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'Math is really the key to everything.'

MARSHFIELD MATH TEACHER JEAN KELLEY

Eureka! Who knew math was riveting?

By Terry Byrne
GLOBE CORRESPONDENT

When Marshfield math teacher Jean Kelley suggested last year that her friend Shaun Sirkin produce a play about mathematics, Sirkin was skeptical.

"I didn't think math concepts would naturally lend themselves to dramatic situations," said Sirkin, whose Boston-based Chamber Theatre Productions tours the country with plays that support middle and high school instruction.

"We've always focused on the literature curriculum," Sirkin said. "But we constantly ask teachers for feedback on what they're reading and what they need help with. We were looking for something a little different, and when we polled teachers across the country, they overwhelmingly asked for a math play."

With Kelley as her consultant, Sirkin put out a call last spring to several play-

MATH

wrights to see what they might come up with. "Eureka!" by Shaun Wainwright-Branigan, jumped out at her right away.

"I read a lot of new scripts," said Sirkin, "Even in the first draft, I could see Shaun knew how to make this subject dramatically compelling."

"Eureka!" focuses on a seventh-grader named Sara, who is struggling with math on the night before a test, when she receives some unexpected help from Albert Einstein, Blaise Pascal, Lady Ada Lovelace, and Pythagoras.

In the course of 60 funny and imaginative minutes, Wainwright-Branigan manages to work in explanations of number theory, order of operations, probability, prime numbers, the Fibonacci sequence, the origins of the calculator and computer, Pascal's triangle, and the golden ratio. The play has been on the road since its premiere in Atlanta on Oct. 29, and Sirkin says the response has been phenomenal.

"We've already added several performances because demand has been so high," she said. "Eureka!" will be performed in Boston at the Berklee Performance Center Nov. 17 and Dec. 4, and at John Hancock Hall Nov. 18 and Dec. 23. "Despite the economic downturn and tightened school budgets, many teachers recognize the need for a creative presentation of these math concepts," Sirkin said.

Sirkin's experience includes producing Tony award-winning plays, and her Chamber Theatre Productions has been working with teachers for 30 years to create educational plays such as "The Legend of Sleepy Hollow," "The Tell-Tale Heart," "The Lady or the Tiger?" and "The Ransom of Red Chief." The company mounts as many as four tours a year, grouping four dramatized stories as one production and stopping in more than 200 cities, providing performances and study guides for the classrooms.



PHOTOS BY ANDREW BRILLIANT/BRILLIANT PICTURES

Actors portraying Albert Einstein and Blaise Pascal have a eureka moment in Shaun Wainwright-Branigan's "Eureka!"

Putting math on a stage of its own

Kelley, who teaches sixth-grade math at the Furnace Brook Middle School, believes theater can be an effective tool for teaching.

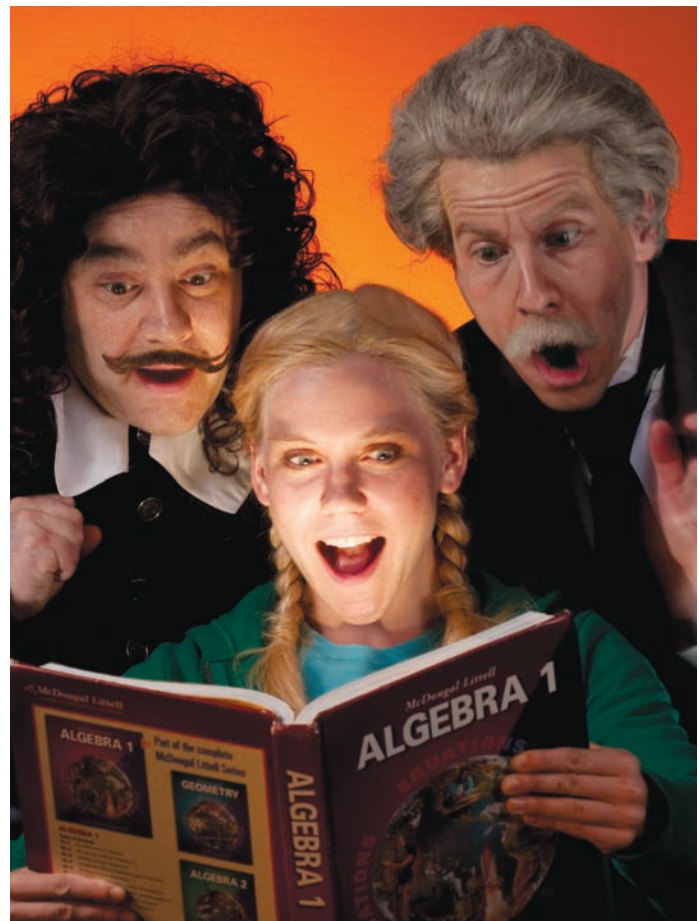
"Sixth- and seventh-grade math is the moment when students move from computational skills to more conceptual skills," she said. "It's a time when a lot of students, especially girls, start to lose interest, and students are no longer able to see the relationship between math and life. But if you can catch their attention, in a dramatic way, you can help show the really essential connection between math and art, poetry, music, and science. Math is really the key to everything."

There's a line in the play, Kelley said, where Pascal explains the difference between arithmetic and math. He says: "Arithmetic is about finding one concrete answer. Math is about finding the patterns in life. Arithmetic is just the tool."

"That's an important distinction for students to make," Kelley said, "and Shaun spells it out so simply."

Kelley read and commented on the script as Wainwright-Branigan completed drafts, and she sat in on several rehearsals to make sure the math was accurate and to help director David Krinitz figure out how to display the math problems without having it look too much like a classroom blackboard.

"I was so impressed with the humor and humanity Shaun brought to these famous mathematicians," said Kelley. "Anchoring these math concepts in funny moments and creating concrete visual links between the ideas and things we encounter as part of our everyday lives, that's what will make math exciting for students."



Actors George Saulnier, Dan Fenaughty, and Myleah Misenhimer appear to find Algebra I highly entertaining.

Being involved with "Eureka!" has given Kelley ideas about the way she presents concepts in her classroom, and she's already started talking to Sirkin about a sequel.

"I suppose we should wait a bit and see what the feedback from audiences is," Kelley said, but she believes there are many more math concepts that would be easier for students to understand if they were dramatized.

"At the end of the play, Einstein says, 'I hope we helped a little.' I think that's what every teacher wants to do," said Kelley. "Not give all the answers, but encourage a student to keep going and make those discoveries on their own."

"Eureka!" tickets are available for some Boston performances: chambertheatre.com, 800-225-7988.