

**RESOURCE MATRIX  
(Exploration Activities)**

Articles, Manuals, and Other Reports	
Citation	Aronin, S., & Israel, M. (Eds.). (2013). Special issue: STEM education. <i>Teaching Exceptional Children</i> , 45, 2-67.
Description	This special issue of <i>Teaching Exceptional Children</i> includes articles on understanding STEM education; supporting students through UDL; promoting literacy-embedded, authentic STEM instruction for students with disabilities; using iPads in inclusive preschool classrooms to introduce STEM concepts; promoting inclusive practices in inquiry-based science classrooms; inclusive STEM education co-teaching in science and mathematics; using the “T” in STEM to improve literacy skills; how to organize a STEM camp; and adapting mathematics core curricula to meet the needs of students with disabilities.
Application	Information from this special issue supports course content on including young children with special needs during science and math instruction.
Outcome	Information in this special issue will help students participate in the selection and use of appropriate instructional materials, equipment, supplies, and other resources needed to effectively teach children with exceptional needs. [3.2]
Additional Information	AccessSTEM, The National Science Foundation, & University of Washington’s DO-IT Center (Disabilities, Opportunities, Internetworking, and Technology). (Producers). (1998). <i>Working together: Science teachers and students with disabilities</i> [Video]. Available from <a href="http://www.washington.edu/doi/Video/index.php?vid=34">http://www.washington.edu/doi/Video/index.php?vid=34</a> Basham, J. D., & Marino, M. T. (2010). Introduction to the topical issue: Shaping STEM education for all students. <i>Journal of Special Education Technology</i> , 25, 1-2.
CEC Paraeducator Standards/NAEYC Core Standards	Instructional strategies/Using content knowledge to build a meaningful curriculum

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Articles, Manuals, and Other Reports	
Citation	Bouck, E. C., & Meyer, N. K. (2012). eText, mathematics, and students with visual impairments: What teachers need to know. <i>Teaching Exceptional Children, 45</i> , 42-49.
Description	Etext is mathematics content converted into electronic form. Research is ongoing to determine how the increased capabilities in the form, function, and content enabled by this conversion might increase access to mathematics and improve student learning and achievement especially for students with visual disabilities. This article provides information about eText for mathematics and considerations for implementation. It provides a chart of mathematics etext products with the description and price of each product and a similar chart of mathematics technology.
Application	Information from this article supports course content on including children with visual impairments during math instruction.
Outcome	Information in this article will help students participate in the selection and use of appropriate instructional materials, equipment, supplies, and other resources needed to effectively teach children with exceptional needs. [3.2]
Additional Information	Bouck, E. C., Flanagan, S., Joshi, G. S., Sheikh, W., & Schleppebach, D. (2011). Speaking math-A voice input, speech output calculator for students with visual impairments. <i>Journal of Special Education Technology, 26</i> , 1-14.  Carl and Ruth Shapiro Family, Grousbeck Foundation, National Center for Accessible Media, Perkins School for the Blind, & WGBH National Center for Accessible Media (NCAM). (Producers). (2009). <i>Resources for teaching and adapting science lessons for students with visual impairments</i> [Recommendations]. Available from <a href="http://ncam.wgbh.org/experience_learn/educational_media/accessible-online-learning-tea/resources-for-teaching-and-ada">http://ncam.wgbh.org/experience_learn/educational_media/accessible-online-learning-tea/resources-for-teaching-and-ada</a>
CEC Paraeducator Standards/NAEYC Core Standards	Individual learning differences/Knowing and understanding effective strategies and tools for early education

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Articles, Manuals, and Other Reports	
Citation	Fraser, D. W. (2013). 5 tips for creating independent activities aligned with the common core state standards. <i>Teaching Exceptional Children, 45</i> , 6-15.
Description	This article details independent work tasks that use readily available items (such as mathematic manipulatives) from schools, grocery stores, and craft stores. Tasks range in difficulty to meet the needs of a variety of students and corresponding common core state standards are provided.
Application	Information from this article will be infused into course content on mathematics.
Outcome	This article will help students Increase the participation and engagement of all (with and without disabilities) children in the classroom (e.g., use knowledge of individual children’s strengths, interests, and learning styles to encourage engagement in varied activities).[4.2].
Additional Information	Boggan, M., Harper, S., & Whitmire, A. (2010). Using manipulatives to teach elementary mathematics. <i>Journal of Instructional Pedagogies, 3</i> , 1-6. National Governor’s Association & Council of Chief State School Officers. (Producers). (2013). <i>Common Core State Standards (CCSS) Initiative</i> [Home Page]. Available from <a href="http://www.corestandards.org/">http://www.corestandards.org/</a> Click on the map of the United States and you will see if your state has adopted Common Core State Standards. Standards for Mathematical Practice are available from <a href="http://www.corestandards.org/Math/Practice">http://www.corestandards.org/Math/Practice</a>
CEC Paraeducator Standards/ NAEYC Core Standards	Individual learning differences/Knowing and understanding effective strategies and tools for early education

