### Unit Goals – Stage 1

#### Number of Days: 23

**Traditional:** October 2 - November 1, 2017

**Unit Description:** Manipulatives continue to play a large part in building conceptual understanding of addition and subtraction through problem solving in order to support addition and subtraction fluency to 10. Students work to represent their work with manipulatives through illustrations and number sentences.

**Materials:** HSP, *Early Mathematics Supplemental Book* (EM), *Big & Little* by Steven Jenkins, *It Makes Sense* (IMS), 100 chart, number path, connecting cubes, base ten blocks, ten-frames.

#### Standards for Mathematical Practice

<table>
<thead>
<tr>
<th>SMP</th>
<th>Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMP.1</td>
<td>Make sense of problems and persevere in solving them.</td>
</tr>
<tr>
<td>SMP.2</td>
<td>Reason abstractly and quantitatively.</td>
</tr>
<tr>
<td>SMP.3</td>
<td>Construct viable arguments and critique the reasoning of others.</td>
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<tr>
<td>SMP.4</td>
<td>Model with mathematics.</td>
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<tr>
<td>SMP.5</td>
<td>Use appropriate tools strategically.</td>
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<tr>
<td>SMP.6</td>
<td>Attend to precision.</td>
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<td>SMP.7</td>
<td>Look for and make use of structure.</td>
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<tr>
<td>SMP.8</td>
<td>Look for and express regularity in repeated reasoning.</td>
</tr>
</tbody>
</table>

#### Standards for Mathematical Content Clusters Addressed

- **Operations and Algebraic Thinking:**
  - [m] 1.OA.A Represent and solve problems involving addition and subtraction.
  - [m] 1.OA.B Add and subtract within 20.
  - [m] 1.OA.D Work with addition and subtraction equations.
  - [m] 1.OA.C Compose and decompose numbers and objects.

- **Numbers:**
  - [m] 1.NBT.A Count to 120, starting at any number less than 120.
  - [m] 1.NBT.B Understand place value.
  - [m] 1.NBT.C Add and subtract within 20.

#### Transfer Goals

**Students will be able to independently use their learning to...**

- Make sense of never-before-seen problems and persevere in solving them.
- Construct viable arguments and critique the reasoning of others.

#### Making Meaning

**UNDERSTANDINGS**

**Students will understand that...**

- Drawings, objects, and equations can be used to solve problems.
- Addition and/or subtraction are used to solve problems involving various situations.

**ESSENTIAL QUESTIONS**

**Students will keep considering...**

- What strategies can be used to solve this problem?

#### Acquisition

**KNOWLEDGE**

**Students will know...**

- The definition of academic vocabulary words difference, minuend, related addition fact, related subtraction fact, and subtrahend.
- Situations of adding to, taking from, putting together, taking apart, call for addition or subtraction.
- The relationship between addition and subtraction.
- The meaning of the equal sign.

**SKILLS**

**Students will be skilled at and/or be able to...**

- Reason when to add and/or subtract in word problems.
- Use addition and subtraction to solve word problems.
- Use the relationship between addition and subtraction to solve problems.
- Use the equal sign properly.
### Standards for Mathematical Practice

| SMP.1 | Make sense of problems and persevere in solving them. |
| SMP.2 | Reason abstractly and quantitatively. |
| SMP.3 | Construct viable arguments and critique the reasoning of others. |
| SMP.4 | Model with mathematics. |
| SMP.5 | Use appropriate tools strategically. |
| SMP.6 | Attend to precision. |
| SMP.7 | Look for and make use of structure. |
| SMP.8 | Look for and express regularity in repeated reasoning. |

### Standards for Mathematical Content

#### Operations and Algebraic Thinking

**[m]** 1.OA.A **Represent and solve problems involving addition and subtraction.** (within 10 in unit 1)

1.OA.1 Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart and comparing, with unknowns in all positions, e.g., by using objects, drawings and equations with a symbol for the unknown number to represent the problem.

**[m]** 1.OA.B **Understand and apply properties of operations and the relationship between addition and subtraction.**

1.OA.4 Understand subtraction as an unknown-addend problem. For example, subtract 10 – 8 by finding the number that makes 10 when added to 8.

**[m]** 1.OA.D **Work with addition and subtraction equations.**

1.OA.7 Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false. For example, which of the following equations are true and which are false? 6 = 6, 7 = 8 – 1, 5 + 2 = 2 + 5, 4 + 1 = 5 + 2.

1.OA.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = □ - 3, 6 + 6 = □.

