

Math Best Practices and Interventions to Meet Student's Learning Needs

Instructional Strategies	Math Interventions
<ol style="list-style-type: none"> 1. Provide immediate feedback about progress (especially via computers). 2. Modeling and guided practice using tightly sequenced forms of explicit instruction 3. Explicit instruction in the use problem representation and problem solving strategies 4. Small group, cooperative learning, and peer tutoring 5. Providing teachers with regular updates on student performance in terms of state standards 6. Teaching prerequisite skills regarding number sense 7. Providing direct instruction in self-monitoring procedures 8. Using graphic organizers 9. Explicit teaching summarizing and writing extended responses 10. Incorporating manipulatives and concrete materials and authentic situations 11. Teaching conceptual knowledge 12. Expand math vocabulary through explicit teaching (e.g., notetaking, memory and retrieval strategies, roots, prefixes, and suffixes in mathematics) 13. Using time math exercises that mirror state and district assessments 14. Assuring equity of curriculum delivery and opportunity to learn math 15. Creating opportunities for interactive classroom discussion regarding inventive and intuitive problem solving 16. Providing opportunities to use calculators <p>Sources: Walberg, (1995) In Cawelti, G. Handbook of Research on Improving Student Achievement. Arlington, VA: Educational Research Service</p> <p>US Department of Education, The Use of Scientifically Based Research in Education, Working Group Conference, (2002)</p>	<ol style="list-style-type: none"> 1. One-on-one tutoring 2. Parent training and involvement 3. After-school program 4. Curriculum alignment 5. Computer-Assisted reading management Program 6. At-home computer use 7. Content area staff development (e.g., assessment design, differentiation, explicit math instruction, vocabulary development, technology integration) 8. Staff development for co-teachers. 9. Coordination of teaching and support for special ed and regular ed 10. Blocking more time for intervention programs 11. Early intervention 12. Appropriate formative and summative assessment of benchmark skills, strategies, and knowledge

Differentiating Instruction in Math	
<ol style="list-style-type: none"> 1. _____ Provide immediate feedback about progress. 2. _____ Model and use guided practice with tightly sequenced forms of explicit instruction. 3. _____ Teach and model the use of problem representation and problem solving. 4. _____ Use small group, cooperative learning. 5. _____ Use peer tutoring. 6. _____ Item analyze student performance to determine specific learning needs.. 7. _____ Teach prerequisite skills prior to the introduction of new operations and concepts. 8. _____ Provide direct instruction in self-monitoring procedures. 9. _____ Use graphic organizers to illustrate processes and concepts. 	<ol style="list-style-type: none"> 10. _____ Explicitly teach summarizing and writing math extended responses. 11. _____ Incorporate manipulatives, concrete materials, and authentic situations. 12. _____ Use short timed math exercises that mirror state and district assessments. 13. _____ Provide opportunities to use calculators. 14. _____ Provide computer-assisted math instruction. 15. _____ Provide correctives and re-takes for grades below C (i.e., acceptable mastery level). 16. _____ Teach notetaking. 17. _____ Teach memory and retrieval strategies 18. _____ Teach math roots, prefixes, and suffixes.