

Sportsometry teaches math through basketball



Annick Winokur, top right, founder of Sportsometry, uses basketball to teach math skills to Dwight School students.

Photos by Peter Hvizdak/Register

By Maria Garriga • Register Staff

Richelle Jones and Alesandra Francis, sixth-graders at Dwight School, both hated math until they started a new after-school pilot program in January called Sportsometry.

Every Wednesday, they learn about math and spatial reasoning by playing basketball.

Sportsometry founder Annick Winokur directs students to bounce balls in ways that create geometric shapes.

A bounce pass helps make a triangle. Four chest passes thrown at right angles create a square.

Under Winokur's tutelage, the students measure, manipulate and draw trajectories and solve related math problems.

"I love basketball, so it's an easier way for me to learn math," Alesandra said.

Winokur founded the program in 2003 as a private nonprofit agency that investigates a correlation between improvement in cognitive processing and spatial reasoning with participation in sports.

She serves as president, executive

director and the lone employee who works directly with children at the Dwight School.

"Before, I didn't know the difference between an acute and an obtuse angle," Alesandra said.

Alesandra said she generally received good grades but nearly failed math in the first quarter of the year. She is now getting Bs, and she credits Sportsometry.

Richelle said her grades went from a C to B+.

"I learned you can do a lot more with math than addition or subtraction."

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Sportsometry founder Annick Winokur, left, uses a basketball to teach Dwight School student Whitney Jordan, 12, some math skills.



Shaping skills

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tion. I wasn't used to it, but I caught on quick. Math is in everything," Richelle said.

Winokur, an avid squash player in New Haven who has played in numerous tournaments, believes that playing squash may have improved her cognitive abilities, specifically in math and spatial reasoning.

Although she has a blind spot in her peripheral vision, she noticed she is still able to track the ball's trajectory through geometry and physics even when she loses visual contact with the ball.

"When you play, you do geometry with your body," she said.

That personal observation, combined with a long-standing interest in cognitive science, generated her research project.

Winokur received a bachelor's degree in cognitive science from Vanderbilt University in 1996 and took seminars on research methodology at Yale University in 2003.

Using the spatial test battery from researchers at Johns Hop-

kins University, she tested 50 seventh-graders at Greenwich Academy at the beginning and end of the squash season; 25 played squash, 25 did not.

"It was a statistically significant difference," Winokur said.

"We were going to use this semester to develop a lesson plan. This is the pilot," she added.

"It's a clever idea. She invented this concept, did some initial trials and got some promising results. More research is definitely needed," said Jean Mauro, who serves on Sportsometry's board of directors. Mauro, a retired patent attorney from North Haven, sees Sportsometry as a project in progress that may be most effective for students with learning deficiencies.

He noted the program has already evolved and will continue to do so.

For example, Mauro said, Winokur started out by using squash as the program's basis and has switched to basketball.

For many inner-city children, the black tar surface of the basketball court is a far more familiar

sight than the squash court.

Winokur plans to expand the program to include dance as well as basketball and will include boys in the program as early as this summer.

For now, she works once a week with six girls ages 11 to 12 at the Dwight School as part of the Leadership, Education and Athletic Partnership's after-school program.

LEAP offers after-school activities to children in low-income neighborhoods.

"It's different from any other of our programs," said Amarilis Franjul, LEAP site coordinator for the Dwight-Kensington neighborhood.

"We want to bring math to children in fun ways. We use math every day, but it's not about doing long division on paper, it's about knowing two by two is four in less than a second. It's about getting quick," Franjul said.

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