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Articles, Manuals, and Other Reports	
Citation	Gersten, R. et al., (2012). Universal screening in mathematics for the primary grades: Beginnings of a research base. <i>Exceptional Children</i> , 78, 423-445.
Description	In this article, the authors describe key findings from contemporary research on screening for early primary grade students in the area of mathematics.
Application	Instructors will use this resource to learn more age appropriate strategies regarding math instruction for all children.
Outcome	This article will help students Use data to develop and implement activities and lessons. [4.1]
Additional Information	<p>Baker, S. Gersten, R., Flojo, K., Katz, R., Chard, D., &amp; Clarke, B. (2002). <i>Preventing mathematical difficulties in young children: Focus on effective screening of early number sense delays</i>. Eugene, OR: Pacific Institutes for Research.</p> <p>National Research Council. (2009). <i>Mathematics learning in early childhood: Paths towards excellence and equity</i>. Committee on Early Childhood Mathematics, C. T. Cross, T.A. Woods, &amp; H. Schweingruber (Eds.), Center for Education, Division of Behavioral and Social Sciences and Education. Washington, DC: The National Academies Press.</p> <p>Seethaler, P. M., &amp; Fuchs, L. S. (2010). The predictive utility of kindergarten screening for math difficulty. <i>Exceptional Children</i>, 77(1), 37-60.</p>
CEC Paraeducator Standards/ NAEYC Core Standards	Instructional strategies/Knowing and understanding effective strategies and tools for early education

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Articles, Manuals, and Other Reports	
Citation	Miller, B. (2012). Ensuring meaningful access to the science curriculum for students with significant cognitive disabilities. <i>Teaching Exceptional Children, 44</i> , 16-25.
Description	This article provides examples of standards-based instruction using an inquiry approach.
Application	Instructors will use this resource to learn more age appropriate strategies regarding science instruction for all children.
Outcome	Information on this article will help students participate in the selection and use of appropriate instructional materials, equipment, supplies, and other resources needed to effectively teach children with exceptional needs. [3.2]
Additional Information	<p>Jimenez, B. A., Browder, D. M., &amp; Courtade, G. (2010). An exploratory study of self-directed science concepts learning by students with moderate intellectual disabilities. <i>Research &amp; Practice for Persons with Severe Disabilities, 34</i>, 33-46.</p> <p>National Research Council. (2012). <i>A framework for K-12 science education: Practices, crosscutting concepts, and core ideas</i>. Washington, DC: National Academies Press.</p> <p>Spooner, F., Knight, V., Browder, D., Jimenez, B., DiBiase, W. (2011). Evaluating evidence-based practice in teaching science content to students with severe disabilities. <i>Research &amp; Practice for Persons with Severe Disabilities, 36</i>, 62-75.</p>
CEC Paraeducator Standards/NAEYC Core Standards	Instructional Strategies/Using content knowledge to build a meaningful curriculum

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Articles, Manuals, and Other Reports	
Citation	Moomaw, S., & Davis, J. A. (2010). STEM comes to preschool. <i>Young Children</i> , 65, 12-18.
Description	The article discusses the introduction of science, technology, engineering and math (STEM) subjects in preschool education. The authors point out that these subjects can be consolidated into an integrated curriculum. They explain that devising appropriate STEM activities can help children to explore materials with the use of their senses. They also describe several activities developed to improve STEM learning in urban preschools. They conclude that STEM activities have attracted the attention of preschool children.
Application	Instructors will use this resource to learn more age appropriate strategies regarding math and science instruction for all children.
Outcome	This article will help students Increase the participation and engagement of all (with and without disabilities) children in the classroom (e.g., use knowledge of individual children’s strengths, interests, and learning styles to encourage engagement in varied activities). [4.2]
Additional Information	Moowmaw, S. (2013). <i>Teaching STEM in the Early Years: Activities for Integrating Science, Technology, Engineering and Mathematics</i> . St. Paul, MN : Redleaf Press. Wehrell-Grabowski, D. (Producer). (2013). <i>Exploring STEM concepts and practices in the early childhood classroom</i> [Video]. Available from <a href="http://www.youtube.com/watch?v=HglYz0h2n2E">http://www.youtube.com/watch?v=HglYz0h2n2E</a> Wehrell-Grabowski, D. (Producer). (2011). <i>STEM explorations in the early childhood classroom</i> [Video]. Available from <a href="http://www.youtube.com/watch?v=p-B3GjmAbyY">http://www.youtube.com/watch?v=p-B3GjmAbyY</a>
CEC Paraeducator Standards/ NAEYC Core Standards	Instructional strategies/Knowing and understanding effective strategies and tools for early education

