Colegio de San Juan de Letran
Dominican Avenue, Abucay, Bataan
Library and Media Services

# RESEARCH GUIDE:

# SCIENCE 1

## TABLE OF CONTENTS

**RESEARCH GUIDES**

**SCIENCE 1**

## I. SCOPE NOTE

*Learners will use their senses to locate and describe the external parts of their body; to identify, external parts of animals and plants; to tell the shape, color, texture, taste, and size of things around them; to describe similarities and differences given two objects; to differentiate sounds produced by animals, vehicles cars, and musical instruments; to illustrate how things move; to, describe the weather and what to do in different situations; to use appropriate terms or vocabulary to describe these features; to collect, sort, count, draw, take things apart, or make something out of the things; to practice healthy habits (e.g., washing hands properly, choosing nutritious food) and safety measures (e.g., helping to clean or pack away toys, asking questions and giving simple answers/ descriptions to probing questions).*

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

**BT:**

- Science

**RT:**

- Matter
- Heat Energy
- Light Energy
- Sound
- Force and Motion
- Body Parts
- Animals
- Plants
- Living Things
- Non Living Things
- Landforms
- Water Farms
- Weather

**NT:**

- Exploration
- Discovery
- Observation
- Body Parts

- Characteristics of Animals

## III. INFORMATION RESOURCES

### A. LIBRARY RESOURCES

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

➢ **E-JOURNALS**

- Journal of Science Education. https://www.proquest.com/central/publication/publications_28899
- Cultural Studies of Science Education. https://www.proquest.com/central/publication/publications_54611
- Journal of Physics: Conference Series. https://www.proquest.com/central/publication/publications_4998668
- International Journal of Arts & Sciences. https://www.proquest.com/central/publication/publications_626342
- Journal of Turkish Science Education. https://www.proquest.com/central/publication/publications_2032192
- Journal of Baltic Science Education. https://www.proquest.com/central/publication/publications_4477238
- Canadian Journal of Science, Mathematics and Technology Education. https://search.proquest.com/central/publication/publications_42727
- International Journal of Science and Mathematics Education. https://search.proquest.com/central/publication/publications_2043858
- Science Education. https://search.proquest.com/central/publication/publications_48964
- Teaching Science. https://search.proquest.com/central/publication/publications_29558
- Science and Children. https://search.proquest.com/central/publication/publications_41736

➢ **E-THESES**

- Kralina, L. M. (2009). Enhancing science education through extracurricular activities: A retrospective study of "Suzy science and the whiz Kids0RW1S34RfeSDcfkexd09rT3©1RW1S34RfeSDcfkexd09rT3" (Order No. 3393624). Available from ProQuest Central. (305065986). Retrieved from https://www.proquest.com/dissertations-theses/enhancing-science-education-through/docview/305065986/se-2?accountid=190548
- Nariman, N. (2014). Problem-based science inquiry: Challenges and possibilities for addressing 210RW1S34RfeSDcfkexd09rT3st1RW1S34RfeSDcfkexd09rT3 century skills (Order No. 3621619). Available from ProQuest Central. (1548006410). Retrieved from

https://www.proquest.com/dissertations-theses/problem-based-science-inquiry-challenges/docview/1548006410/se-2?accountid=190548

