UNIT PLANNING TOOL
Planning Focus: Addition and Subtraction with word problems  Module(s)/Unit(s) Deming Pacing guide weeks 5-8
CCSSM:
2.MD.B.6: Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ..., and represent whole-number sums and differences within 100 on a number line diagram.
2.OA.B.2: Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers.
2.OA.A.1: Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

Mathematical practices being emphasized:
Make sense of problems and persevere in solving them. (#1)
Construct viable arguments and critique the reasoning of others. (#3)

Essential Questions
What tools help us model our thinking?  How do we solve word problems?
How do we show our work/thinking so other people can understand it?

Key Concepts
- Strategies to solve addition and subtraction problems (builds on week 3 and 4)
- Flexibility using multiple strategies to solve word problems looking at the context
- Communicating thinking using words, objects, pictures, and equations

Pre Assessment
Preassessment – Show me two ways you can solve these problems.

14+5=

12-6=

My dog ate 5 bones at breakfast and 6 bones at lunch. For dinner, she ate 3 more. How many bones did she eat?

Miguel had 5 stickers. Juanita gave him some more stickers. He now has 11 stickers. How many stickers did Juanita give Miguel?

If time – differentiated sequence counting on back

© 2018 E. Mayer & L. Meyer
Connections (Real World Applications)

Students use addition and subtraction on a daily basis. Watch for examples of real problems in the classroom that can be highlighted.

- How many more boys than girls here today?
- We have 22 sharp pencils but we need 25 sharpened pencils so everyone has one. How many more do we need to sharpen?
- I have 12 scissors. John just gave me 4. How many scissors do I have? Oh no, I just dropped 2. How many do I have in my hand?
- 10 kids are in line for PE. How many students still need to line up?

Language Functions/Structures

Functions: Explain. Describe.

Structures: I drew ____ because ____. I used a number line and started at ____.
You add ____ plus ____ and get ____. First, I ____. Then I ____.
I ______________ to find the answer.

Why did you ____? I _____ because _____. The tool I used was _____.

Vocabulary

<table>
<thead>
<tr>
<th>solution</th>
<th>add</th>
<th>make a ten</th>
<th>more</th>
</tr>
</thead>
<tbody>
<tr>
<td>answer</td>
<td>addend</td>
<td>number line</td>
<td>less</td>
</tr>
<tr>
<td>equation</td>
<td>subtract</td>
<td>hundreds chart</td>
<td>equal</td>
</tr>
<tr>
<td>picture</td>
<td>difference</td>
<td>putting together</td>
<td></td>
</tr>
<tr>
<td>model</td>
<td>count on</td>
<td>taking apart</td>
<td></td>
</tr>
<tr>
<td>number sentence</td>
<td>count back</td>
<td>strategies</td>
<td></td>
</tr>
</tbody>
</table>

Focus and Motivation

You Tube – Solve Me Maybe – Elementary Math Problem Solving Steps
https://www.youtube.com/watch?v=2Y4x7EgwWlO

Chants – Mental Math Addition Bugaloo (DLeNM chant bank)

Literature – The Grapes of Wrath by Greg Tang (Fish School, Ant Attack)
- The Action of Subtraction by Brian O. Cleary
- Mission: Addition by Loreen Leedy
- Subtraction Action by Loreen Leedy

Game – I have, Who has? (different version available on-line), counting up and back games

© 2018 E. Mayer & L. Meyer
Mental Addition Bugaloo
by Lisa Meyer

I’m a mathematician and I’m here to say,
I use addition strategies every day.
Sometimes I draw a picture or use blocks instead
But by second grade I want to do them in my head.

Doubles, making ten, counting on too,
Doing the addition bugaloo.

I’m a mathematician and I’m here to say,
  Making ten helps me every day.
  I find the ten and then add the rest,
  My friends think this strategy is the best.

Doubles, making ten, counting on too,
Doing the addition bugaloo.

I’m a mathematician and I’m here to say,
  Counting on helps me every day,
  Start with a number and add some more,
  just count on as you’re walking out the door.

Doubles, making ten, counting on too,
Doing the addition bugaloo.

I’m a mathematician and I’m here to say,
  I use fact families every day.
  Addition can do a quick turn around.
  Now with subtraction, the answer can be found.