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Library and Media Services

RESEARCH GUIDE:

MATHEMATICS K

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RESEARCH GUIDES

MATHEMATICS K

I. SCOPE NOTE

Children are expected to understand and demonstrate knowledge, thinking skills, and insights into patterns of mathematics, concepts of numbers, length, capacity, mass, and time through the use of concrete objects or materials, and to apply these meaningfully in their daily experiences. Children are provided with varied manipulative activities to help them see relationships and interconnections in math and enable them to deal flexibly with mathematical ideas and concepts.

II. SEARCH AIDS (BT: Broader Term, RT: Related Term, NT: Narrow Term)

BT:

- Mathematics

RT:

- Color
- Shapes
- Patterns
- Counting
- Numerals
- Philippine Coins and Bills
- Addition
- Subtraction
- Groupings
- Part of the Whole
- Size
- Length
- Height
- Capacity
- Days
- Month
- Time
- Graphs

NT:

- Two Dimensional Shapes
- Three Dimensional Shapes
- Sorting Objects

- Classifying Objects
- Comparing Objects
- Completing Patterns
- Counting Forward
- Counting Backward
- Ordinals
- Word Problem in Addition
- Word Problem in Subtraction
- Grouping Objects in Equal Parts
- Measuring Length
- Measuring Size
- Measuring Height
- Measuring Capacity
- Time of the Day
- Days of the Week
- Months of the Year
- Longer Time
- Shorter Time

III. INFORMATION RESOURCES

A. LIBRARY RESOURCES

Note: For the appropriate access credentials, please contact the Letran Bataan Library

➢ **E-JOURNALS**

- The Elementary School Journal. https://www.proquest.com/central/publication/publications_40700
- Educational Psychology. https://www.proquest.com/central/publication/publications_33176
- British Educational Research Journal. https://www.proquest.com/central/publication/publications_33034
- Journal of Research on Educational Effectiveness. https://www.proquest.com/central/publication/publications_466392
- The Arithmetic Teacher. https://www.proquest.com/central/publication/publications_815
- Early Education Development. https://search.proquest.com/central/publication/publications_536298
- European Early Childhood Education Research Journal.

https://search.proquest.com/central/publication/publications_426770

- Exceptional Children. https://search.proquest.com/central/publication/publications_7735
- Teaching Children Mathematics. https://search.proquest.com/central/publication/publications_32876
- YC Young Children. https://search.proquest.com/central/publication/publications_27755

➢ **E-THESES**

- Scrinzi, A. S. (2011). An examination of the relationships between kindergarten teachers' beliefs, mathematical knowledge for teaching, and instructional practices (Order No. 3465083). Available from ProQuest Central. (882884829). Retrieved from https://www.proquest.com/dissertations-theses/examination-relationships-between-kindergarten/docview/882884829/se-2?accountid=190548
- Steinbrecher, T. D. (2009). Examining longitudinal relationships between teacher preparation and mathematics achievement of kindergarten and first grade students with disabilities through the national center for education statistics' "Early childhood longitudinal study - kindergarten cohort" (Order No. 3489403). Available from ProQuest Central. (915156717). Retrieved from https://www.proquest.com/dissertations-theses/examining-longitudinal-relationships-between/docview/915156717/se-2?accountid=190548
- McGillicuddy, C. (2016). The effects of age and demographic variables on kindergarten literacy and mathematics achievement (Order No. 10133317). Available from ProQuest Central. (1802924799). Retrieved from https://www.proquest.com/dissertations-theses/effects-age-demographic-variables-on-kindergarten/docview/1802924799/se-2?accountid=190548
- Shanley, C. J. (2014). 1 + 1 is not always 2: Variation in the relations between mathematics self-efficacy development and longitudinal mathematics achievement growth (Order No. 3673121). Available from ProQuest Central. (1652557213). Retrieved from https://www.proquest.com/dissertations-theses/1-is-not-always-2-variation-relations-between/docview/1652557213/se-2?accountid=190548
- Parkinson, J. (2011). Children at risk of academic failure: How child health and social-emotional skills affect reading and mathematics achievement from kindergarten through fifth grade (Order No. 3459079). Available from ProQuest Central. (872951443). Retrieved from https://www.proquest.com/dissertations-theses/children-at-risk-academic-failure-how-child/docview/872951443/se-2?accountid=190548
- Robertson, R. M. (2016). A comparative analysis of the effect of kindergarten retention on academic success in grade three (Order No. 10306887). Available from ProQuest Central. (1860239418). Retrieved from https://www.proquest.com/dissertations-theses/comparative-analysis-effect-kindergarten/docview/1860239418/se-2?accountid=190548