- DomNwachukwu, N. S. (2018). From california academic content standards (CACS) to next generation science standards (NGSS): The challenge of science, technology, engineering, and mathematics (STEM) integration in the 210RW1S34RfeSDcfkexd09rT3st1RW1S34RfeSDcfkexd09rT3 century K-12 classroom (Order No. 10743628). Available from ProQuest Central. (2043901605). Retrieved from https://www.proquest.com/dissertations-theses/california-academic-content-standards-cacs-next/docview/2043901605/se-2?accountid=190548
- Carpenter, W. R. (2014). A study of science leadership and science standards in exemplary standards-based science programs (Order No. 3637540). Available from ProQuest Central. (1617552451). Retrieved from https://www.proquest.com/dissertations-theses/study-science-leadership-standards-exemplary/docview/1617552451/se-2?accountid=190548
- Zimmerman, H. (2008). Everyday science & science every day: Science -related talk & activities across settings (Order No. 3345569). Available from ProQuest Central. (304447033). Retrieved from https://www.proquest.com/dissertations-theses/everyday-science-amp-every-day-related-talk/docview/304447033/se-2?accountid=190548
- Bousselot, T. E. (2018). Shifting the focus to science in the early elementary years: An examination of science achievement growth in grades K-2 using a nationally representative dataset (Order No. 10829119). Available from ProQuest Central. (2090125721). Retrieved from https://www.proquest.com/dissertations-theses/shifting-focus-science-early-elementary-years/docview/2090125721/se-2?accountid=190548
- Hirschy, B. (2017). Evaluation of science outcomes after using the picture-perfect science lessons in K-2 elementary education: A quantative study (Order No. 10642461). Available from ProQuest Central. (1972148922). Retrieved from https://www.proquest.com/dissertations-theses/evaluation-science-outcomes-after-using-picture/docview/1972148922/se-2?accountid=190548
- Boyd, Y. F. (2016). Inquiry-based science: Preparing human capital for the 210RW1S34RfeSDcfkexd09rT3 st1RW1S34RfeSDcfkexd09rT3 century and beyond (Order No. 10168217). Available from ProQuest Central. (1831606185). Retrieved from https://www.proquest.com/dissertations-theses/inquiry-based-science-preparing-human-capital-21/docview/1831606185/se-2?accountid=190548
- Rangasammy, G. (2017). An investigation of teachers' reported use of scientific practices in elementary instruction: Implications for student outcomes and principals' selfefficacy (Order No. 10641493). Available from ProQuest Central. (2011020439). Retrieved from https://search.proquest.com/docview/2011020439?accountid=190548
- Almarode, J. T. (2011). Frequency, duration, and time devoted to elementary science instruction and the association with science achievement and science interest (Order No. 3484456). Available from ProQuest Central. (905163834). Retrieved from https://search.proquest.com/docview/905163834?accountid=190548
- Scoggins, S. S. (2016). The effects of academic grouping on student performance in science (Order No. 10183560). Available from ProQuest Central. (1845855228). Retrieved from https://search.proquest.com/docview/1845855228?accountid=190548

- Bays, K. (2016). Teaching the next generation of scientists: Science education in the primary grades (Order No. 10140660). Available from ProQuest Central. (1821617902). Retrieved from https://search.proquest.com/docview/1821617902?accountid=190548
- Olgan, R. (2008). A longitudinal analysis of science teaching and learning in kindergarten and first-grade (Order No. 3348526). Available from ProQuest Central. (304645479). Retrieved from https://search.proquest.com/docview/304645479?accountid=190548


**B. OPEN ACCESS**

➢ **FREE E-BOOKS**


- Norris, Jill. (2002). Read and Understand Science Grade 1-2. U.S.A. Evan-Moor Educational Publisher. https://www.pdfdrive.com/read-and-understand-science-grades-1-2-d183724437.html
- Reading and Writing in Science. New York: McGraw Hill. https://www.pdfdrive.com/reading-and-writing-in-science-teachers-guide-grade-1-california-science-d188335603.html
- Hackett, Jay. (2008). California Science. New York: McGraw Hill. https://www.pdfdrive.com/california-science-grade-1-student-edition-d157356655.html
- Hackett, Jay. (2008). Science: A Closer Look. New York: McGraw Hill. https://www.pdfdrive.com/science-a-closer-look-grade-1-d162351463.html
- A Closer Look for Grade 1 – Reading and Writing in Science Workbook. https://www.pdfdrive.com/a-closer-look-grade-1-reading-and-writing-in-scienceworkbook-d19687866.html
- Michaels, Sarah. (2007). Ready, set, science! : putting research to work in K-8 science classrooms. Washington: The National Academic Press. https://www.pdfdrive.com/ready-set-science-putting-research-to-work-in-k-8-scienceclassrooms-d184354367.html
- Manitoba Education Training (1999). Kindergarten to Grade 4 science : a foundation for, implementation. https://www.pdfdrive.com/kindergarten-to-grade-4-science-e40105280.html
- Science K to 7: integrated resource package 2005. https://www.pdfdrive.com/sciencekindergarten-d51382007.html


➢ **FREE E-JOURNALS**


- Science Kids Journal. https://sciencejournalforkids.org/
- AERA Open. https://journals.sagepub.com/doi/10.1177/2332858419861081
- Education Sciences. https://www.mdpi.com/journal/education
- Early Childhood Research Quarterly Open Access Articles. https://www.journals.elsevier.com/early-childhood-research-quarterly/open-access-articles

