\]
Nifty Numbers

- Daily number knowledge and number recognition activity
- Different ways to represent the number of school days
- Adapted to remote learning
- **SMP 4** - Model with Mathematics

### Day 144

<table>
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<tr>
<th>hundreds</th>
<th>tens</th>
<th>ones</th>
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<tbody>
<tr>
<td><img src="image1" alt="Grid" /></td>
<td><img src="image2" alt="Sticks" /></td>
<td><img src="image3" alt="Sticks" /></td>
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**How many GROUPS of 100?**
- **1**

**What's the VALUE of 1 in the hundreds place?**
- **100**

**How many GROUPS of 10?**
- **4**

**What's the VALUE of 4 in the tens place?**
- **40**

**How many GROUPS of 1?**
- **4**

**What's the VALUE of 2 in the ones place?**
- **4**

**Represent Today's Number Using Coins**
- Total: **$1.44**

**Represent Today's Number Using Tally Marks**
- Total: **144**
Splat!
By: Steve Wyborney

- Promotes rigor
- Solving for unknown
- Part-part whole relationships
- Students share their reasoning with others
- Part of our weekly in-class routine
- Modeled during remote learning
- Offered as an optional resource for enrichment

- **SMP 1** – Make sense of problems and persevere in solving them.
- **SMP 2** – Reason abstractly and quantitatively.
These real-world crucial context are crucial for engaging students in mathematical modeling and for preparing students to use mathematics beyond the classroom (Felton, 2014).

https://classroomscreen.com/
https://awwapp.com/
https://ditchthattextbook.com/online-whiteboard/
Connecting Conceptual Math to the Relationships

- Connect often!!
- Use multiple forms of communication
- Set virtual classroom hours
- Check in with students individually
- Communicate with parents
- Remember…virtual relationships matter

(Zimny, 2020)
Q&A
We want to hear from YOU...
List of Resources

https://stacyrsalter.weebly.com


# Mathematics Resources

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