- Ensey Hover, A. B. (2014). How kindergarten readiness affects the future academic achievement of students (Order No. 3623180). Available from ProQuest Central. (1549543329). Retrieved from https://www.proquest.com/dissertations-theses/how-kindergarten-readiness-affects-future/docview/1549543329/se-2?accountid=190548
- Hill, A. (2011). Do our children add up? A meta-analysis of the longitudinal effects of kindergarten schedule and mathematic achievement (Order No. 3464867). Available from ProQuest Central. (886771127). Retrieved from https://www.proquest.com/dissertations-theses/do-our-children-add-up-meta-analysis-longitudinal/docview/886771127/se-2?accountid=190548
- Franklin, M. A. (2013). Kindergarten teachers' perceptions of barriers english language learners face in mathematics (Order No. 3552492). Available from ProQuest Central. (1312336923). Retrieved from https://www.proquest.com/dissertations-theses/kindergarten-teachers-perceptions-barriers/docview/1312336923/se-2?accountid=190548
- Baglici, S. P. (2008). The long -term predictive validity of early mathematics curriculum - based measurement (Order No. 3325449). Available from ProQuest Central. (304674180). Retrieved from https://www.proquest.com/dissertations-theses/long-term-predictive-validity-early-mathematics/docview/304674180/se-2?accountid=190548
- Donaldson, J. M. (2014). An examination of the impact that pre-kindergarten and kindergarten participation has on the academic achievement of third graders in south carolina public elementary schools (Order No. 3662533). Available from ProQuest Central. (1667746189). Retrieved from https://www.proquest.com/dissertations-theses/examination-impact-that-pre-kindergarten/docview/1667746189/se-2?accountid=190548
- Bouchard, M. (2012). Preschool predictors of kindergarten math achievement (Order No. 3506382). Available from ProQuest Central. (1015171448). Retrieved from https://www.proquest.com/dissertations-theses/preschool-predictors-kindergarten-math/docview/1015171448/se-2?accountid=190548
- Doabler, C. T. (2010). Measuring instructional interactions in kindergarten mathematics classrooms through a direct observation system (Order No. 3407197). Available from ProQuest Central. (305213470). Retrieved from https://search.proquest.com/docview/305213470?accountid=190548
- Uzomah, S. L. (2012). Teaching mathematics to kindergarten students through a multisensory approach (Order No. 3494578). Available from ProQuest Central. (921644835). Retrieved from https://search.proquest.com/docview/921644835?accountid=190548
- Yates, A. (2018). Reconceptualizing early childhood mathematics through number talks and math baskets: Challenging dominant mathematics curriculum in one kindergarten classroom (Order No. 11009981). Available from ProQuest Central. (2130136073). Retrieved from https://search.proquest.com/docview/2130136073?accountid=190548

- Smith, C. (2010). Mathematics in early childhood: An investigation of mathematics skills in preschool and kindergarten students (Order No. 3397868). Available from ProQuest Central. (205456190). Retrieved from https://search.proquest.com/docview/205456190?accountid=190548
- Irwin, C. M. (2013). Relations among executive function, number sense, and mathematics achievement in kindergartners (Order No. 3594927). Available from ProQuest Central. (1443863329). Retrieved from https://search.proquest.com/docview/1443863329?accountid=190548