- International Journal of Educational Research Open Access Articles. https://www.journals.elsevier.com/international-journal-of-educational-research/open-access-articles
- Elsevier Open Access Journal. https://www.elsevier.com/open-access/open-access-journals
- International Journal of STEM Education. https://stemeducationjournal.springeropen.com/
- PLOS Biology. https://journals.plos.org/plosbiology/
- Educational Sciences – Open Access Journal. https://www.mdpi.com/journal/education
- Frontiers for Young Minds. https://kids.frontiersin.org/
- Sci EP. http://www.sciepub.com/portal/search?q=kindergarten

➢ **FREE E-THESES**

- Hillman, P. C. (2018). Vertically Aligned Professional Learning Communities as a Keystone for Elementary Science Teacher Professional Development, Growth, and Support. (Doctoral Dissertation). Columbia University. Retrieved from https://doi.org/10.7916/D82N6JQH
- Harris, G. B. (2020). Novice Elementary Teachers' Self-Efficacy for Teaching Science: A Phenomenological Study. (Doctoral Dissertation). Liberty University. Retrieved from https://digitalcommons.liberty.edu/doctoral/2589
- Witt, K. L. (2020). A CASE STUDY OF A STEM SPECIALIST CO-TEACHING MODEL. (Doctoral Dissertation). University of Kentucky. Retrieved from https://uknowledge.uky.edu/edsc_etds/76
- Richey, L. R. (2011). The portrayal of the nature of science in upper elementary instructional materials. (Thesis). Iowa State University. Retrieved from https://lib.dr.iastate.edu/etd/10287
- Wenner, J. A. (2014). How context impacts elementary teachers' decisions about science instruction. (Thesis). University of Georgia. Retrieved from http://hdl.handle.net/10724/28945
- Bullock, R. R. (2018). The Relationship between Epistemological Beliefs and Attitudes towards Science of Undergraduate Elementary Education Majors. (Doctoral Dissertation). Liberty University. Retrieved from https://digitalcommons.liberty.edu/doctoral/1955
- Logerwell, M. G. (2009). The effects of a summer science camp teaching experience on preservice elementary teachers' science teaching efficacy, science content knowledge, and understanding of the nature of science. (Thesis). George Mason University. Retrieved from http://pqdtopen.proquest.com/#viewpdf?dispub=3367054
- Tank, K. M. (2014). Examining the effects of integrated science, engineering, and nonfiction literature on student learning in elementary classrooms. (Doctoral Dissertation). University of Minnesota. Retrieved from http://hdl.handle.net/11299/165090
- Kinskey, M. (2020). Developing and Facilitating Socioscientific Issues Based Science Lessons: Elementary Preservice Teachers' Experiences. (Thesis). University of South Florida. Retrieved from https://scholarcommons.usf.edu/etd/8236

- Parks, M. Y. (2011). The nature of elementary students' science discourse and conceptual learning. (Doctoral Dissertation). Florida Atlantic University. Retrieved from http://purl.flvc.org/FAU/3318675
- Dashoush, N. (2015). Establishing a Community of Practice Between an Elementary Educator and a Scientist as a Means of Professional Development. (Doctoral Dissertation). Columbia University. Retrieved from https://doi.org/10.7916/D85H7FB8
- Lofgran, B. L. (2012). Science Self-Efficacy and School Transitions: Elementary School to Middle School and Middle School to High School. (Masters Thesis). Brigham Young University. Retrieved from https://scholarsarchive.byu.edu/cgi/viewcontent.cgi?article=4668&context=etd
- Cloutier, S. E. (2016). Learning About Teaching Science: Improving Teachers' Practice Through Collaborative Professional Learning. (Thesis). University of Western Ontario. Retrieved from https://ir.lib.uwo.ca/etd/3831
- Peer, J. (2011). Gender, grade-level and stream differences in learning environment and student attitudes in primary science classrooms in Singapore. (Thesis). Curtin University of Technology. Retrieved from http://hdl.handle.net/20.500.11937/1158
- Patchett, C. M. (2015). Evaluating Primary Grade-Level Science Texts for Evidence of Science Information, Quality of Literature, and Elements of Critical Literacy with the Modified Analytical Science Trade-Book Rubric. (Thesis). Texas A&M University – Corpus Christi. Retrieved from http://hdl.handle.net/1969.6/634
- Sothayapetch, P. (2013). A comparative study of science education at the primary school level in Finland and Thailand. (Doctoral Dissertation). University of Helsinki. Retrieved from http://hdl.handle.net/10138/42259
- Benningfield, S. (2013). The Effects of Gender and Implicit Theories on Science Achievement and Interest in Elementary-Aged Students. (Master's Thesis). Western Kentucky University. Retrieved from https://digitalcommons.wku.edu/theses/1254
- Ngmenkpieo, F. (2010). The nature of instructional support HoDs provide to mathematics and science teachers in Cape Town primary schools. (Thesis). Cape Peninsula University of Technology. Retrieved from http://etd.cput.ac.za/handle/20.500.11838/1965


