Number Sense Trajectory –*Putting It All Together*

Trajectory	**Subitizing** Being able to visually recognize a quantity of 5 or less.	**Comparison** Being able to compare quantities by identifying which has more and which has less.	**Counting** Rote procedure of counting. The meaning attached to counting is developed through one-to-one correspondence.	**One-to-One Correspondence** Students can connect one number with one object and then count them with understanding.	**Cardinality** Tells how many things are in a set. When counting a set of objects, the last word in the counting sequence names the quantity for that set.	**Hierarchical Inclusion** Numbers are nested inside of each other and that the number grows by one each count. 9 is inside 10 or 10 is the same as 9 + 1.	**Number Conservation** The number of objects remains the same when they are rearranged spatially. 5 is 4&1 OR 3&2.

Each concept builds on the previous idea and students should explore and construct concepts in such a sequence

Number Relationships	Spatial Relationship Patterned Set Recognition Students can learn to recognize sets of objects in patterned arrangements and tell how many without counting.	One and Two-More or Less Students need to understand the relationship of number as it relates to +/- one or two. Here students should begin to see that 5 is 1 more than 4 and that it is also 2 less than 7.	Understanding Anchors Students need to see the relationship between numbers and how they relate to 5s and 10s. 3 is 2 away from 5 and 7 away from 10.	Part-Part-Whole Relationship Students begin to conceptualize a number as being made up from two or more parts.

NOTES:

Addition and Subtraction Strategies

One/Two More/Less These facts are a direct application of the One/Two More/ Less than relationships	**Make a Ten** Use a quantity from one addend to give to another to make a ten then add the remainder. 9 + 7 = 10 + 6	**Near Doubles** Using the doubles anchor and combining it with 1 and 2 more/less.
Facts with Zero Need to be introduced so that students don't over generalize that answers to addition are always greater.	**Doubles** Many times students will use doubles as an anchor when adding and subtracting.	