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Articles, Manuals, and Other Reports	
Citation	National Mathematics Advisory Panel. (2008). <i>Foundations for success: The final report of the national mathematics advisory panel</i> . Washington, DC: U.S. Department of Education U.S. Department of Education Contract No.ED04CO0082/0001.Retrieved from <a href="http://www2.ed.gov/about/bdscomm/list/mathpanel/report/final-report.pdf">http://www2.ed.gov/about/bdscomm/list/mathpanel/report/final-report.pdf</a> .
Description	This report contains 45 findings and recommendations on numerous topics, including curricular content, learning processes, instructional practices and materials, teachers, assessments, and future research priorities.
Application	Information from this article will be infused into course content on mathematics.
Outcome	This article will help students promote child development and learning through varied delivery of instruction (e.g., teach individual students or small groups of students to reinforce learning and skills introduced by the teacher.) [4.3]
Additional Information	EdWorkforce. (Producer). (2008). <i>McKeon: National Mathematics Advisory Report</i> [Video]. Available from <a href="http://www.youtube.com/watch?v=nX-TFLrSDUA">http://www.youtube.com/watch?v=nX-TFLrSDUA</a> EETCC Conference. (Producer). (2012). <i>Dr. Doug Clements speaks at EETC 2012</i> [Video]. Available from <a href="http://www.youtube.com/watch?v=hWm5VAFzril">http://www.youtube.com/watch?v=hWm5VAFzril</a>
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Articles, Manuals, and Other Reports	
Citation	Notari-Syverson, A., & Sadler, F. H. (2008). Math is for everyone: Strategies for supporting early mathematical competencies in young children. <i>Young Exceptional Children, 11</i> , 2-16.
Description	In this article, the authors describe current information on the development of early mathematical knowledge and offer suggestions for how EC/ECSE teachers can support mathematical learning in preschool children.
Application	Instructors will use this resource to learn more age appropriate strategies regarding math instruction for all children.
Outcome	This article will help students embed learning opportunities in everyday routines, relationships, activities, and places. [3.3]
Additional Information	DavidsonFilms1955. (Producer). (2012). <i>Building mathematical competencies in early childhood</i> [Video]. Available from <a href="http://www.youtube.com/watch?v=BMoF-hiH3J8">http://www.youtube.com/watch?v=BMoF-hiH3J8</a> National Council of Teachers of Mathematics. (Producer). (2013). <i>NAEYC position statement on mathematics</i> [Position Statement]. Available from <a href="http://www.naeyc.org/files/naeyc/file/positions/Mathematics_Exec.pdf">http://www.naeyc.org/files/naeyc/file/positions/Mathematics_Exec.pdf</a> Starkey, P., Klein, A., & Wakeley, A. (2004). Enhancing young children’s mathematical knowledge through a pre-kindergartens mathematics intervention, <i>Early Childhood Research Quarterly, 19</i> , 82-98. Wolfgang, C. H., Stannard, L. L., & Jones, I. (2001). Block play performance among preschoolers as a predictor of later school achievement in mathematics, <i>Journal of Research in Childhood Education, 15</i> , 173-180.
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Articles, Manuals, and Other Reports	
Citation	Peterson, P., Johnson, G., & Showalter, S. (2012). Math and science strategies for English learners with learning disabilities <i>Learning Disabilities: A Multidisciplinary Journal</i> , 18, 103-110.
Description	Students with learning disabilities have significantly lower achievement in math and science than students from the general population. If students with learning disabilities also are English Learners, the challenges for success in math and science are even more difficult. Teachers need to infuse best practices into their classrooms to support the learning of all students. The authors state that strategies and methods presented in this article are a beginning point for teachers and represent good teaching practices for all students.
Application	Instructors will use this resource to learn more age appropriate strategies regarding math and science instruction for English language Learners with learning disabilities.
Outcome	This article will help students Increase the participation and engagement of all (with and without disabilities) children in the classroom (e.g., use knowledge of individual children’s strengths, interests, and learning styles to encourage engagement in varied activities). [4.2]
Additional Information	<p>Carr, J. (2012, October 25). Strategies for Teaching English Learners and Students with Learning Disabilities. <i>ASCD Express</i>. Retrieved from <a href="http://www.ascd.org/ascd-express/vol8/802-carr.aspx">http://www.ascd.org/ascd-express/vol8/802-carr.aspx</a></p> <p>Jarrett, D., Mathematics and Science Education Center, Northwest Regional Educational Laboratory, &amp; U.S. Department of Education (1999). <i>The inclusive classroom teaching mathematics and science to English-Language Learners: It’s just good teaching</i> (DOE Contract Number RJ96006501). Retrieved from <a href="http://educationnorthwest.org/webfm_send/754">http://educationnorthwest.org/webfm_send/754</a></p> <p>Manura, D. &amp; Math2.org. (Producers). (1997). <i>Math tables: English to Spanish Dictionary</i> [Resource Tool]. Available from <a href="http://math2.org/math/spanish/eng-spa.htm">http://math2.org/math/spanish/eng-spa.htm</a></p> <p>Purplemath. (Producer). (2013). <i>Translating word problems: Keywords</i> [Resource Tool]. Available from <a href="http://www.purplemath.com/modules/translat.htm">http://www.purplemath.com/modules/translat.htm</a></p>
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Articles, Manuals, and Other Reports	
Citation	Rye, J. A. et al. (2012). Elementary school garden programs enhance science education for all learners. <i>Teaching Exceptional Children</i> , 44, 58-65.
Description	This article describes a national movement to establish elementary school gardens that serve academic, social, environmental needs of all students and positively impact students' science achievement. The possibilities of gardening in inclusive settings are explored as well as benefits such as fostering inquiry and developing motor skills.
Application	Instructors will use this resource to learn more age appropriate strategies regarding science instruction for all children.
Outcome	Information from this article will help students participate in the selection and use of appropriate instructional materials, equipment, supplies, and other resources needed to effectively teach children with exceptional needs. [3.2]
Additional Information	<p>Blair, D. (2009). The child in the garden: An evaluative review of the benefits of school gardening. <i>The Journal of Environmental Education</i>, 40, 15-38.</p> <p>Burgstahler, S. (Ed.). (2006). <i>Making math, science, and technology instruction accessible to students with disabilities. A resource for teachers and teacher educators</i>. Seattle, WA: University of Washington. Retrieved from <a href="http://www.washington.edu/doi/MathSci/">http://www.washington.edu/doi/MathSci/</a></p> <p>City Farmer TV. (Producer). (2007). <i>Preschool food garden</i> [Video]. Available from <a href="http://www.youtube.com/watch?v=3oXpzig7tZ-E">http://www.youtube.com/watch?v=3oXpzig7tZ-E</a></p> <p>National Gardening Association (1999). Gardening with children with special needs. <i>KidsGardening</i>. Retrieved from <a href="http://www.kidsgardening.org/article/gardening-children-special-needs">http://www.kidsgardening.org/article/gardening-children-special-needs</a></p> <p>Western Growers Foundation. (Producer) (2012). <i>7 tips for Head Start and pre-school edible gardens</i> [Video]. Available from <a href="http://www.youtube.com/watch?v=YwbwdGaTEgU">http://www.youtube.com/watch?v=YwbwdGaTEgU</a></p>
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Articles, Manuals, and Other Reports	
Citation	Shillady, A. (Ed.). (2012). <i>Spotlight on young children: Exploring math</i> . Washington, DC: National Association for the Education of Young Children.
Description	In this collection of articles from NAEYC's journal <i>Young Children</i> , teachers of children from infancy through age 8 will learn how to help children develop, construct, use, and reflect on their mathematical understandings. The articles focus on the key math concept areas number and operations, geometry and measurement, and data analysis.
Application	Information from this special issue supports course content on including young children with special needs during math instruction.
Outcome	Information in this special issue will help students participate in the selection and use of appropriate instructional materials, equipment, supplies, and other resources needed to effectively teach children with exceptional needs. [3.2]
Additional Information	National Library of Virtual Manipulatives (NLVM), & National Science Foundation. (1999-2010). <i>National Library of Virtual Manipulatives</i> . Retrieved from <a href="http://www.nlvm.edu">http://www.nlvm.edu</a> This Utah State University project is building Java-based mathematical tools that allow educators to create approaches to interactive math instruction. The NLVM is actively being extended and refined through projects including the eNLVM, a project to develop interactive online learning units for mathematics. Learning First Alliance, National Council of Teachers of Mathematics, National Action Council for Minorities in Engineering, National Science Foundation, U.S. Department of Education, & Widmeyer Communications (1999-2004). <i>Figure This!</i> Retrieved from <a href="http://www.figurethis.org">www.figurethis.org</a>
CEC Paraeducator Standards/NAEYC Core Standards	Instructional Strategies/Using content knowledge to build a meaningful curriculum

