

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
- Unifix 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 computation

RESOURCES ON THE INTERNET:

<http://www.illuminations/nctm.org/index.aspx>

<http://www.ablenetinc.com>

<http://www.widgit.com> (math games for free download)

<http://www.donjohnston.com> (Blocks in motion is a building and creativity program that lets students practice problem-solving and critical thinking skills)