### C. PROFESSIONAL ORGANIZATIONS

- The Association for Science Education. https://www.ase.org.uk/
- California Science Teacher Association. https://cascience.org/
- National Science Teaching Association. https://www.nsta.org/
- National Association for Research in Science Teaching (NARST). https://narst.org/
- Science Education Organizations on the Internet. http://quantum.esu.edu/~bbq/scied/sciedorg.html
- National Education Association. https://www.nea.org/home/2580.htm?cpssessionid=SID49F2D42F-401C7F83
- American Federation of Teachers. https://www.aft.org/
- Computer Using Educators. https://cue.org/
- National Association for Gifted Children. https://www.nagc.org/
- Association for Experimental Education. https://www.aee.org/

## D. OTHER RELATED WEB PORTALS

- How to Smile. https://www.howtosmile.org/
- National Science Digital Library. https://nsdl.oercommons.org/
- Jet Propulsion Laboratory. https://www.jpl.nasa.gov/edu/
- Smithsonian Science Education Center. https://ssec.si.edu/
- Curiosity Machine. https://www.curiositymachine.org/
- Ed Heads: Activate your Mind. https://edheads.org/?
- Exploratorium. https://www.exploratorium.edu/
- Science Kids. https://www.sciencekids.co.nz/
- NASA Kids Club. https://www.nasa.gov/kidsclub/index.html
- Brain Pop Science. https://www.brainpop.com/science/seeall/
- Discovery Kids Plus. https://www.discoverykidsplus.com/
- National Geographic Kids. https://kids.nationalgeographic.com/
- PBS Kids. https://pbskids.org/
- Ology. https://www.amnh.org/explore/ology
- Frontiers for Young Minds. https://kids.frontiersin.org/
- Earthquake for Kids. https://earthquake.usgs.gov/learn/kids/
- Chemi Cool. https://www.chemicool.com/
- NASA Science. https://solarsystem.nasa.gov/missions/galileo/overview/
- Smithsonian: National Air and Space Museum. https://airandspace.si.edu/
- Climate Kids. https://climatekids.nasa.gov/
- My First Garden. https://web.extension.illinois.edu/firstgarden/
- Farmer's Almanac for Kids. https://www.almanac.com/kids
- PBS Building Big. http://www.pbs.org/wgbh/buildingbig/index.html

## E. RELATED ONLINE RESOURCES FOR TEACHERS

- California Academy of Sciences. https://www.calacademy.org/learn-explore
- CK – 12. https://www.ck12.org/student/
- Defined Learning. https://app.definedstem.com/home
- The Lawrence Hall of Science. https://www.lawrencehallofscience.org/
- Mystery Science. https://mysteryscience.com/
- Mrs. Jump Class. https://deannajump.com/science-videos-for-kids/
- Smithsonian: Science Education Center. https://ssec.si.edu/
- How to Smile. https://www.howtosmile.org/
- Periodic Videos. http://www.periodicvideos.com/index.htm
- Teach the Earth. https://serc.carleton.edu/teachearth/index.html
- Stellarium. http://stellarium.org/
- NASA Education. https://www.nasa.gov/education/materials/
- Learn Genetics. https://learn.genetics.utah.edu/
- The Concord Consortium. https://concord.org/our-work/research-projects/
- Chem Collective. http://www.chemcollective.org/

- Sci Table. https://www.nature.com/scitable/
- Impact Earth. https://www.purdue.edu/impactearth/
- Creosity Space. https://www.creosityspace.com/spring2020.html
- Elementari. https://www.elementari.io/
- Essentials Skills. https://essentialskills.com/
- Common Sense Education. https://www.commonsense.org/education/website/ck-12
- Define Learning. https://app.definedstem.com/home
- PHET Interactive Simulations in Math and Science. https://phet.colorado.edu/
- Ok Go Sandbox. https://okgosandbox.org/