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Articles, Manuals, and Other Reports	
Citation	Spalding, L. S., & Flannagan, J. S. (2012). DIS <sub>2</sub> ECT: A framework for effective inclusive science instruction. <i>Teaching Exceptional Children, 44</i> , 6-14.
Description	This article provides special education and general education teachers with a framework (DIS <sub>2</sub> ECT) for teaching science in inclusive settings. DIS <sub>2</sub> ECT stands for Design (Backwards); Individualization; Scaffolding and Strategies; Experiential Learning; Cooperative Learning; and Teamwork. This framework was developed from a synthesis of evidence-based best practices in special education and science.
Application	Instructors will use this resource to learn more age appropriate strategies regarding inclusive science instruction for all children.
Outcome	This article will help students participate in the selection and use of appropriate instructional materials, equipment, supplies, and other resources needed to effectively teach children with exceptional needs. [3.2]
Additional Information	<p>Dexter, D. D., Park, Y.J., &amp; Hughes, C. A. (2011). A meta-analytic review of graphic organizers and science instruction for adolescents with learning disabilities: Implications for the intermediate and secondary science classroom. <i>Learning Disabilities, Research &amp; Practice, 26</i>, 201-213.</p> <p>Henderson School. (Producer). (2013). <i>Dr. William H. Henderson Inclusion Elementary School</i> [Video]. Available from <a href="http://www.youtube.com/watch?v=lsU3NgvNi8M">http://www.youtube.com/watch?v=lsU3NgvNi8M</a></p> <p>Scruggs, T. E., &amp; Mastropieri, M. A. (2004). Science and schooling for learning disabilities. <i>Journal of Learning Disabilities, 37</i>, 270-276.</p> <p>Scruggs, T. E., Mastropieri, M. A., &amp; Okolo, C. M. (2008). Science and social studies for students with disabilities. <i>Focus on Exceptional Children, 41</i>, 1-23.</p>
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Field Trips, Service Sites, and Other Instructional Activities	
Citation	Madison Metropolitan School District. (2011). <i>Math at Play</i> . Retrieved from <a href="http://www.mathatplay.org/">http://www.mathatplay.org/</a>
Description	<i>Math at Play</i> is a multimedia resource for people who work with children from birth to age five. Featured resources include links to parent activities that enrich children’s learning of math concepts, additional parent math activities organized by children’s ages, an extensive collection of videos of life in preschool classrooms where activities include those in which students are learning math concepts during sandbox play and dramatic play, embedded activities to teach math skills and problem solving, and a chart developed by Professor Douglas Clements outlining what math concepts children are typically capable of understanding at 3, 4, and 5 years of age.
Application	Use of this website will help students use evidence-based practices to teach math concepts and skills to all children birth to five.
Outcome	Information from this website will help students embed learning opportunities in everyday routines, relationships, activities, and places. [3.3]
Additional Information	Ballweg, J. (2012). Picture books that nurture mathematical thinking (Ages 0-3). <i>Math at Play</i> . Retrieved from <a href="http://www.mathatplay.org/resources/slideshow_docs/Picture_Books_Math_Concepts_0-3.pdf">http://www.mathatplay.org/resources/slideshow_docs/Picture_Books_Math_Concepts_0-3.pdf</a> Madison Metropolitan School District & Math at Play. (Producers). (2011). <i>Block structures</i> [Video]. Available from <a href="http://www.mathatplay.org/popup/block_structures.html">http://www.mathatplay.org/popup/block_structures.html</a> Madison Metropolitan School District & Math at Play. (Producers). (2011). <i>Video library</i> [Resource List]. Available from <a href="http://www.mathatplay.org/resources_v.html">http://www.mathatplay.org/resources_v.html</a> Madison Metropolitan School District & Math at Play. (Producers). (2011). <i>Websites</i> [Resource List]. Available from <a href="http://www.mathatplay.org/resources_webl.html">http://www.mathatplay.org/resources_webl.html</a> TEAMMathAssessment. (Producer). (2010). <i>Early mathematics</i> [Video]. Available from <a href="http://www.youtube.com/watch?v=EYaLrPNtD8I">http://www.youtube.com/watch?v=EYaLrPNtD8I</a>
CEC Paraeducator Standards/NAEYC Core Standards	Individual learning differences/Knowing and understanding effective strategies and tools for early education