B. OPEN ACCESS

➢ **FREE E-BOOKS**

- National Research Council. (2009). Mathematics Learning in Early Childhood: Paths Toward Excellence and Equity. Washington: National Academic Press. https://www.pdfdrive.com/mathematics-learning-in-early-childhood-paths-toward-excellence-and-equity-d157121343.html.
- Mantague-Smith, Ann. (2018). Mathematics in Early Years Education. 4th edition. London: Routledge: Taylor & Francis Group. https://www.pdfdrive.com/mathematics-in-early-years-education-d158552178.html.
- Dana, Charles A. (2012). Early Mathematics: A Resource for Teaching Young Children Kindergarten. Texas: Charles A. Dana Center. https://www.pdfdrive.com/noyce-earlymath-kindergarten-book-the-charles-a-dana-center-d14644613.html
- Meg, Glenn. (2003).The Everything Kids Math Puzzle Books. Massachusetts: Adams Media Corporation. https://www.pdfdrive.com/the-everything-kids-math-puzzles-book-d18939541.html
- Kinder Mathematics. https://www.pdfdrive.com/kindergarten-mathematicsd25812254.html
- Raport, Rebecca. (2017). Math lab for kids: fun, hands-on activities for learning with shapes, puzzles, and games. USA: Quarto Publishing Group USA Inc. https://www.pdfdrive.com/math-lab-for-kids-fun-hands-on-activities-for-learning-with-shapes-puzzles-and-games-d158194044.html
- Your total solution for math K. USA: Carson-Dellosa Publishing LLC. https://www.pdfdrive.com/your-total-solution-for-math-kindergarten-d187389581.html

➢ **FREE E-JOURNALS**

- Mathematics. https://www.mdpi.com/journal/mathematics
- The Journal of Mathematical Behavior. https://www.journals.elsevier.com/the-journal-of-mathematical-behavior
- Kragujevac Journal of Mathematics. https://imi.pmf.kg.ac.rs/kjm/en/
- Mathematics Education Research Journal. https://www.springer.com/journal/13394

- The Elementary School Journal. https://www.journals.uchicago.edu/toc/esj/current
- Journal for Research in Mathematics Education. https://www.nctm.org/publications/journal-for-research-in-mathematics-education/
- Mathematics Teacher. https://www.nctm.org/publications/mathematics-teacher/
- Mathematics Teacher Educator. https://www.nctm.org/publications/mathematicsteacher-educator/
- Mathematical Thinking and Learning. https://www.tandfonline.com/loi/hmtl20#.V3FiOqJsxNd
- Educational Studies in Mathematics. https://www.springer.com/journal/10649

➢ **FREE E-THESES**

- Woodruff, S. E. (2014). Increasing equity and access to quality mathematics instruction through early screening. (Thesis). University of Georgia. Retrieved from http://purl.galileo.usg.edu/uga_etd/woodruff_sara_e_201312_phd
- Li, Q. (2020). Teachers' responses to children's mistakes in kindergarten mathematics classrooms. (Thesis). Purdue University. Retrieved from https://hammer.purdue.edu/articles/thesis/Teachers_responses_to_children_s_mistakes_in_kindergarten_mathematics_classrooms/12707780/1
- Miller, J. A. (2019). Involve Me! Using Developmentally Appropriate Practices to Support a Rigorous Kindergarten Program: The Effects on Engagement and Attitude. (Doctoral Dissertation). Arizona State University. Retrieved from https://repository.asu.edu/items/55472
- Whitman, E. (2015). Teacher Mathematics Language: Its Use in the Early Childhood Classroom and Relationship with Young Children's Learning. (Doctoral Dissertation). Loyola University Chicago. Retrieved from https://ecommons.luc.edu/luc_diss/1498
- White, Wendee B, M. (2015). The Relationship Between an Affective Instructional Design, Children's Attitudes Toward Mathematics, and Math Learning for Kindergarten-Age Children. (Thesis). East Tennessee State University. Retrieved from https://dc.etsu.edu/etd/2554
- NC DOCKS at The University of North Carolina at Greensboro; Pierro, R. C. (2015). Teachers' knowledge, beliefs, self-efficacy, and implementation of early childhood learning standards in science and math in prekindergarten and kindergarten. (Thesis). NC Docks. Retrieved from http://libres.uncg.edu/ir/uncg/f/Pierro_uncg_0154M_11772.pdf
- Stone, J. (2016). Assessing the Impact of Picture Books in Primary Grades Mathematics Instruction. (Doctoral Dissertation). University of Tennessee – Knoxville. Retrieved from https://trace.tennessee.edu/utk_graddiss/3876
- Nelson, G. (2017). The Effects of Early Numeracy Interventions for Students in Preschool and Early Elementary: A Meta-Analysis. (Doctoral Dissertation). University of Minnesota. Retrieved from http://hdl.handle.net/11299/201136
- La Voy, C. L. (2009). Mathematics and the visually impaired child| An examination of standards-based mathematics teaching strategies with

