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PROMOTION

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GROUNDBREAKER AWARDS

THURSDAY, OCTOBER 9, 2014

ATLANTA HISTORY CENTER GRAND OVERLOOK BALLROOM

for making an impact

CONT

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2014 GROUNDBREAKER FINALISTS

ArtsBridge

For introducing the arts to 240,000 students and teachers

The Center for Civil and Human Rights

For connecting Atlanta's past with today's global struggles

The Coretta Scott King Young Women's Leadership Academy

For encouraging girls to reach their potential

Emory University and Georgia Institute of Technology

For creating a top-ranked biomedical engineering program

Fugees Academy

For giving refugee children a place to play and thrive

IS3D Educational Software

For making science come alive

Midtown Buzz

For linking communities through mobile tech

Odyssey

For reinventing summer school

READING Paws

For giving young readers confidence (and cuddles)

The Rollins Center for Language and Literacy

For helping to bridge the word gap

VOX Teen Communications

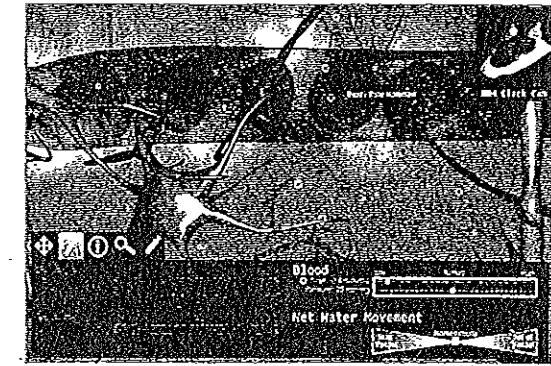
For giving teens a voice

PNC celebrates achievement and the 2014 Groundbreaker finalists. Because we're committed to helping tomorrow's leaders become present and visionary leaders.



For the art of the future.

Atlanta



IS3D EDUCATIONAL SOFTWARE

For making science come alive

by MICHELE COHEN MARILL

CLARK THE CALF IS SERIOUSLY ILL. As he lies on the ground, his head jerks in a seizure. It's up to Denice Esterly's biology class at the Walker School in Marietta to save his life.

The cure involves osmosis, in which water molecules pass across a permeable cell membrane—a concept they have just learned about. Step by step, they discover that Clark needs a saline solution to coax excess water out of his brain and into his blood vessels. Moments after the solution is administered, the calf is sitting up, enjoying his handler's strokes between his ears.

The students aren't in a barn but are observing Clark by video and diagnosing him using an interactive case study created by IS3D, an educational software startup that originated at the University of Georgia. The company's programs use video, animation, and real-life examples to help students understand ideas like osmosis, diffusion, and filtration.

IS3D (Interactive Science in 3-D) grew out of the frustration of UGA veterinary school professors, who felt students needed a better understanding of cell biology. They partnered with Casey O'Donnell, a Michigan State anthropologist who studies and designs games, and the result was powerful. "It's hard to visualize what the inside of a cell looks like," says Tom Robertson, CEO of IS3D and an associate professor of physiology and pharmacology. "If you

can show them that world, they can learn much more quickly about these biological pathways."

A \$1.3 million grant from the National Institutes of Health enabled IS3D to develop case studies that boost the critical-thinking and problem-solving skills of high school students. Further funding from NIH, the National Science Foundation, and the Georgia Research Alliance, along with input from teachers, is allowing IS3D to create a suite of ten case studies, interactive guides, and texts.

The software allows teachers to track students as they move through the case studies and intervene if students struggle with a particular concept.

A similar program is being developed for elementary and middle school students. The products will be available commercially as Cogent Education.

Technology and real-world stories are just the way to engage today's device-dependent students, says Esterly. "You can see the look on their faces if they did the wrong thing and Clark has a seizure," she says. "They want to go back and fix it and save Clark. They care about that cow." (Note: No cattle were harmed to make the video. At the end, students learn that Clark's "seizures" were actually created by shaking the calf's rump while someone filmed the movement of his head.)