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Key: **[m]** = major clusters; **[s]** = supporting clusters; **[a]** = additional clusters
**Evidence of Learning – Stage 2**

### Assessment Evidence

**Unit Assessment / Answer Key**
Students will solve concepts and procedure problems to demonstrate mastery of the unit standards as outlined in this guide.

<p>| | |</p>
<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>1.OA.A</strong></td>
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</table>
| • Students demonstrate decomposing and composing numbers to 10 using a variety of tools.  
• Students are able to use a variety of tools interchangeably to solve word problems |

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<table>
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<tr>
<td><strong>1.OA.B</strong></td>
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<tr>
<td>• Students will understand subtraction as an unknown addend problem.</td>
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<tbody>
<tr>
<td><strong>1.OA.D</strong></td>
<td></td>
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<tr>
<td>• Students demonstrate an understanding of the equal sign.</td>
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</table>

For **selected content, students will need to**…

- Solve complex problems in pure and applied mathematics, making productive use of knowledge and problem solving strategies.
- Clearly and precisely construct viable argument to support their own reasoning and critique the reasoning of others.

### Other Evidence

**Formative Assessment Opportunities**

- District Unit 2 Resource (to be used if you are taking the online Unit Assessment) – exit tickets and quizzes English (Word or PDF)
- Opening Task – Early Mathematics Session 3 pgs. 8 – 11
- GoMath! Show What You Know – Chapter 1 (page 10), Chapter 2 (page 50), Chapter 3 (page 94), & Chapter 4 (page 150)
- Formative Assessment Lessons/Writing Activities – Fishes, Fishes, Fishes; Agree or Disagree; Picking Apples
- GoMath! Performance Task: Who’s Still Here?
- GoMath! Standards Practice Book –for quizzes or homework
- Synergy Item Bank  
  o myPD Course #2531: Creating an Assessment in Synergy
# Learning Plan – Stage 3

## Teacher Resources

We encourage using the following resources throughout the unit:

- Early Mathematics – A Resource for Teaching Young Children (EM) – If you do not have this book, download it to your desktop from this link. You can then print selected pages if desired.
- Mastering the Math Rack (MMR)
- It Makes Sense (IMS)
- Think Central
- FAL Writing Activity Teacher Guide
- What is the Difference Between a Number Path and a Number Line?
- Which One Doesn't Belong?
- Cooperative Group Mats
- Standards Posters

### myPD Courses:

- myPD course #2821: GoMath! Digital Resources
- myPD course #7401: Standards for Mathematical Practice
- myPD course #7455: Lesson Planning Tools
- myPD course #3578: Understand the Problem: Notice and Wonder Strategy
- myPD course #7796: The Rekenrek “Math Rack”
- myPD course #7420: Mathematical Discourse Resources

- Mathematics Framework for CA Public Schools – Grade 1
- Using Formative Assessment for Differentiation
## Learning Plan – Stage 3

**Suggested Sequence of Key Learning Events and Instruction**

<table>
<thead>
<tr>
<th>Days</th>
<th>Learning Target</th>
<th>Success Criteria</th>
<th>Go Math! Lessons and Activities and Core Resources</th>
<th>Supplemental Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily</td>
<td>I can group dots to tell how many are shown by…</td>
<td>• Participating in daily Number Talks.</td>
<td>• LBUSD Trimester 1 Number Talks Cards</td>
<td>• myPD course #2165 Beginning of the Year Number Talks Kinder through 5th</td>
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<tr>
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<td>• Applying subitizing skills and identifying numbers shown on dot images.</td>
<td>Number Talks Cards (contact the Math Office if new to the grade level)</td>
<td>• myPD course #2702 “Number Talks: Dot Card Images”</td>
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<td>• Answering questions such as:</td>
<td>• myPD course #7446 Elementary Number Talks</td>
<td>• It Makes Sense</td>
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<td></td>
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<td>o How many dots do you see?</td>
<td>o Grade 1 Number Talk Directions</td>
<td>o Routine 2 pgs. 8-13</td>
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<tr>
<td></td>
<td></td>
<td>o How do you see them?</td>
<td>o Rekenrek Directions</td>
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<tr>
<td>60 minutes</td>
<td>I can persevere in problem solving as I play interactive games to help me understand math by…</td>
<td>• Developing long term problem solving skills.</td>
<td>ST Math Objectives</td>
<td>ST Math Tips</td>
</tr>
<tr>
<td>per wk.</td>
<td></td>
<td>• Visualizing math concepts.</td>
<td>• Number Pairs and Making 10</td>
<td>• Go to <a href="#">ST Math Central</a></td>
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<td></td>
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<td>• Making connections between concepts and across grades.</td>
<td>• Addition and Subtraction Within 20</td>
<td>• Assign a minimum of 5 homework objectives</td>
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<td>ST Math Tips</td>
<td>• Review facilitation prompts and processes to help struggling students</td>
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<td>• Give the “Show What You Know” Diagnostic Assessments:</td>
<td>• District will handle all student rostering/ transfers</td>
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<tr>
<td></td>
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<td>Chapter 1 pg. 10, Chapter 2 pg. 50, Chapter 3 pg. 94, and Chapter 4 pg. 150</td>
<td>(If not used in Unit 1)</td>
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<tr>
<td>Before the</td>
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<td>Determine if students need intervention for the unit prerequisite skills.</td>
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<tr>
<td>Unit</td>
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<td>*Use the Diagnostic Table for intervention options: On-level, Strategic, Intensive, and Independent</td>
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<td>*Rule of Thumb: Rather than doing the “Vocabulary Builder” in Chapters 1 - 4 as a separate activity, incorporate vocabulary where appropriate in daily lessons. (e.g. as students build conceptual understanding with different tasks, insert mathematical vocabulary during the class discussion, building word walls, or vocabulary lists in notebooks with the students.)</td>
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**LONG BEACH UNIFIED SCHOOL DISTRICT**