young visually impaired children. (Thesis). University of Kansas. Retrieved from https://www.proquest.com/dissertations-theses/mathematics-visually-impaired-child-examination/docview/304910651/se-2?accountid=190548

- Mononen, R. (2014). Early mathematics interventions : Supporting young children with low performance in mathematics. (Doctoral Dissertation). University of Helsinki. Retrieved from http://hdl.handle.net/10138/144106
- Taylor-Buckner, N. (2014). The Effects Of Elementary Departmentalization On Mathematics Proficiency. (Doctoral Dissertation). Columbia University. Retrieved from https://doi.org/10.7916/D8D50K49
- Carrie, C. (2014). Factors that contribute to kindergarten math success . (Thesis). California State University – San Marcos. Retrieved from http://hdl.handle.net/10211.3/121922
- Heale, A. N. (2015). Technology Enhancing Kindergarten Students' Literacy Skills in Math. (Thesis). SUNY College at Brockport. Retrieved from https://digitalcommons.brockport.edu/ehd_theses/596
- Freer, D. (2017). The threshold hypothesis applied to spatial skill and mathematics. (Thesis). Michigan State University. Retrieved from https://eric.ed.gov/?id=ED579025
- Bowen, R. C. (2010). Effects of pre-kindergarten music instruction on kindergarten reading and math scores for low SES ELL students. (Thesis). Trevecca Nazarene University. Retrieved from https://www.proquest.com/dissertations-theses/effects-pre-kindergarten-music-instruction-on/docview/1370975201/se-2?accountid=190548
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- Kiss, A. (2018). Investigating Young Children's Attitudes toward Mathematics: Improved Measurement and the Relation to Achievement. (Doctoral Dissertation). University of Minnesota. Retrieved from http://hdl.handle.net/11299/199057
- Smith, C. (2010). Mathematics in early childhood| an investigation of mathematics skills in preschool and kindergarten students. (Thesis). Alfred University. Retrieved from https://www.proquest.com/dissertations-theses/mathematics-early-childhood-investigation-skills/docview/205456190/se-2?accountid=190548
- O'Neill, A. M. (2012). Mathe-dramatical play tasks kit: integrating socio dramatic play and mathematical problem solving in the kindergarten curriculum. (Master's Thesis). California State University – Northridge. Retrieved from http://hdl.handle.net/10211.2/1083

C. PROFESSIONAL ORGANIZATIONS

- National Council of Teacher for Mathematics. https://www.nctm.org/
- Consortium for Mathematics and its Application. https://www.comap.com/
- Technical Education Research Center. https://www.terc.edu/
- Education Development Center. https://www.edc.org/

- American Mathematical Society. https://www.ams.org/home/page
- Mathematical Association of America. https://www.maa.org/