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Field Trips, Service Sites, and Other Instructional Activities	
Citation	Reading Rockets & American Federation of Teachers. (2011). <i>Colorín Colorado</i> . Retrieved from <a href="http://www.colorincolorado.org/">http://www.colorincolorado.org/</a>
Description	Colorín Colorado is a free web-based, bilingual service that provides information, activities, and advice for educators and Spanish-speaking families of English language learners (ELLs, also known as students of English as a second language). At his site, you will find the <i>Common Core and ELLS Resource Section and Blog</i> including Common Core updates related to language proficiency standards, assessments, and professional development. Also found here is <i>Serving English Language Learners: Laws, Policies, and Regulations</i> , a guide written for <i>Colorín Colorado</i> by Dr. Debbie Zacarian, describing how federal ELL policies are implemented in our schools.
Application	Information from this website supports course content on teaching content area subjects to children learning English as a second language.
Outcome	Information from this website will help students participate in the selection and use of appropriate instructional materials, equipment, supplies, and other resources needed to effectively teach children with exceptional needs. [3.2]
Additional Information	Discovery Education. (2013). <i>Math for everyone</i> . Retrieved from <a href="http://www.webmath.com/index1.html?campaign=flyout_students_webmath">http://www.webmath.com/index1.html?campaign=flyout_students_webmath</a> Discovery Education. (2013). <i>Puzzlemaker</i> . Retrieved from <a href="http://www.discoveryeducation.com/free-puzzlemaker/index.cfm?campaign=footer_teacher_puzzle">http://www.discoveryeducation.com/free-puzzlemaker/index.cfm?campaign=footer_teacher_puzzle</a> Robertson, K. (2009). Math Instruction for English Language Learners. <i>Colorín Colorado</i> . Retrieved from <a href="http://www.colorincolorado.org/article/30570/">http://www.colorincolorado.org/article/30570/</a> Torres-Velaquez, & Rodriguez, D. (2005). Improving mathematics problem solving skills for English language learners with learning disabilities. <i>Colorín Colorado</i> . Retrieved from <a href="http://www.colorincolorado.org/article/12907/">http://www.colorincolorado.org/article/12907/</a>
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Textbooks, Workbooks, and Other Instructional Materials	
Citation	National Council of Teachers of Mathematics (NCTM). (2000-2013). <i>Illuminations: Resources for Teaching Math</i> . Retrieved from <a href="http://illuminations.nctm.org/">http://illuminations.nctm.org/</a>
Description	The National Council of Teachers of Mathematics (NCTM) is a public voice of mathematics education, providing vision, leadership, and professional development to support teachers in ensuring mathematics learning of the highest quality for all students. With 100,000 members and 250 affiliates, NCTM is the world's largest organization dedicated to improving math education in preK-12. <i>Illuminations</i> is designed to provide materials that illuminate the vision for school mathematics set forth in <i>Principles and Standards for School Mathematics</i> , <i>Curriculum Focal Points for Prekindergarten through Grade 8 Mathematics</i> , and <i>Focus in High School Mathematics: Reasoning and Sense Making</i> .
Application	This website offers instructional materials that support course content on mathematics instruction in inclusive classrooms.
Outcome	Information from this website will help students participate in the selection and use of appropriate instructional materials, equipment, supplies, and other resources needed to effectively teach children with exceptional needs. [3.2]
Additional Information	Education.com (2006-2013). <i>Free Worksheets and Printables for Kids</i> . Retrieved from <a href="http://www.education.com/worksheets/math/#grade:preschool topic:math">http://www.education.com/worksheets/math/#grade:preschool topic:math</a> Houghton Mifflin. (2000-2001). <i>Houghton Mifflin Mathematics</i> . Retrieved from <a href="http://www.eduplace.com/kids/mhm/">http://www.eduplace.com/kids/mhm/</a> Kawas, T. (2013). <i>Mathwire.com: Standards-Based Math Activities</i> . Retrieved from <a href="http://www.mathwire.com/">http://www.mathwire.com/</a>
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Textbooks, Workbooks, and Other Instructional Materials	
Citation	New York State Education Department. (2013). <i>EngageNY</i> . Retrieved from <a href="http://www.engageny.org/">http://www.engageny.org/</a>
Description	The EngageNY website provides materials focused on curricular examples, standards for mathematical practice, and other materials for professional development. Click on the <a href="#">Video Library</a> , then <a href="#">Math</a> on the menu at the left for videos on effective evidence-based math practices and standards addressed in the video math lesson.
Application	Information from this website supports course content on instructional materials used to teach academic subjects to all children.
Outcome	Information from this website will help students participate in the selection and use of appropriate instructional materials, equipment, supplies, and other resources needed to effectively teach children with exceptional needs. [3.2]
Additional Information	<p>New York State Education Department. (Producer). (2013). <i>Common Core Video Series: Grade K Module 5 Mathematics-application example</i> [Video]. Available from <a href="http://www.engageny.org/resource/common-core-video-series-grade-k-module-5-mathematics-application-example">http://www.engageny.org/resource/common-core-video-series-grade-k-module-5-mathematics-application-example</a></p> <p>New York State Education Department. (Producer). (2013). <i>Common Core Video Series: Kindergarten Mathematics-counting sticks</i> [Video]. Available from <a href="http://www.engageny.org/resource/common-core-video-series-kindergarten-mathematics-counting-sticks">http://www.engageny.org/resource/common-core-video-series-kindergarten-mathematics-counting-sticks</a></p> <p>New York State Education Department. (Producer). (2013). <i>Common Core Video Series: Kindergarten Mathematics-double 10 frames</i> [Video]. Available from <a href="http://www.engageny.org/resource/common-core-video-series-kindergarten-mathematics-double-10-frames">http://www.engageny.org/resource/common-core-video-series-kindergarten-mathematics-double-10-frames</a></p> <p>New York State Education Department. (Producer). (2013). <i>Common Core Video Series: Kindergarten Mathematics-example of instruction</i> [Video]. Available from <a href="http://www.engageny.org/resource/common-core-video-series-grade-k-module-5-mathematics-example-of-instruction">http://www.engageny.org/resource/common-core-video-series-grade-k-module-5-mathematics-example-of-instruction</a></p> <p>New York State Education Department. (Producer). (2013). <i>Educational activities for parents and students</i> [Resource List]. Available from <a href="http://www.engageny.org/educational-activities-for-parents-and-students">http://www.engageny.org/educational-activities-for-parents-and-students</a></p>
CEC Paraeducator Standards/NAEYC Core Standards	Individual learning differences/Knowing and understanding effective strategies and tools for early education



