

How was school? Engaging

Emerging technique feeds children's minds with art, music, food

Erika Hobbs | Sentinel Staff Writer

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While most Orange County school children get to flex their quadriceps or biceps, it's not every day they get to work their frontal lobes in gym class, too.

For youngsters at Wolf Lake Elementary in Apopka, pumping their muscles is just another way to exercise their minds.

Principal Carroll Grimando and her team follow one of the hottest educational strategies nationwide -- "brain-based teaching," a philosophy that applies what neuroscientists have learned about the brain to classroom instruction.

It focuses heavily on movement, music, art, nutrition and other tactile techniques to prod little brains into powerhouses.

Wolf Lake is one of about a dozen Orange County schools and hundreds statewide that adopted the techniques.

"We were looking for anything that might give our students the edge," said Jana Ricci, a former teacher and Winter Park parent who first brought the concept to Orange County at Brookshire Elementary in 2000.

Wolf Lake, a public school that opened in August, is Orange's first to fully embrace the concept. All the teachers are trained in its techniques, and brain health, structure and function are woven into the curriculum.

The school looks and sounds different.

HOW BRAIN-BASED TEACHING WORKS

In brain-based teaching, teachers stimulate as many areas of the brain as possible to make a lesson stick. They also try to light up both side of the brain: the left, which controls word formation, and the right, which is responsible for abstract reasoning.

In place of rote memorization or flash cards, 4th-graders might sing all 50 states. Kindergartners might trace the alphabet in shaving cream. Second-graders might learn punctuation by running — slowing down when they see a comma, stopping at a period.

Kids also get 'brain break' activities that help them re-focus, such as juggling or choreographed dances.

The diagram illustrates the functional areas of the brain. The left hemisphere is associated with 'Speech' and 'Abstract thought'. The right hemisphere is associated with 'Thought and consciousness' and 'Body movement'. Other functional areas include 'Touch', 'Hearing', 'Sight', 'Coordination', and 'Cerebellum'. The lobes are labeled: Frontal lobe, Parietal lobe, Temporal lobe, and Occipital lobe.

SOURCES: BRAINCONNECTION.COM, JLCBRAIN.COM, NATIONAL INSTITUTES OF HEALTH

Gone are long lectures, rote circling in workbooks, spelling and math drills. Wolf Lake is vibrant and loud: Children paint and rap the alphabet and pair off to teach each other lessons. Music, not a bell, signals the transition between classes.

Parent Amy Hutchinson is no longer apprehensive about transferring her two boys from private school to Wolf Lake.

They now love school, get great grades -- and have even begged for blueberries, fruit for the brain.

"This whole thing has been intriguing," she said. Grimando "runs an excellent program and it's been a great

experience."

No studies have been done to show how well brain-based teaching boosts student performance, however, so many critics call it just another fad.

Grimando and others disagree. It's another tool in the teaching toolbox, they say.

"We know more about the brain now than ever before," said Marcus Conyers, a Winter Park consultant who teaches brain-based learning strategies nationwide.

For the first time, teachers are not relying on tradition or intuition, he and other proponents said. In many cases, it appears science now affirms what they've done all along.

"It's everything good teachers already know," Grimando said.

The idea took flight in Orange after Ricci helped the school secure a grant from the Winter Park Health Foundation to push good nutrition and hydration habits, and after the state hired Conyers to work with several districts, including Orange, to lower dropout rates.

At Brookshire, Ricci's grant bought 10 new water fountains and water bottles for every student. The school promoted a shift from sugary junk foods because research shows that the brain needs a low-fat, protein-packed, nutrient-dense diet for peak performance.

It worked so well that Ricci's efforts quickly spread to Winter Park High and the nine elementaries, two middles and technical school that feed into it. Teachers expanded the program and now use a variety of brain-based teaching strategies.

"Does it work?" Ricci asked. "Brookshire has kept its A every year since then."

Wolf Lake and the Winter Park schools now teach their children to reach for 10 key foods, including salmon and broccoli.

Hutchinson said her boys now ask for blueberries instead of candy.

"I couldn't believe it," she said.

Eric Jensen, a San Diego-based advocate whose work has been adopted across the country, thinks of it as "ESP" -- mnemonic devices are key in brain-based teaching -- or "engagement of strategies that are based on principles of brain research."

The concept builds on the "right-brained," "left-brained" concepts, using neuroscientists' attempts to understand how the brain works by using various forms of magnetic imaging to illuminate its pathways.

Many researchers have created practical applications for the findings. For example, work in the 1990s led to software and curricula that have significantly helped tackle some learning and reading disabilities.

Educators who embrace the concept generally accept that memory is malleable, experience shapes the brain, and emotion is a catalyst in learning.

The practice relies on feeding the brain -- nurturing it with plenty of water and foods containing protein and omega-3 fatty acids, along with strategies that make memories stick and capture short attention spans.

One way teachers do that is to teach children in seven- to eight-minute spans with "brain breaks" in between. Instructors often use a bag of tricks, from jingles to mnemonic devices, to teach letters, states and punctuation.

Even the breaks, which aim to reduce stress and harness wandering minds, are calculated to stimulate interest and enhance learning.

Fourth-grade teacher Eudeen Mott, for example, assigned the eight parts of speech to eight body parts, to help her kids remember them.

On a recent December afternoon, Debbie Rosselle propped a white easel amid the jump ropes and free

weights in her physical-education classes.

Her goal, she told her students, is to build healthy bodies and healthy minds. She reviewed vocabulary and fun facts -- that a human walks almost 70,000 miles in a lifetime, for example. Those who wanted to be chosen captain of a relay team had to correctly answer a question from the lecture first.

Across the building, teacher Jayme Hubbard introduced finance concepts to her second-graders using music and dance.

Holding huge cardboard coins, she first defined "income" and then asked the class what "services" they can provide to earn an income.

After several lukewarm responses, Hubbard stopped the class for a "brain break" -- a short, choreographed dance that uses both sides of the brain -- to let kids regroup before their brains tune out.

Hubbard popped in a CD, and the class shimmied in the cha-cha slide, a trendy dance that requires kids to follow directions.

After three minutes, they cooled off, drank some water, and sat down.

This time, the responses were much better: mowing lawns, cooking dinner, washing clothes.

Grimando's new school has not yet been graded by the state. But she hopes her brain curriculum will be the boost the kids need, saying, "The proof will be in the pudding."

Erika Hobbs can be reached at 407-420-6226 or ehobbs@orlandosentinel.com.