

SIUE Elementary Education Students Make Math Fun for Grade Schoolers

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EDWARDSVILLE - Before the first bell of the day, first and second graders at Eastwood Elementary School in East Alton and Ellis Elementary School in Belleville engage in math instruction but with a twist: Math strategies and equations are made to look like fun and games, courtesy of Southern Illinois University Edwardsville elementary education teacher candidates.



The project is known as CIED 441 Morning Math Enrichment. “Teacher candidates enrolled in CIED 441 Teaching and Learning Elementary Level Mathematics create hands-on math games to reinforce computation skills,” said SIUE Elementary Education Program Director Barbara Martin, EdD, associate math professor in the School of Education, Health and Human Behavior’s Department of Teaching and Learning.

“The teacher candidates visit either Eastwood Elementary or Ellis Elementary to ‘play’ the games with elementary students before school.”

Elementary Education majors Caitlin Foster, Clare Huels and Josie Tedrick, all juniors, shared their teaching experiences with Morning Math Enrichment.

“These enrichment games are great examples of implementing learning without the students realizing it,” said Huels. “It is a great environment, and students are asking to come back.”

“Games can be effective, because they are engaging, interactive, and thought-provoking,” continued Huels. “Sometimes these games get competitive and fun, which changes the room to a positive environment quickly.”

“It is important to increase math literacy, because people use math in their everyday lives whether they realize it or not,” explained Tedrick. “Through new ways of teaching math, students also learn such skills as problem solving, working with others, and the

creation of their own techniques. We show students there are multiple ways to solve one problem.”

“A common theme in our math methods class is learning the importance of number sense,” said Foster. “It ties perfectly with why math literacy is so important. Without proper number sense, children can't fully grasp the concepts of math and its many possibilities.”

“The best way of teaching math is to use hands-on activities, such as manipulatives,” said Tedrick. “The use of manipulatives also keeps students engaged and interested in the lesson. Also, asking the right questions to guide them on the right path is also beneficial. Then, making the students explain how they arrived at their answer, can make them rethink their strategy.”

The games are at different levels and are designed for various readiness levels, noted Huels.

“We do everything from establishing equal parts of a shape, to adding and subtracting different fractions.”

“When it comes to teaching math, visual aids are extremely important,” said Foster. “Without being able to physically see how math works, it prohibits children from fully understanding the concepts. Luckily, with guidance from Dr. Martin, we were all able to complete fun and creative math games that the children seem to really enjoy.”

“These experiences give teacher candidates an opportunity to practice their beginning instructional and communication skills in a low-stakes setting and help provide extra enrichment for elementary students,” said Martin. “Teacher candidates are taught to not only create fun ways to teach math in a hands-on way, but to encourage elementary students to explain their mathematical thinking to build their understanding and communication skills.”

The concept was developed by Martin and Brian Johnson, PhD, associate professor in the Department of Teaching and Learning.

“The project began out of the CIED 321 Literacy course with Dr. Brian Johnson at Eastwood Elementary in 2017,” said Martin. “We scaled up to CIED 441 Teaching and Learning Math (Methods) course in 2018. And this year were able to scale up again adding Ellis Elementary.”

“We thought having a hands-on opportunity for candidates in the CIED 441 math course would be a great way to bridge theory with practice,” continued Martin. “The

experience really helps teacher candidates try out what I am teaching in the course and provide a setting where I can coach them to use the strategies we discuss in the class.”

“I've really enjoyed getting to know the children at Ellis Elementary,” said Foster. “I'm hoping that I can use my new math knowledge for my student teaching next year and my future classroom!”

“I want to become a teacher to help shape young minds and inspire the future generations of our world,” said Tedrick.