**RESOURCE MATRIX**  
**(Exploration Activities)**

Websites and Other Electronic Media	
Citation	AccessSTEM, The National Science Foundation , & University of Washington’s DO-IT Center (Disabilities, Opportunities, Internetworking, and Technology) <i>AccessSTEM</i> . (Producers). (2009). <i>Equal Access: Science and students with sensory impairments</i> [Video]. Available from <a href="http://www.youtube.com/watch?v=3-PolJ6VjWA&amp;feature=youtu.be">http://www.youtube.com/watch?v=3-PolJ6VjWA&amp;feature=youtu.be</a>
Description	Students share the adaptations and accommodations that have led to their successful engagement in science activities and their achievement in this field.
Application	Information from this video supports course content on promoting the engagement and achievement of students in the field of science.
Outcome	Information on this video will help students participate in the selection and use of appropriate instructional materials, equipment, supplies, and other resources needed to effectively teach children with exceptional needs. [3.2]
Additional Information	<p>AccessSTEM, The National Science Foundation, &amp; University of Washington’s DO-IT Center (Disabilities, Opportunities, Internetworking, and Technology). (Producers). (2011). <i>STEM and people with disabilities</i> [Video]. Available from <a href="http://www.youtube.com/watch?v=RynXLeOe-7l&amp;feature=youtu.be">http://www.youtube.com/watch?v=RynXLeOe-7l&amp;feature=youtu.be</a></p> <p>AccessSTEM, Burgstahler, S, The National Science Foundation, &amp; University of Washington’s DO-IT Center (Disabilities, Opportunities, Internetworking, and Technology). (2009). (Producers). <i>Equal access: Science and students with sensory impairments</i> [Video]. Available from <a href="http://www.youtube.com/watch?v=3-PolJ6VjWA">http://www.youtube.com/watch?v=3-PolJ6VjWA</a></p> <p>AccessSTEM, Burgstahler, S, The National Science Foundation, &amp; University of Washington’s DO-IT Center (Disabilities, Opportunities, Internetworking, and Technology). (2009). (Producers). <i>Making math, science, and technology instruction accessible to students with disabilities</i> [Information Brief]. Available from <a href="http://www.washington.edu/doi/MathSci/">http://www.washington.edu/doi/MathSci/</a></p>
CEC Paraeducator Standards/NAEYC Core Standards	Individual learning differences/Knowing and understanding effective strategies and tools for early education

**RESOURCE MATRIX**  
**(Exploration Activities)**

Websites and Other Electronic Media	
Citation	Center for Applied Special Technology. (1984). <i>CAST: Universal Design for Learning</i> . Retrieved from <a href="http://www.cast.org/">http://www.cast.org/</a>
Description	This website defines Universal Design for Learning (UDL) and provides guidelines for presenting information and content in different ways (multiple means of representation), differentiating the ways that students can express what they know (multiple means of action and expression), and stimulating interest and motivation in learning (multiple means of engagement).
Application	Information from this website supports course content on teaching mathematics in an inclusive setting.
Outcome	Information from this website will help students participate in the selection and use of appropriate instructional materials, equipment, supplies, and other resources needed to effectively teach children with exceptional needs. [3.2]
Additional Information	Center for Applied Special Technology. (Producer). (2013). <i>UDL guidelines in practice: Grade 1 mathematics</i> . [Video]. Available from <a href="http://www.cast.org/library/video/gr1_math/">http://www.cast.org/library/video/gr1_math/</a> National Science Foundation, PBS, & WGBH Educational Foundation. (2002-2013). <i>Teachers' Domain: Digital Media for the Classroom and Professional Development</i> . Retrieved from <a href="http://www.teachersdomain.org/">http://www.teachersdomain.org/</a> <i>Teachers' Domain</i> is a free digital media service for educational use from public broadcasting and its partners. You'll find thousands of media resources, support materials, and tools for classroom lessons, individualized learning programs, and teacher professional learning communities. Major funding is provided by the National Science Foundation.
CEC Paraeducator Standards/NAEYC Core Standards	Individual learning differences/Knowing and understanding effective strategies and tools for early education

