**Strategies by Grade Level**

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| **Grade** | **Addition** | **Subtraction** |
| **K** | Counting All/Counting OnMaking Tens | Counting BackAdding Up |
| **1** | Counting All/Counting OnDoubles/Near DoublesMaking TensLandmark or Friendly NumbersBreaking Up Number into their Place ValueAdding up in Chunks | Adding UpRemoval in Parts |
| **2** |  Counting All/Counting OnDoubles/Near DoublesMaking TensLandmark or Friendly NumbersBreaking Up Number into their Place ValueAdding up in Chunks | Adding UpRemoval in Parts |
| **3** | Breaking Numbers into their Place ValueAdding up in ChunksCompensationAdjusting 1 Number to Create an Easier Problem using a Landmark Number | Adding UpNegative NumbersConstant DifferenceAdjusting 1 NumberOpen Number LinePar-Whole Box Model |
| **Multiplication** |
| Repeated AdditionSkip CountingDoubling and Halving Making an Array as a ModelPartial ProductsUsing Landmark Numbers |

**Students need to understand that:**

* Numbers are composed of smaller numbers
* Numbers can be taken apart and combined with other numbers to make new numbers.
* What we know about one number can help us figure out other numbers.
* What we know about parts of smaller numbers can help us with parts of larger numbers.
* Numbers are organized into groups of tens and ones (and hundreds, tens, and ones, and so forth).
* What we know about numbers to 10 helps us with numbers to 100 and beyond