2017 - 2018
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|      | I can use addition and subtraction to solve problems by… | OPENING TASK – Early Mathematics Session 3  
- Using manipulatives.  
- Drawing or writing a number sentence that corresponds to what was built using manipulatives.  
- Communicating my thinking.  
- Answering questions such as:  
  o What can our starting point be?  
  o Why would that be our starting point?  
  o Can you explain what the numbers in this number sentence represent? | **Big & Little by Steven Jenkins**  
**Early Mathematics**, (EM) grade 1; Session 3; pgs. 8–11  
Lesson 2.2: Model Taking From pgs. 57A – 60 |  
Coach’s Note:  
Please review the CCSS Addition and Subtraction Situations.  
Some of the strategies in this Unit are a review from Kindergarten. Note: Add-To/Take-From Problems – results unknown: \((A + B = \square)\) \((C - B = \square)\) are considered the easier problem types and practiced in kindergarten. These days might be a good opportunity for small group instruction and a chance to introduce basic facts activities such as: How Many are Hiding. |
| 1   | OA.1            |                  |                                                  |                        |
| 2 – 7 | I can use addition or subtraction to solve word problems by… |                  | **Early Mathematics**  
- Grade 1; Session 4; pgs. 12 – 15  
- Grade 1; Session 5; pgs. 16 – 19  
- Grade 1; Session 6; pgs. 20 – 23  
- Lesson 2.3: Hands On – Model Taking Apart pgs. 61A – 64 | **Application:**  
- Sharing Markers  
- Exit Ticket Question:  
  "Rory has ___ marbles. ___ marbles are green. The rest are blue. How many marbles are blue?"  
**Sharing Markers** |