**RESOURCE MATRIX  
(Exploration Activities)**

Websites and Other Electronic Media	
Citation	Education Northwest. (Producer). (2013). <i>Mathematics interventions: What strategies work for struggling learners or students with learning disabilities [Resource List]</i> . Available from <a href="http://educationnorthwest.org/resource/1679">http://educationnorthwest.org/resource/1679</a>
Description	These resources have the following strategies in common: providing systematic and explicit instruction; teaching visual representation of functions and relationships, such as manipulatives, pictures, and graphs; providing peer-assisted instruction; and using ongoing, formative assessment.
Application	Information from this website supports course content on including young children with special needs.
Outcome	As a result of exploring this website, students will learn skills to promote child development and learning through varied delivery of instruction (i.e., teach individual students or small groups of students to reinforce learning and skills introduced by the teacher). [4.2]
Additional Information	<p>Kroesbergen, E.H., &amp; Van Luit, J.E.H. (2003). Mathematics interventions for students with special needs. <i>Remedial and Special Education, 24</i>, 97-114. Abstract may be retrieved from <a href="http://nichcy.org/research/summaries/abstract25">http://nichcy.org/research/summaries/abstract25</a></p> <p>Wilson, P. (2013). Teaching Math Skills to children with special needs. <i>Bella Online: The Voice of Women</i>. Retrieved from <a href="http://www.bellaonline.com/articles/art38411.asp">http://www.bellaonline.com/articles/art38411.asp</a></p> <p>Cawley, J. F., &amp; Foley, T.E. (2002). Connecting math and science for all students. <i>Teaching Exceptional Children, 34</i>, 14-19.</p>
CEC Paraeducator Standards/NAEYC Core Standards	Instructional Strategies/Using content knowledge to build a meaningful curriculum

**RESOURCE MATRIX  
(Exploration Activities)**

Websites and Other Electronic Media	
Citation	The IRIS Center, & The U.S. Department of Education, Office of Special Education Programs (OSEP). (Producers). (2001). <i>High-Quality Mathematics Instruction: What Teachers Should Know</i> [Module]. Available from <a href="http://iris.peabody.vanderbilt.edu/math/chalcycle.htm">http://iris.peabody.vanderbilt.edu/math/chalcycle.htm</a>
Description	This module describes the components of high-quality mathematics instruction: a standards-based curriculum and evidence-based strategies. It also highlights several effective practices teachers can use to teach mathematics.
Application	Information from this website supports course content on math activities.
Outcome	Information on this website will help students participate in the selection and use of appropriate instructional materials, equipment, supplies, and other resources needed to effectively teach children with exceptional needs. [3.2]
Additional Information	<p>Murray B., Silver-Pacuilla, H., &amp; Innes Helsel, F. (2007). Improving basic mathematics instruction: Promising technology resources for students with special needs. <i>Technology in Action</i>, 2(5), 1-8. Retrieved from <a href="http://iris.peabody.vanderbilt.edu/resource_infoBrief/info_brief_files/cited_org_library_site_039_tam_tia_feb_07_21_pdf.html">http://iris.peabody.vanderbilt.edu/resource_infoBrief/info_brief_files/cited_org_library_site_039_tam_tia_feb_07_21_pdf.html</a></p> <p>The IRIS Center, &amp; The U.S. Department of Education, Office of Special Education Programs (OSEP). (Producers). (2001). <i>Diane Torres-Velásquez: Diverse learners</i> [Audio Podcast]. Available from <a href="http://iris.peabody.vanderbilt.edu/math/chalcycle.htm">http://iris.peabody.vanderbilt.edu/math/chalcycle.htm</a></p>
CEC Paraeducator Standards/NAEY C Core Standards	Instructional Strategies/Using content knowledge to build a meaningful curriculum

**RESOURCE MATRIX  
(Exploration Activities)**

Websites and Other Electronic Media	
Citation	The IRIS Center, & The U.S. Department of Education, Office of Special Education Programs (OSEP). (Producers). (2001). <i>RTI: Mathematics</i> . [Module]. Available from <a href="http://iris.peabody.vanderbilt.edu/rti_math/chalcycle.htm">http://iris.peabody.vanderbilt.edu/rti_math/chalcycle.htm</a>
Description	This module describes the RTI framework as applied to mathematics. It includes discussions of instruction, assessment, and data-based decision making at the primary, secondary, and tertiary levels.
Application	Use of this module will help students to become more aware of the background and research on RTI (Response to Intervention) and mathematics.
Outcome	Implement strategies that promote the self-awareness, self-regulation, self-control, self-reliance, self-esteem and independence in children under the guidance of the lead teacher.[2.1]
Additional Information	Gersten, R. (2011, April 15). The potential for mathematics education. <i>Rti: Response to Instruction and Intervention and Mathematics</i> . Retrieved from <a href="http://www.centeroninstruction.org/files/RTI%20Math%20Gersten%202011.pdf">http://www.centeroninstruction.org/files/RTI%20Math%20Gersten%202011.pdf</a> The U.S. Department of Education, Office of Special Education Programs (OSEP). (2001). <i>The IRIS Center</i> . Retrieved from <a href="http://iris.peabody.vanderbilt.edu/resources.html">http://iris.peabody.vanderbilt.edu/resources.html</a> . Resources at this site include twenty-five information briefs under the topic of math as well as one podcast and two case studies.
CEC Paraeducator Standards/NAEYC Core Standards	Individual learning differences/Knowing and understanding effective strategies and tools for early education

