**Station Ideas**

**Cluster 3: Use Place Value Strategies to**

**Add and Subtract Whole Numbers**

**Computer Stations:**

* Scorpion Game - Students will "eat" bugs needed to build number. <https://www.turtlediary.com/game/identifying-place-value.html>
* Number Detective - Students will build numbers using the hints given. <https://www.turtlediary.com/game/number-detective.html>
* Place Value Hockey - Students practice place value forms with a fun educational game. <http://www.abcya.com/place_value_hockey.htm>
* Subtraction Algorithm Game - <https://www.splashmath.com/subtraction-games-for-4th-graders>
* Addition Algorithm Jeopardy Game - <https://jeopardylabs.com/play/3-digit-addition-review-jeopardy-game>
* Space Number Addition - Adding game to help build a strong foundation in addition. <https://www.turtlediary.com/game/missing-addends.html>

**Sorts:**

* Provide students with a set of word problems. Have them sort the word problems based on the operation they would use to solve the problem. Then have students select a few problems to model and solve.
* Provide students with sets of numbers and have them sort the numbers based on certain rules or attributes. Have students create their own sorting rules.

|  |  |
| --- | --- |
| Possible Numbers | Possible Sorting Rules  |
| 99,999 32,4964,985 8,81883,008 10,000566 9,99818,423 73073,121 6,533846 55,974917 28,855 | * Numbers less than 25,000
* Numbers with a 9 in the hundreds place
* Odd or even numbers
* Numbers greater than 9,999
* Numbers less than 1,000
* Numbers with an 8 in the thousands place
* Numbers with a digit in one place that is ten times greater than the digit to its right
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**Games and Manipulatives:**

* Cup Stacking Place Value Pyramid Game (NBT.2):

<http://www.rundesroom.com/2016/08/5-activities-for-teaching-place-value.html>

Gather styrofoam cups (or any cup with a rim) and write the digits 0-9 on the rim – one number on the rim of each cup. Have students spread the cups out. As quickly as they can, students create a pyramid using random cups from the group. They will then collapse the pyramid so they have a stack of cups with the numbers showing. Students say the newly created number out loud to the group and then write the number in word and expanded forms.

* Rolling the Largest Number:

Provide students with a set of 5 dice/number cubes. One student rolls the dice and creates the largest possible number. (Example: Student rolls 4, 6, 3, 2, 6 and creates the number 66,432.) The second student does the same. Both students compare their numbers to see which number is the largest. They record the comparisons using the symbols <, >, and =. After several rounds, students can take all of the numbers they created and place them in order from greatest to least. Variations: Create the smallest numbers and then compare. Have students subtract to find the difference between the two numbers.

* Base Ten Pieces:

Students model various numbers as well as addition/subtraction word problems using base ten pieces.

* Base Ten Buildings:

Students create buildings out of the base ten blocks. They find the value of the building and record using numerals, number names, and expanded form.

<https://educationcloset.com/2016/09/06/base-ten-buildings-a-steam-activity/>

* Modeling Place Value:

Students read or listen to the book Sir Cumference and All the King’s Tens by Cindy Neuschwander. As they read, have them model the story using base ten blocks. [https://www.youtube.com/watch?v=UmAYYbbeufE&list= PLwkuvgaY\_ NoRjk\_SP0aWsomjjTw1oOvAb&index=4](https://www.youtube.com/watch?v=UmAYYbbeufE&list=%20PLwkuvgaY_%20NoRjk_SP0aWsomjjTw1oOvAb&index=4)

**Vocabulary Station:**

* Brainstorm with the class a list of vocabulary words that relate to this cluster. Have students model each word with a picture/representation, numbers, and/or words. This can be done in math notebooks, on index cards, or posters to use in the classroom. These can be posted on a math wall. Students may want to add to their drawings and representations as the year progresses and their understanding deepens.
* Have students play games with the vocabulary words. Examples: Matching definitions and words, Pictionary, Giving clues to a partner to try to guess the word