D. OTHER RELATED WEB PORTALS

- Prodigy Math Game. https://sso.prodigygame.com/signup
- TES. https://www.tes.com/en-us/teaching-resources
- Teacher Vision. https://www.teachervision.com/math/third-grade-worksheets
- Teacher Tube. https://www.teachertube.com/
- Fun Brain. https://www.funbrain.com/
- Math Blaster. http://www.mathblaster.com/
- Multiplication. https://www.multiplication.com/
- Learn Zillion. https://learnzillion.com/p/
- Hooda Math. http://www.hoodamath.com/
- Manga High. https://www.mangahigh.com/en-us/
- Manga Time. http://www.mathgametime.com/
- Math Playground. https://www.mathplayground.com/
- BBC Bitesize. http://www.bbc.co.uk/schools/410.shtml
- Cool Math Games. https://www.coolmathgames.com/
- Code Monkey. https://www.codemonkey.com/covid-19/

E. RELATED ONLINE RESOURCES FOR TEACHERS

- National Library of Virtual Manipulatives. http://nlvm.usu.edu/en/nav/vlibrary.html
- Math Goodies. https://www.mathgoodies.com/
- Math-Aids. https://www.math-aids.com/
- Khan Academy. https://www.khanacademy.org/
- Wolfram Math World. https://mathworld.wolfram.com/
- Online Chart Tool. https://www.onlinecharttool.com/
- Age of Learning https://www.ageoflearning.com/programs/#abcmouse
- Adventure Academy. https://www.adventureacademy.com/
- Awe Learning. https://awelearning.com/library-resources/
- ASL Literary Activities. https://motionlightlab.podia.com/asl-literacy-activities
- Beanstack. https://landing.beanstack.com/lerner-sports-challenge
- Benchmark Education. https://www.benchmarkeducation.com/
- Bamboo Learning. https://bamboolearning.com/resources
- Brain Pop. https://www.brainpop.com/
- Breakout Edu. https://www.breakoutedu.com/funathome
- Brookes Publishing. https://brookespublishing.com/covid-19-resources/
- Classroom Champions. https://www.classroomchampions.org/
- Creosity Space. https://www.creosityspace.com/spring2020.html
- Elementari. https://www.elementari.io/
- Essentials Skills. https://essentialskills.com/

- ETS. https://news.ets.org/stories/free-ets-elearning-tools-for-todays-learners/
- First in Math. https://www.firstinmath.com/

F. RELATED ONLINE RESOURCES FOR PARENTS

- Scholastic Parents. https://www.scholastic.com/parents/home.html
- Get the Math. https://www.thirteen.org/get-the-math/
- Carrot Top: Free Educational Resources. https://carrot-top.com/educational-resources
- Carson Dellosa.https://www.carsondellosa.com/free-resources/freeprintables/?utm_source=MDR&utm_medium=partnershipAd&utm_campaign=FreeResources
- Clever Tykes. https://clevertykes.com/shop/
- Curriculum Associates. https://www.curriculumassociates.com/teaching-learning-2020
- Didax. https://www.didax.com/math/virtual-manipulatives.html
- Camp DK. https://www.dk.com/us/information/home-learning-for-kids/
- Ed Helper. https://www.edhelper.com/teacher-education/Daily-Free-Learning-Workbooks-for-Teachers-to-Share-with-Parents-while-Schools-are-Closed-Kids-will-actually-do-these.htm
- Educational Insights. https://www.educationalinsights.com/at-home-activities-for-kids
- Emotional ABC. https://www.emotionalabcs.com/
- Freckle. https://www.freckle.com/

IV. TUTORIALS

- Math TV. https://mathtv.com/videos_by_topic
- Superkids. https://www.superkids.com/aweb/tools/math/index.shtml
- Science and Mathematics Initiative for Learning Enhancement. http://mypages.iit.edu/~smile/index.html
- Kids Math. https://www.kidsmathtv.com/kindergarten-videos/
- Khan Academy. https://www.khanacademy.org/math/cc-kindergarten-math
- Education. https://www.education.com/lesson-plans/kindergarten/math/
- Home School Math. https://www.homeschoolmath.net/teaching/kindergarten.php
- Fun Expected. https://funexpectedapps.com/playhome
- Math Solutions. https://mathsolutions.com/classroom-lessons/

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