### F. RELATED ONLINE RESOURCES FOR PARENTS

- Tiny Bop Schools. https://schools.tinybop.com/
- PBS Nova. https://www.pbs.org/wgbh/nova/
- National Science Digital Library. https://nsdl.oercommons.org/
- Jumpstart. https://www.jumpstart.com/parents/resources/science-resources
- Community Resources for Science. https://www.crscience.org/educators/Family
- Backpack Sciences. https://www.backpacksciences.com/science-simplified
- Breakout Edu. https://www.breakoutedu.com/funathome
- Carson Dellosa. https://www.carsondellosa.com/free-resources/free-printables/

## IV. TUTORIALS

- SciShow Kids. https://www.youtube.com/channel/UCRFIPG2u1DxKLNuE3y2SjHA
- National Geographic Kids. https://kids.nationalgeographic.com/videos/
- Science Videos for Kids. https://www.youtube.com/playlist?list=PLyqf1JCzOf_nBNCibt2BQi-hLBCzgHrMt
- Popular Science. https://www.youtube.com/user/Popscivideo
- Operation Ouch. https://www.youtube.com/c/OperationOuch/videos
- Sids the Science Kids. https://pbskids.org/sid/videos
- Socratica Kids. https://www.youtube.com/c/SocraticaKids/videos
- Steve Spangler Science. https://www.stevespanglerscience.com/lab/categories/experiments/at-home-science/
- Home Science. https://www.youtube.com/c/maricv84HomeScience/videos
- Minute Earth. https://www.youtube.com/channel/UCeiYXex_fwgYDonaTcSIk6w
- Science Bob. https://sciencebob.com/category/videos/
- Science Kidz. https://www.sciencekids.co.nz/videos.html
- Sports Science. https://www.youtube.com/playlist?list=PLn3nHXu50t5xqHW67LKFhUB_C2Y9C0IwC
- NASA Gallery. https://www.nasa.gov/multimedia/videogallery/index.html
- Scientific American. https://www.youtube.com/user/SciAmerican
- How Stuff Works. https://www.youtube.com/HowStuffWorks
- Tell Me Why? https://www.youtube.com/playlist?list=PL84TJyOKWovp9cov9kZS_dzZ2IENs7Yea
- Crash Course. https://www.youtube.com/channel/UCX6b17PVsYBQ0ip5gyeme-Q

- It's Okay to Be Smart. https://www.youtube.com/channel/UCH4BNI0-FOK2dMXoFtViWHw
- Veritasium. https://www.youtube.com/channel/UCHnyfMqiRRG1u-2MsSQLbXA
- AsapSCIENCE. https://www.youtube.com/user/AsapSCIENCE/featured
- The Infographics Show. https://www.youtube.com/user/TheInfographicsShow
- Science Max. https://www.youtube.com/channel/UCbprhISv-0ReKPPyhf7-Dtw/featured
- Finding Stuff Out. https://www.youtube.com/channel/UC8u2mS-ZGT2PldXH8-zvx3A
- The Slow Mo Guys. https://www.youtube.com/channel/UCUK0HBIBWgM2c4vsPhkYY4w
- Cool Science Videos for Kids. https://www.youtube.com/watch?v=kYJt5kWNsbM
- First Grade Science. https://www.youtube.com/watch?v=dMKczzD0URA
- Wonders of the Sky | Science | Grade-1,2. https://www.youtube.com/watch?v=UNa0u64piUY
- Units of Time | First and Second Grade Science Lesson Video. https://www.youtube.com/watch?v=YppG6YY9JPs
- Turtles - Science Lesson for Grade 1. https://www.youtube.com/watch?v=7Le8eSLhqMA
- Fun Science Videos for Kids. https://www.youtube.com/watch?v=b5NK4CXI4GQ
- Sun and Moon: How We get Seasons | 1st Grade Science. https://www.youtube.com/watch?v=PeB4VF6m_7Q
- Solid and Liquid | First and Second Grade Science for Kids. https://www.youtube.com/watch?v=qYzjg5nRMOg

**Prepared by:**

**Mr. Marvin A. Milla**
Layout
mamilla@letranbataan.edu.ph

**Ms. Maria Rosiel C. Ordenes**
Subject Librarian
mrcordenes@letranbataan.edu.ph

**Asst. Prof. Norady Mercado Pere**
Chief Librarian
ndmercado@letranbataan.edu.ph

For more inquiries, kindly e-mail us at library@letranbataan.edu.ph