Remote Learning Chat
Grades K - 2 Mathematics Content
RLC K-2 Mathematics Content
Introductions

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Currently working on her Doctorate in Math Curriculum
Former PAEMST winner
2 sons who are 6 and 2.
Kindergarten Routines & Strategies

Which One Doesn’t Belong  Number Talks  Same/Different Math

Graham Fletcher
Kindergarten Relationships

Math Student
Kindergarten Relationships

The Candyman - 3-Act Task
1st Grade

- Virtual Whiteboards for Number Talks

3 + 6
• Show what you know with Screen Recording and audio response.

Flipgrid
Beginning of Year Math Games

- Stand at desk
- Say 1-3 sequential numbers at a time
- Sit at the number 13

Class challenge
- Count to 10
- One person can speak at a time and can only say 1 number
- No other talking or hand signals

Break Apart 10:
- 10 stick of unifix cubes
- Put behind your back and break off a part
- Show one part
- Partner says what is behind your back
Beginning of Year Activities

What is a Mathematician?

- magician with math
- does a lot of math
- smart
- writes neatly
- glasses or goggles
- books
- boy or girl
- like a scientist
- lab coat
- equations
- solved a problem you didn't know
- watched video
- guessing numbers
- think different
- ask questions even when you don't know answer (wonder)
- noticed things
- estimate
- talk to each other
- draw pictures
- counted
- used charts

Math Alphabet
Where are my students at?

Georgia’s Numeracy Project: GloSS and IKAN
IKAN: Individual Knowledge Assessment for Numeracy (stage 1)
GloSS: Global Strategy Stage

- Numeracy Project Tasks
- Small Group Instruction
- Number Talks
<table>
<thead>
<tr>
<th>Big Idea/ Topic</th>
<th>Identify what students need to know/ understand in this learning plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big Idea: Extend Understanding of Base-Ten Notation</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Standard Alignment</th>
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<tbody>
<tr>
<td>List the GSE standard(s) alignment here</td>
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</tbody>
</table>

MGSE2.NBT.1 Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases: a. 100 can be thought of as a bundle of ten tens — called a “hundred.” b. The numbers 100, 200, 300, 400, 500, 600, 700, 800, 900 refer to one, two, three, four, five, six, seven, eight, or nine hundreds (and 0 tens and 0 ones).

MGSE2.NBT.2 Count within 1000; skipcount by 5s, 10s, and 100s.

MGSE2.NBT.3 Read and write numbers to 1000 using base-ten numerals, number names, and expanded form.

MGSE2.NBT.4 Compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, and < symbols to record the results of comparisons. Represent and interpret data.

MGSE2.MD.10 Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problems using information presented in a bar graph.
<table>
<thead>
<tr>
<th>Diagnostic Assessment</th>
<th>Link to appropriate diagnostic task/activity/assessment and write a short description of the assessment used to diagnose student understanding of the specific big idea</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Diagnostic Task Big Idea: Extend Understanding of Base-Ten Notation</strong></td>
</tr>
</tbody>
</table>
This morning, a tub of base ten blocks spilled onto the floor. One of the students said that we can’t write a number to represent the value of all of the blocks because there are more than 10 tens and more than 10 ones. What do you think?
The next day, another tub of base ten blocks spilled on the floor. A student counted 3 hundreds, 13 tens, and 35 ones. Some students think the total value of the spilled blocks is 348. Is this correct? Show your mathematical thinking.

Base-Ten Spill… The Next Day

Oh, no! It happened again! Another tub of base-ten blocks spilled onto the floor. This time, we know the total value of the blocks is 584.

What base-ten blocks could have been in the container?
<table>
<thead>
<tr>
<th>Anticipated Student Thinking</th>
<th>Students and Their Thinking</th>
<th>2nd grade: Extend Understanding of Base-Ten Notation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Making Groups</strong></td>
<td></td>
<td></td>
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<tr>
<td>Students make hundreds with</td>
<td></td>
<td></td>
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<tr>
<td>groups of tens and tens with</td>
<td></td>
<td></td>
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<tr>
<td>groups of ones.</td>
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<tr>
<td><strong>Place Value Equation</strong></td>
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<tr>
<td>Students count the number</td>
<td></td>
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<tr>
<td>of hundreds, tens, and ones</td>
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<td>then accurately write an</td>
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<tr>
<td>equation using place value</td>
<td></td>
<td></td>
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<tr>
<td>numbers</td>
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<tr>
<td><strong>Identify Place Value Parts</strong></td>
<td></td>
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<tr>
<td>Students Identify the correct</td>
<td></td>
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<tr>
<td>number of hundreds, tens,</td>
<td></td>
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<tr>
<td>and ones</td>
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</tr>
<tr>
<td>Anticipated Student Thinking</td>
<td>Students and Their Thinking</td>
<td>Big Idea</td>
</tr>
<tr>
<td>------------------------------------------------------------------</td>
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<td>----------------------------------------------</td>
</tr>
<tr>
<td><strong>More than One Place Value Equation</strong></td>
<td></td>
<td>2nd grade: Extend Understanding of Base-Ten Notation</td>
</tr>
<tr>
<td>Students write at least one equation to represent the amount shown by the base-ten blocks</td>
<td></td>
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</tr>
<tr>
<td><strong>Inaccurate Place Value Grouping</strong></td>
<td></td>
<td>2nd grade: Extend Understanding of Base-Ten Notation</td>
</tr>
<tr>
<td>Students are unable to group tens to make hundreds and/or group ones to make tens</td>
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<tr>
<td>Students show a lack of consideration of place values i.e., 2 + 23 + 27 = 52</td>
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<tr>
<td><strong>Inaccurate Identification of Place Value Parts</strong></td>
<td></td>
<td>2nd grade: Extend Understanding of Base-Ten Notation</td>
</tr>
<tr>
<td>Students are unable to accurately identify the correct number of hundreds, tens, and ones</td>
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</tbody>
</table>
Instructional Design

