**Aligned Standards of Learning**

Mathematics Instructional Strategies

# GENERAL MATH STRATEGIES:

* Use adapted writing tools for any paper/pencil work (e.g. pencil grips, pencils on splints, wrist supporters, arm stabilizers)
* Use word walls containing important and current math curricula vocabulary (including picture clues for word meaning)
* Enlarge the text of any written materials or instructions
* Break down all instructions into simple 2-5 word steps
* Model all activities and directions
* Provide prepared sheets for any written assignments (include organized places for responses, visual cues, etc.)
* Provide graphic organizers whenever helpful
* Adjust allotted time for assignments
* Elicit student’s prior knowledge of content
* Provide framed sentences and/or paragraphs for any written responses
* Present any new vocabulary and review any related or needed vocabulary for current assignment
* Use partner pairs and/or think/pair/share groupings to work through assigned activity
* Utilize topics of student interest for any data collection or data organization and representation (e.g., favorite animals, colors, ice cream flavors, music groups, etc.)

# MANIPULATIVES:

(Using manipulatives builds understanding in a concrete way and helps students focus on conceptual understanding and skill blending)

* Base Ten Blocks
* Pattern Blocks
* Tangrams
* Cuisenaire Rods
* Fraction Bars
* Fraction Circles
* Unifex Cubes
* Centimeter Cubes
* Geoboards
* Attribute Pieces
* Patio Tiles

# NO TECH IDEAS:

* Have students verbally or visually explain how to solve a math problem
* Provide students with a strategy to use for solving word problems
* Model strategy used to solve a problem
* Teach and use think-aloud, self-dialogue, non-verbal sequence strategies
* Use enlarged math sheets
* Use Math smart charts (counting, adding, multiplication tables)
* Embed counting and number use into daily routines
* Integrate object/symbol graphs into daily routines
* Integrate time and money and measurement into daily routine
* Use color coding for maintaining columns in math computations
* Use lined paper turned sideways to maintain column for computation

# LOW TECH IDEAS:

* Provide learning aids such as calculators, manipulatives, and models to help students focus on conceptual understanding and skill building
* Demonstrate all concepts with manipulatives
* Use large-size calculators
* Use calculators with print-out
* Use calculators with big number buttons and large keypads
* Use abacus/math line

# MID TECH IDEAS:

* Use software programs with on-screen calculator pads
* Use on-screen/scanning calculator
* Use alternative keyboard programmed for math tasks
* Use software with cueing for math computation
* Use talking watches/clocks/calculators
* Use electronic number processors
* Use money calculator and Coin-u-lator
* Use tactile/voice output measuring devices
* Use voice recognition software for math computatio

# RESOURCES ON THE INTERNET:

[NCTM Illuminations](https://illuminations.nctm.org/) <https://illuminations.nctm.org/>

[Ablenet](https://www.ablenetinc.com/) [http://www.ablenetinc.com](http://www.ablenetinc.com/)

[Widget](https://www.widgit.com/) [http://www.widgit.com](http://www.widgit.com/) (math games for free download)

[Don Johnson: Human Learning Tools](https://learningtools.donjohnston.com/) [https://learningtools.donjohnston.com](https://learningtools.donjohnston.com/%22%20%5Co%20%22Web%20address)