**RESOURCE MATRIX**  
**(Exploration Activities)**

Websites and Other Electronic Media	
Citation	University of Washington’s DO-IT Center (Disabilities, Opportunities, Internetworking, and Technology) <i>AccessSTEM</i> . (2002-2013). Retrieved from <a href="http://www.washington.edu/doi/Stem/">http://www.washington.edu/doi/Stem/</a>
Description	The purpose of <i>AccessSTEM</i> is to increase the participation of people with disabilities in STEM careers. Outreach and dissemination efforts extend nationwide. The lead agency for <i>AccessSTEM</i> is the University of Washington's (UW) DO-IT Center (Disabilities, Opportunities, Internetworking, and Technology), which has conducted successful National Science Foundation projects since 1992. <i>AccessSTEM</i> works with a leadership team of partners that represent stakeholders including postsecondary institutions, precollege STEM educators, disability services, veteran associations, projects that broaden participation in STEM, and industry and career services.
Application	Information from this website supports course content on promoting the engagement and achievement of students in math and science activities.
Outcome	Information on this website will help students participate in the selection and use of appropriate instructional materials, equipment, supplies, and other resources needed to effectively teach children with exceptional needs. [3.2]
Additional Information	AccessSTEM, The National Science Foundation, & University of Washington’s DO-IT Center (Disabilities, Opportunities, Internetworking, and Technology). (Producers). (2013). <i>Accommodation Strategies</i> [Information Brief]. Available from <a href="http://www.washington.edu/doi/Stem/acc.html">http://www.washington.edu/doi/Stem/acc.html</a> AccessSTEM, Burgstahler, S., The National Science Foundation, & University of Washington’s DO-IT Center (Disabilities, Opportunities, Internetworking, and Technology). (Producers). (2013). <i>Universal Design of Instruction</i> [Information Brief]. Available from <a href="http://www.washington.edu/doi/Stem/ud.html">http://www.washington.edu/doi/Stem/ud.html</a>
CEC Paraeducator Standards/NAEYC Core Standards	Individual learning differences/Knowing and understanding effective strategies and tools for early education

**RESOURCE MATRIX**  
**(Exploration Activities)**

Websites and other Electronic Media	
Citation	U.S. Department of Education, Office of Special Education Programs (OSEP). (2013). <i>National Center on Student Progress Monitoring</i> . Available from <a href="http://www.studentprogress.org/">http://www.studentprogress.org/</a>
Description	To meet the challenges of implementing effective progress monitoring, the Office of Special Education Programs (OSEP) funded the <i>National Center on Student Progress Monitoring</i> . Housed at the American Institutes for Research, and working in conjunction with researchers from Vanderbilt University it is a national technical assistance and dissemination center dedicated to the implementation of scientifically based student progress monitoring. The project has come to the end of its five-year contract with the U.S. Department of Education, Office of Special Education Programs (OSEP); however, the website will continue to be maintained. Additional resources on student progress monitoring can be found on the National Center on Response to Intervention's (NCRTI) website <a href="http://www.rti4success.org/">http://www.rti4success.org/</a> .
Application	Information from this website supports course content on assessing young students' academic performance and evaluating the effectiveness of instruction.
Outcome	This website will help students use data to develop and implement activities and lessons. [4.1]
Additional Information	Espin, C. A., Shin, J., & Busch, T. W. (2005). Curriculum-based measurement in the content areas: Vocabulary matching as an indicator of progress in social studies learning. <i>Journal of Learning Disabilities, 38</i> , 353-365. Safer, N., & Fleischman, S. (2005, February). Research Matters / How Student Progress Monitoring Improves Instruction. <i>Educational Leadership, 62</i> (5). Retrieved from <a href="http://www.ascd.org/publications/educational-leadership/feb05/vol62/num05/How-Student-Progress-Monitoring-Improves-Instruction.aspx">http://www.ascd.org/publications/educational-leadership/feb05/vol62/num05/How-Student-Progress-Monitoring-Improves-Instruction.aspx</a> Vannest, K. J., Soares, D. A, Smith, S. L., & Williams, L. E. (2012). Progress monitoring to support science learning for all students. <i>Teaching Exceptional Children, 44</i> , 66-72.
CEC Paraeducator Standards/NAEYC Core Standards	Instructional Strategies/Using content knowledge to build a meaningful curriculum

**RESOURCE MATRIX  
(Exploration Activities)**

Websites and Other Electronic Media	
Citation	WGBH Educational Foundation. (2002).The PBS website for <i>Misunderstood Minds</i> (Attention, Reading, Writing, and Math). Retrieved from <a href="http://www.pbs.org/wgbh/misunderstoodminds/intro.html">http://www.pbs.org/wgbh/misunderstoodminds/intro.html</a>
Description	This site is a companion to the PBS special <i>Misunderstood Minds</i> , and profiles a variety of learning problems and expert opinions. It is designed to give parents and teachers a better understanding of learning processes, insights into difficulties, and strategies for responding. See the list of resources at <a href="http://www.pbs.org/wgbh/misunderstoodminds/resources.html">http://www.pbs.org/wgbh/misunderstoodminds/resources.html</a>
Application	Information from this website supports course content on understanding learning differences.
Outcome	Information on this website will help students participate in the selection and use of appropriate instructional materials, equipment, supplies, and other resources needed to effectively teach children with exceptional needs. [3.2]
Additional Information	U.S. Department of Health and Human Services, & Head Start: An Office of the Administration for Children and Families: Early Childhood Learning & Knowledge Center (ECLKC). (Producers). (2013). <i>Leading the way for children, families, and communities</i> [Video].Available from <a href="http://eclkc.ohs.acf.hhs.gov/hslc/hs/about">http://eclkc.ohs.acf.hhs.gov/hslc/hs/about</a> U.S. Department of Health and Human Services, & Head Start: An Office of the Administration for Children and Families: Early Childhood Learning & Knowledge Center (ECLKC) (2013). <i>Quality Teaching and Learning: Disabilities</i> . Retrieved from <a href="http://eclkc.ohs.acf.hhs.gov/hslc/tta-system/teaching/Disabilities">http://eclkc.ohs.acf.hhs.gov/hslc/tta-system/teaching/Disabilities</a>
CEC Paraeducator Standards/NAEYC Core Standards	Individual learning differences/Knowing and understanding effective strategies and tools for early education