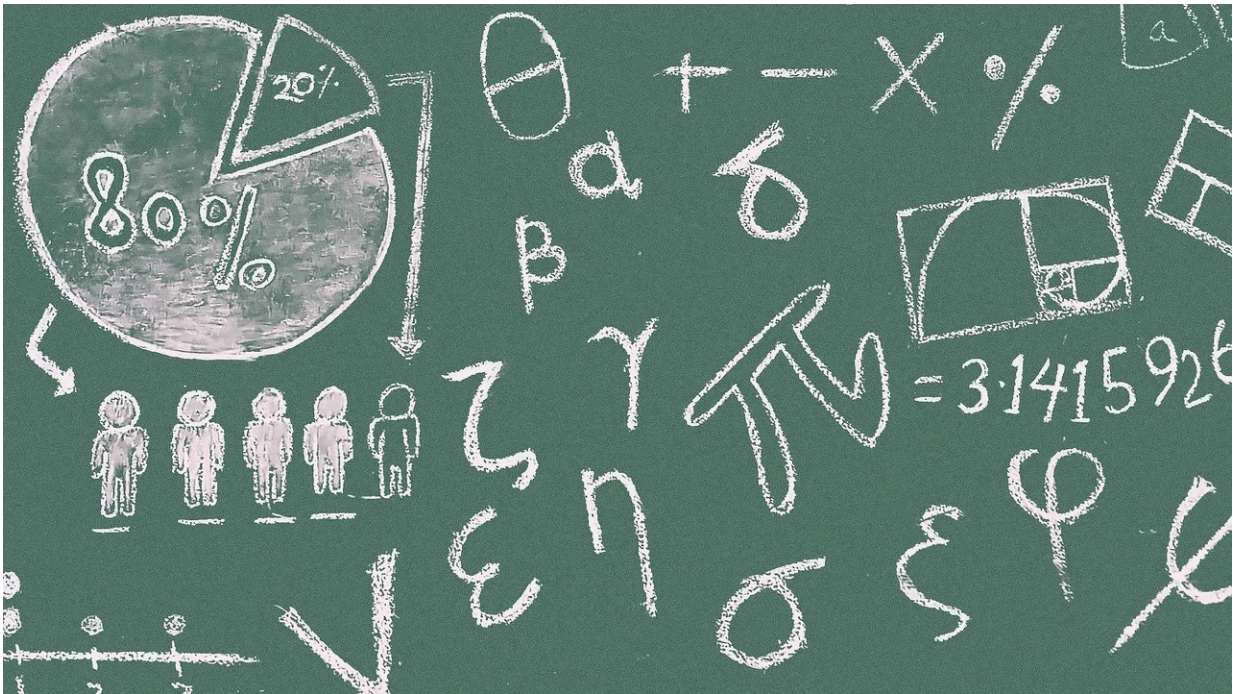


Online science and math resources for teachers of young children

July 27 2021



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As COVID-19 restrictions begin to ease and people return to the workplace this fall, many young children will return to child care centers, preschools and family child care homes. The University of Illinois Chicago's College of Education is reminding caregivers that they have available free online resources for both early math and early science education.

The [Early Math Counts](#) website, which began in 2012 with grants from the CME Group Foundation, is a suite of free-access online resources focusing on early [math](#) for child care teachers. The site is frequented by thousands of monthly users.

Most recently, the College of Education launched a second website, [Early Science Matters](#), which began in 2019 with a grant from the Caplan Foundation for Early Childhood and a gift from philanthropist Marjorie Pelino. The aim is to replicate the success of the Early Math Counts website, which has been used by early childhood teachers and parents across the world.

"We focus on providing online free-access professional [development](#) for early child care teachers. It is often difficult for early childhood teachers to access professional development because they are often constrained by geography, time and affordability," said Kathleen Sheridan, project director, associate professor and chair of the educational psychology department. "By providing any time free access to professional development resources, the constraints many early childhood teachers face can be overcome."

The Early Math Counts professional development website is at www.earlymathcounts.org and has four core objectives:

- To give early childhood educators the knowledge and skills they need to teach early math
- To help early childhood educators set up environments that promote math literacy
- To provide math activities and lessons that foster the development of early math skills
- To help create a world of math-literate children

The website consists of early math lessons, videos to help early

childhood teachers increase their knowledge and set up math-rich environments, a twice-monthly blog, as well as access to eight online early math professional development courses that focus on early math content and applications in child care and educational settings for young children. Each professional development course takes about one hour to complete and includes content as well as interviews with educational experts, videos and assessments. Among the professional development course topics are: number sense, geometry, data analysis, patterns, shapes and spaces, measurement and math processes.

"Our Early Math Counts professional development website and resources get over 10,000 users a month and people in over 90 different countries have accessed the site...from Australia to Zimbabwe," Sheridan said.

Research completed on the effectiveness of the early math professional development indicated that after engaging in the professional development courses, participants increased their attitudes, confidence, beliefs and knowledge in teaching early math. Participants also reported positive changes in their classroom practices in teaching early math.

After the success of the Early Math Counts site, Sheridan and her UIC colleague Catherine Main and doctoral students David Banzer and Anne Pradzinski decided to create Early Science Matters, a similar professional development resource focusing on science.

Since children naturally engage in science exploration and discovery early in life, the aim of the Early Science Matters professional development site is to harness this innate curiosity in children by helping early childhood teachers gain access to early science lessons, content and professional development so that they are able to provide high-quality early science education to support the young child's growth and development, Sheridan said.

The Early Science Matters professional development website has four core objectives:

- To give early childhood educators the knowledge and skills they need to teach early science
- To help early [childhood](#) educators set up environments that promote science literacy
- To provide engaging activities and lessons that foster the development of early science skills
- To help create a world of science-literate citizens.

The Early Science Matters professional development suite of resources includes lesson plans centered on early science, content to help [early childhood](#) teachers increase their knowledge and set up science-rich spaces for children, a blog and access to a series of nine one-hour professional development courses.

The nine online free-access early science professional development courses cover topics such as: early science concepts; processes such as earth, water and air; force and motion; weather and seasons; and growth and change.

"Early Science Matters [professional development](#) course participants also learn how to engage young children in scientific activities such as observing, making predictions and drawing conclusions," Sheridan said. "Our [science](#) site is already getting over 3,000 users since the first few months of launching."

More information: Early Math Counts: www.earlymathcounts.org/

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Provided by University of Illinois at Chicago

Citation: Online science and math resources for teachers of young children (2021, July 27)
retrieved 27 April 2024 from

<https://phys.org/news/2021-07-online-science-math-resources-teachers.html>

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