Using Math Stations to Reach All Students

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Saint Anne’s-Belfield School
Why teach using a station model?

- Curricular demands
  - Content
  - Problem solving skills
  - Fact and procedural fluency

- Quality vs. quantity
  - Small group instruction
  - Targeted
Math Station Models

- Three rotating stations
  - Teacher station
  - Independent station
  - Fluency station
Math Station Models

- Whole group mini-lesson, two rotating stations
  - Teacher station
  - Independent practice station

<table>
<thead>
<tr>
<th>Ms. Curran: White boards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ms. Blakeney: Workbook pg. 31 and 32 - Game</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Will</th>
<th>Margaret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloe</td>
<td>Orro</td>
</tr>
<tr>
<td>Timmy</td>
<td>Caroline</td>
</tr>
<tr>
<td>Isabelle</td>
<td>Anna</td>
</tr>
<tr>
<td>Grayson</td>
<td>Octavia</td>
</tr>
<tr>
<td>Henry K.</td>
<td>Henry J.</td>
</tr>
<tr>
<td>Sophia</td>
<td>Justin</td>
</tr>
<tr>
<td></td>
<td>James</td>
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</table>
Setting Up a Rotating Classroom

- Grouping students
Setting Up a Rotating Classroom

- Behavior

- Golden Rule:<br>teachers<br>students<br>Stay focused –<br>don’t draw on w.b.<br>Keep the noise at a<br>good level<br>Transition –<br>waiting at door or steps by the wall<br>quiet<br>quickly

- (2) Teacher<br>Independence

- Respect my group members and other groups.

- Respect all math materials.

- Work quietly and focus on task with my group.
Setting Up a Rotating Classroom

- Classroom set up
Sample Lesson

Teach students to add numbers within 1000 renaming in the ones place.
## Lesson: Renaming Ones

<table>
<thead>
<tr>
<th>Objective</th>
<th>Description</th>
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<tbody>
<tr>
<td>Add within 1000, where renaming occurs in the ones</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Ability Level</th>
<th>Description</th>
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<tbody>
<tr>
<td>Low ability</td>
<td>Use place value discs or base ten blocks to show that ones can be grouped into tens and ones. Add each problem using hands-on manipulatives so that kids can concretely see the renaming that occurs in each problem.</td>
</tr>
<tr>
<td>Medium ability</td>
<td>Use place value discs or base ten blocks to show that ones can be grouped into tens and ones for the first couple examples. Switch to whiteboards and have students begin to model each problem.</td>
</tr>
<tr>
<td>High ability</td>
<td>Demonstrate using place value discs the regrouping of ones to tens for the first example. Have students practice all other examples on whiteboards. High students apply the algorithm while solving word problems.</td>
</tr>
</tbody>
</table>
## Independent Station

<table>
<thead>
<tr>
<th>Low ability</th>
<th>Students complete workbook pages practicing addition with renaming using a place value chart and place value discs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medium ability</td>
<td>Students complete workbook pages practicing addition with renaming, drawing discs on a place value chart, if needed.</td>
</tr>
<tr>
<td>High ability</td>
<td>Students complete a worksheet applying the addition with renaming algorithm to solve word problems.</td>
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</tbody>
</table>

Fluency Station

Play “Race to 1000”

Materials: Place value chart up to the 1000s place, place value discs, 9-sided dice (or number cards)

Play: Students take turns rolling a die and placing the corresponding amount of place value discs on the place value chart, renaming when necessary. The first player to reach 1000 wins.
Independent Station

- Workbook or worksheet
- Homework corrections
- Enrichment activities
- Catch up/leftover work
- Math journaling
Fluency Station

- Paper and pencil practice
- Games
  - Free Boxcar and One-Eyed Jack games
  - Free games: [http://www.mathwire.com](http://www.mathwire.com)
- iPad apps
Game Examples

Top It

- Grades: K - 4th
- Players: 2
- Materials: Playing cards
- Rules: Divide the deck evenly among the players. Students flip over one card and compare their card to the other card(s). The player with the largest number calls out, “Top it!” and wins all the cards. Play continues until one player has won all of the cards.
- Variations: Addition Top It, Multiplication Top It, Greatest Sum (3 or more cards), Lowest Sum, Greatest Difference, Lowest Difference, Place Value Top It
Game Examples

Race to 100

- Grades: 2nd - 4th
- Players: 2
- Materials: Place value chart, dice, and place value discs (or base ten blocks)
- Rules: Each player begins with one. They roll a die and add on that many to their previous number. Anytime they have more than ten ones, they must regroup the ones into tens. The first players to reach 100 wins.
- Variations: Race to 1000 using number cards, Race to 1, Decimal Race to 1
Three in a row

- Grades: 2nd - 4th
- Players: 2
- Materials: Hundreds chart, unit cubes, and playing cards
- Rules: Each student draws four cards and forms two 2-digit numbers. They add the two numbers and mark off that number on the 100s chart. The goal of the game is to cross off three numbers in a row. The first player to complete a row of three (they can play off their own rows or each other's) wins.
- Variations: Allow adding or subtracting
Game Examples

Target

- Grades: 1st - 4th
- Players: 2+
- Materials: Playing cards
- Version 1: 4 cards are dealt to each player and one card is placed in the middle as the target number. Students get points for each round based on the number of cards used.
- Version 2: The teacher makes a 2-digit target number. Each player gets four cards and the students try to arrange the cards into two 2-digit numbers. Students add or subtract to get as close to the target number as possible.
- Version 3: 6 cards are dealt to each player and one card is placed in the middle as the target number. Students use order of operation rules to make the target number. Students get points for the round based on the number of cards used.
## Apps

### Kindergarten
- Kodable Pro
- Skip Counting
- Number Math
- Splash Math 1
- Math Facts
- Number Bonds
- Letter Trace

- Jungle Coins
- Number Match
- Tangrams
- Dominoes
- Math Bingo
- Pattern Recognition
Apps

First Grade
- Bee Bot
- Big Seed
- Dominoes
- Jungle Coins
- Jungle Time
- Kickbox
- Find Sums
- Kodable Pro and Kodable Cass

- Math Bingo
- Math Fact Master
- Number Bond
- Number Match
- Explain Everything
- Sum Dog
# Apps

## 2nd Grade

- Big Seed
- Sum Dog
- Clock Master
- Concentration
- Dominoes
- Fractions
- Find Sums
- Hopscotch
- Jungle Coins
- Jungle Time
- KenKen
- KickBox
- LightBot
- Math Bingo
- Math Fact Master
- Number Bond
- Number Math 1
- Thinking Blocks
Apps

3rd Grade
- Big Seed
- Bills and Coins
- Clock Master
- Concentration
- Division
- Equivalent Fraction
- Fractions
- Find Sums
- Hopscotch
- Jungle Coins
- Jungle Time
- KenKen
- Kickbox
- Lightbot
- Long Mult.
- Make Change
- Math Bingo
- Math Fact Master
- Multiples
- Number Bonds
- Number Line
- Number Match 1
- Rush Hour
- SumDog
- Thinking Blocks
Apps

4th Grade

- Big Seed
- Bills and Coins
- Cargo Bot
- Chess
- Clock Master
- Division
- Equivalent Fractions
- Fractions
- Find Sums
- Hopscotch
- Jungle Coins
- Jungle Time
- KenKen
- KickBox
- Long Mult
- Math Bingo
- Math Fact Master
- Multiples
- Number Bonds
- Number Line
- Number Math 1
- Numbers: Spreadsheet
- RoboLogic
- SumDog
- Thinking Blocks
Questions