Engage
Place Value **Number Talks**
Use base ten blocks to model a **3 digit** number and ask students what number you are representing and how they know? Step by step instructions for completing a Number Talks are in the Link.

For example,

Virtual Base Ten Blocks

- **Synchronous**: Complete during a classroom discussion or virtual classroom meeting.
- **Asynchronous**: Introduce the problem to students in a virtual platform; this can be done via e-document or video. Allow students to share responses and provide feedback to their peers within the virtual platform/classroom. Provide feedback to individual student responses and highlight multiple strategies used by students.
- **Unplugged/ Offline**: Encourage students to provide a written explanation of their thinking and how they reached their solution when solving problems. Provide feedback that demonstrates different strategies to solve problems. Alternatively, share a problem along with a strategy and solution; ask students to explain a different way to solve the problem.
Explore
“Straws, Straws, Straws” 3 Act Task: Use base-10 knowledge to develop strategies to count large quantities more efficiently.

- **Synchronous**: Complete during a classroom discussion or virtual classroom meeting.
- **Asynchronous**: Pre-record each act or create an e-document for each act. Allow students to share their thinking within the virtual platform/classroom. When students are asked to share their solutions and strategies in act 3, ask them to illustrate with drawings. Showcase different strategies students used and allow them to respond/give feedback within the virtual platform.
- **Unplugged/Offline**: Provide students with information from Act 2 and provide them with the main question “how many straws are there?” Ask students to answer the question and provide a drawing that demonstrates how they solved the problem.
Apply

**Base Ten Pictures** Arts Integration/PBL: In this task, students create pictures using base ten blocks. They then record base ten information about their creations.

- **Synchronous**: Complete during a classroom discussion
- **Asynchronous**: Provide students with the materials to complete part one on their own. Allow students time to virtually share the types of animal they created and how that animal travels. Create a table with the information students shared and encourage them to complete the graphing task in part two.
- **Unplugged/ Offline**: Provide students with the materials to complete part one on their own. For part two, provide students with a pre-populated table showing the different ways animals travel.

<table>
<thead>
<tr>
<th>Name</th>
<th>Tally</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walk</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Fly</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Slither</td>
<td></td>
<td>2</td>
</tr>
</tbody>
</table>

For example:
Instructional Design

Reflect

*Would you rather problem:* Would you rather have 23 hundreds, 48 tens, and 9 ones OR 26 hundreds, 17 tens, and 22 ones. Encourage students to explain their reasoning.

- **Synchronous:** Complete the problem as an exit/out the door ticket.
- **Asynchronous:** Have students share their answers in a shared documents or online comment forum.
- **Unplugged/ Offline:** Have students respond to the prompt in a math journal or on paper.
Student Success Toolkit

Success

- Include formative and summative assessment options (during learning or at the conclusion)

“Straws, Straws, Straws” 3 Act Task Formative Questions:
  ● What models did you create?
  ● What organizational strategies did you use?

“Base Ten Pictures” Formative Questions
  ● How many blocks did you use to create your animal?
  ● How did you count the number of blocks?
  ● How many blocks did your partner use?
  ● Who used the most blocks?
  ● How could you create an animal to make it easiest to count?  ● How did you count the total number used?
  ● Can you show me this number in standard form?
  ● What is the number in expanded form?

Diagnostic Task Big Idea: Extend Understanding of Base-Ten Notation
## Student Success Toolkit

<table>
<thead>
<tr>
<th>Suggestions for Acceleration and Intervention, as needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Identify additional strategies to support students as they progress towards mastery of the big idea.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>At Home Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Identify additional support materials or resources that can be used at home to support student understanding of the big idea.</td>
</tr>
<tr>
<td>- May connect to Georgia Home Classroom resources</td>
</tr>
</tbody>
</table>
Mathematics Resources

<table>
<thead>
<tr>
<th>Kindergarten</th>
<th>1st Grade</th>
<th>2nd Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>3rd Grade</td>
<td>4th Grade</td>
<td>5th Grade</td>
</tr>
<tr>
<td>6th Grade</td>
<td>7th Grade</td>
<td>8th Grade</td>
</tr>
<tr>
<td>Coordinate Algebra</td>
<td>Algebra I</td>
<td>Analytic Geometry</td>
</tr>
<tr>
<td>Geometry</td>
<td>Algebra II - Advanced Algebra</td>
<td>Precalculus</td>
</tr>
<tr>
<td>Calculus-Based HS Courses</td>
<td>All Other HS Courses</td>
<td></td>
</tr>
</tbody>
</table>

Additional Teacher Resources

Questions?
Contact Us

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