### Specially Designed Instruction (SDI): Mathematics

Specially designed instruction is the instruction provided to a student with a disability who has an IEP to help him/her master IEP goals/objectives and ensure access to and progress in the general curriculum. Specially designed instruction goes beyond differentiated instruction and addresses the unique needs that exist because of a student’s disability. Specially designed instruction should be implemented in addition to, not in place of, differentiated instruction.

<table>
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<tr>
<th>Area of Impact</th>
<th>Specially Designed Instruction (SDI)</th>
<th>Accommodations and/or Modifications</th>
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| Math Calculation and Reasoning | -Multi-sensory teaching strategies, K-symbols using full body movements, and math chants/rhymes  
-Use of manipulatives using the Concrete-Representational- Abstract Framework  
-Modeling with guided checklist and references  
-Direct instruction in computation and reasoning strategies, word problem strategies  
-Direct instruction in functions and use of Abacus  
-Direct instruction in functions and use of accessible graphing calculator software  
-Direct instruction on functions and use of low vision devices (assistive technology for near and distance viewing)  
-Guided practice mnemonic strategies and problem solving strategies  
-Guided practice through chunking, self-questioning, and skills  
-Pre-teaching and Reteaching of key vocabulary and processes (of the initial learning of difficult skills and supervised practice to prevent misconceptions)  
-Guided Practice of subskills explicitly related to the performance of the whole task and what the student has already learned.  
-Additional independent practice until fluent responses are possible  
-Direct instruction of specialized vocabulary and mathematical symbols  
-Modeling of abstract math concepts through Concrete materials and manipulatives or computer-based models  
-Explicit Instruction for use of flowcharts to plan strategies for problem solving | - Mnemonic strategies  
- Cue cards with problem solving strategies, definitions, examples, models, flow chart, process steps  
- Small group instruction  
- Visual, non-verbal, verbal, physical, picture, and written prompts and cues  
- Repetitive practice  
- Advanced organizers  
- Extended time with word problems  
- Graph paper/vertical lined paper  
- Manipulatives/Concrete representations  
- Tactile graphs/graphics  
- Calculator (large display/talking/graphing/audible graphing calculator software)  
- Low vision devices (near and distant)  
- Additional hands-on Resources: Abacus, Magnifier  
- Colored overlay  
- Number line  
- Study guides and reference formulas  
- Peer buddy/peer tutoring  
- Oral presentation of materials/assessments  
- Assistive technology  
- Calculator for computation tasks  
- Talking calculator or on-screen computer calculator  
- Flowcharts to plan strategies for problem solving  
- Additional examples and explanations  
- Use of graph paper or color coding to organize answers to math problems |