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| **Math 4** |
| **Subject: Math****Unit: Adding From Left to Right Strategy** |
| **Learning Target:** Students willpractice building larger numbers by using base ten blocks; adding 3 and 4 digit numbers together using the ‘add from left to right’ strategy. They will work with partners and think out loud as they build numbers concretely, deepening their understanding of regrouping. This will also help students develop their understanding of mental math strategies. This type of learning approach is **PBL** in nature.  |
| **Curriculum Outcomes:** **N3** Students will be expected to demonstrate an understanding of adding numbers with answers to 10 000 ( limited to 3 and 4 digit numerals) by using personal strategies for adding. |
| **Screencast Support:** [S**creencast**](https://www.youtube.com/watch?v=B8Eby6ssz-0) **https://www.youtube.com/watch?v=B8Eby6ssz-0**,Adding from Left to Right. |
| **Resources/AT Tips:** **-Screencast** – Adding from Left to Right-Pearson **interactive** Base Ten Blocks  -iPads Number Basics app HD:Users:lorna:Desktop:Screen Shot 2015-07-03 at 8.55.14 AM.png  Showme App -Base ten blocks and place value chart-Grid paper **or** digital grid paper-Activity Sheet – Use the ‘add left to right strategy’ -Aim for 1000 **game** |
| **Lesson Procedure** | **21st Century Skills** |
| **I do:** **Activate Prior Knowledge*** Discuss the fact that we often add numbers mentally. Reinforce the benefits of using base ten blocks to develop ones understanding of numbers.
* Reinforce the importance of lining up numbers according to appropriate place value. Provide a couple of examples.
* Review regrouping procedures at the Smartboard.
 |  find, validate remember, understand  communicate  |
| **You do:*** Using the **Smartboard and interactive base ten blocks**, review the ‘front end addition’ strategy, starting with 3 digit numbers. Then demonstrate the strategy using two, 4 digit numbers for those who are ready for ‘the next step’. Afterwards, discuss.
* Have students view the screencast, [**Adding from Left to Right**](https://www.youtube.com/watch?v=B8Eby6ssz-0) **https://www.youtube.com/watch?v=B8Eby6ssz-0.** Have a brief discussion.
* Provide students with base ten blocks and place value mats **or** allow them to use the tools on the app, Number Basics.
 |  find, validate remember, understand  collaborate, communicate analyze, synthesize critical thinkingevaluate, leverage create, publish citizenship |
| **We do:** * Encourage partners to demonstrate their understanding of this strategy to each other by building numbers concretely, or by building them digitally, using their iPads. Allow them time to collaborate with partners as well as work independently. Ask partners to choose and build a variety of two, 3 or 4 digit numbers that they both have to build. They are encouraged to ‘talk out loud’ and learn together as they build the numbers using the ‘left to right addition’ strategy as they work.
* Play the **cooperative game**, Aim for 1000.
 |   collaborate, communicate analyze, synthesize critical thinking evaluate, leveragecreate |
| **We share:*** Ask students to share their learning. Using concrete materials or digital tools, they take turns presenting their numbers with different partners. Students can connect and present on the Smartboard also. Teacher rotates, watches, listens and records. Offer assistance to those in need.
 |  communicate analyze, synthesizecritical thinking evaluate, leverage create, publish citizenship |
| **Differentiation** |
| **Adaptations:** * Provide any students who have difficulty with place value concepts or difficulty lining up digits properly, the choice to build concretely, draw and use regular grid paper **or** have them access **digital** grid paper and draw using the tools on the iPads.
* Any student needing additional adaptations or support can work with numbers up to 100, eliminating the hundreds and thousands place value **as needed**.
* Students **can replay** and review the screencast **Left to Right Addition** as often as needed.
 | **Enrichment:** * Students ready for enrichment

can investigate and utilize any of our ‘number sense’ apps, independently or with a partner as they explore larger numbers.* Extend the game, ‘Aim for 1000’ by adding 4 digit numbers as apposed to 3 digit numbers.
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| **Assessment:** * Ask students to show the numbers 637 and 3245 in different ways. They record by drawing on paper **or** using the interactive tools on their iPad devices. They take turns presenting their work with partners, in small groups or as a whole class presentation. Teacher rotates, listens, and records.
* Those ready can complete the attached **addition** **activity sheet**.
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| **Teacher Reflection:** Developing number sense should allow for a PBL approach to learning; we guide students but they should be allowed to explore manipulatives and discuss their learning.Learning addition strategies take time and practice; allow your students the time to build, draw and explain their thinking out loud. Replay the screencast as often as needed.  |

**Use the ‘adding from left to right ‘strategy as you add the following numbers.**

1.

a) 276 + 198 b) 354 + 512 c) 566 + 103

d) 663 + 128 e) 836 + 199 f) 702 + 385

2.

There were 235 people at the school play on Friday night and 327 people

 on Saturday night. How many people were at the school play in total?

Additional Activity 4:
Aim for 1000

**Master 2.10**

Work in a group.
You will need a deck of playing cards with the 10s and face cards removed.

Each ace counts as 1.
The goal is to make two 3-digit numbers whose sum is as close to 1000 as possible.

How to play:

* Shuffle the cards.
* The dealer deals 6 cards to each player.
* Use your cards to make two 3-digit numbers.
* Find the sum of your two numbers.
* Return the cards to the deck, shuffle them, and play again.

After 5 rounds, add your scores.
The player with the lowest total score wins.

**Take It Further:** Play the game again.

This time, use 8 cards.
Make two 4-digit numbers whose difference is as close to 100 as possible.