LONG BEACH UNIFIED SCHOOL DISTRICT  
2017 - 2018
## Learning Plan – Stage 3

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| 8 – 10 | I can create and write related addition and subtraction facts by… | • Using manipulatives to conceptually see the relationship between addition and subtraction.  
• Explaining how the facts are related through decomposing and composing numbers.  
• Drawing a representation and writing a related fact to a given fact where the sum is 10 or less.  
• Answering questions such as:  
  o I have (5) and you give me (4) more. How many do I have? Now, if I take away (4) how many would I have? How are these facts related?  
  o If I have (n) how many more would I need to make (n)? Now I have (n), if I take away (n) how many do I have left? How are these facts related?  
  o What is the related addition/subtraction fact?  
  o I have 10, how many were taken away if I’m left with (n)? What is the related addition fact? | • Lesson 4.2: Hands on – Think Addition to Subtract pgs. 157A – 168  
• Lesson 4.3: Use Addition to Subtract pgs.161A –163 | Coach’s Note:  
• Select problems within 10.  
• EM session 6 can be revisited for the specific objective of showing subtraction as a missing addend situation. |
| | OA.4 | | | Conceptual Understanding:  
• Mastering the Math Rack (MMR) pgs. 56 – 57 (extension)  
• Mastering the Math Rack (MMR) pgs. 58 – 59 |
| 11 | I can finish ___ workshop activities and show what I did by… | • Competently using math tools from previous lessons to practice, apply and construct learning.  
• Representing work through models, drawings, number sentences and/or words. | Have workshop baskets prepared with math tools from previous lessons for students to continue to practice  
• Early Mathematics  
• It Makes Sense  
• Go Math! Grab and Go Activities  
• Cave Game Subtraction  
• Match Game | |
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| 12 – 13 | I can show different combinations for numbers 1 – 10 by…                        | • Using manipulatives to help solve.  
• Drawing or writing a number sentence that corresponds to what was built using the manipulatives.  
• Writing the possible combinations for a given number.  
• Connecting this activity to composing and decomposing numbers and using a number bond.  | • Early Mathematics  
  ○ Grade 1, *Session 7, pgs. 24-27  
  *also in Unit 1 LT6, supplemental resource                                                                                          | Application:  
  • Helping Others  
  • Boys and Girls Variation 2                                                                                                           |
| 14 – 15 | I can use the equal sign correctly and explain why by…                          | • Using manipulatives to show equal sets (if needed).  
• Identifying equations using the equal sign correctly or identifying equations using the equal sign incorrectly.  
• Solving 2 expressions on both sides of an equal sign to determine if both sides are equal or not equal  
• Explaining why the equal sign is used correctly or incorrectly.  
• Answering questions such as:  
  ○ What is the meaning of the equal sign?  
  ○ What is always true about an equal sign?  | • Early Mathematics  
  ○ Grade 1 Session 10, pgs. 36-39                                                                                                         | Application:  
  • Equality Number Sentences  

**Coach’s Note:**  
To add rigor: Show the chart from the previous lesson EM Session 7. Use one of the equations written from the chart and write a subtraction sentence that would be equivalent using the equal sign between the two expressions. Ask the students if the equal sign is used correctly. Conduct a discussion using Talk Move strategies.
# Learning Plan – Stage 3

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<tr>
<td>16 – 17</td>
<td>I can solve problems and show what I know by…</td>
<td><strong>FORMATIVE ASSESSMENT LESSON Choose one</strong>&lt;br&gt;• Completing one Writing Activity or Performance Task.&lt;br&gt;• Persevering through difficulties.&lt;br&gt;• Participating in class discussions.&lt;br&gt;• Representing my thinking through drawings, words and/or numbers sentences.</td>
<td>FAL:&lt;br&gt;• #1 “Fishes, Fishes, Fishes” OA.1&lt;br&gt;• #2 “Agree or Disagree” OA.7&lt;br&gt;• #3 “Picking Apples” OA.4</td>
<td>• Ch 2 – GoMath! Performance Task; Who’s Still Here?</td>
</tr>
<tr>
<td>18 – 20</td>
<td>I can show ten in different ways by…</td>
<td>• Using manipulatives.&lt;br&gt;• Drawing or writing a number sentence that corresponds to what was built using the manipulatives.&lt;br&gt;• Identifying two numbers equaling 10 and writing it in a number sentence and number bond.&lt;br&gt;• Identifying the missing addend that will lead to the sum of 10.&lt;br&gt;• Recognizing and recording a doubles fact that equals ten&lt;br&gt;• Using commutative property to find number combinations equaling 10.&lt;br&gt;• Answering questions such as,&lt;br&gt;  o “How did you know ___ was the missing addend?”&lt;br&gt;  o “What would be a related fact for that number sentence?”&lt;br&gt;  o “How do you know that 5+5 is a doubles fact?”</td>
<td><strong>Early Mathematics</strong>&lt;br&gt; o Grade 1 Session 11, pgs. 42 – 43 Develop Section&lt;br&gt; o Grade 1 *Session 12, pgs. 44-50 *also in Unit 1 LT8, Supplemental Resources</td>
<td>• It Makes Sense (IMS)&lt;br&gt; o G-6 – Collect Ten, pgs.100-106</td>
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<tr>
<td>21 – 22</td>
<td>I can prepare for the unit assessment on Addition and Subtraction to 10 through Problem Solving by …</td>
<td>• Applying what I’ve learned to complete a task or set of problems.</td>
<td>• Ch. 2 Review pgs. 89 – 92</td>
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<td>• Ch. 4 Review pgs. 177 – 180</td>
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<tr>
<td>23</td>
<td><strong>Unit Assessment</strong></td>
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</table>

Select *either* the Online Unit Assessment (Synergy) or paper pencil Unit Assessment (assessment link found on page 3 of this Unit guide)