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Great GORGE Park

COMMENT
Why it's finally time
P. 7



PLUS! FOUR OTHER COOL LESSONS LOCAL UNIVERSITIES TAUGHT US THIS YEAR.



SCHOLASTIC FANTASTIC FIVE LESSONS FROM LOCAL UNIVERSITIES THIS YEAR

ILLUSTRATIONS BY JEFF DREW

EDUCATION

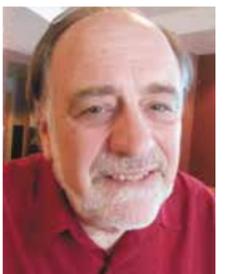
WE CAN RESURRECT A FAILING SCHOOL

BY DANIEL WALTERS

Some ideas about education seem almost iron-clad: Poverty is nearly impossible to overcome. Sudden change just makes everyone angry. Swapping out administrators can't fix a struggling school.

But Chuck Salina, department chair of leadership and administration at Gonzaga University, has practical, on-the-ground experience that says otherwise. From 2010 to 2012, he served as a "turn-around" principal, tasked with reviving a Tri-Cities high school failing by nearly every measure.

The results shocked even him. "It's freakin' scary," Salina says. "This is so much bigger than anything I did."

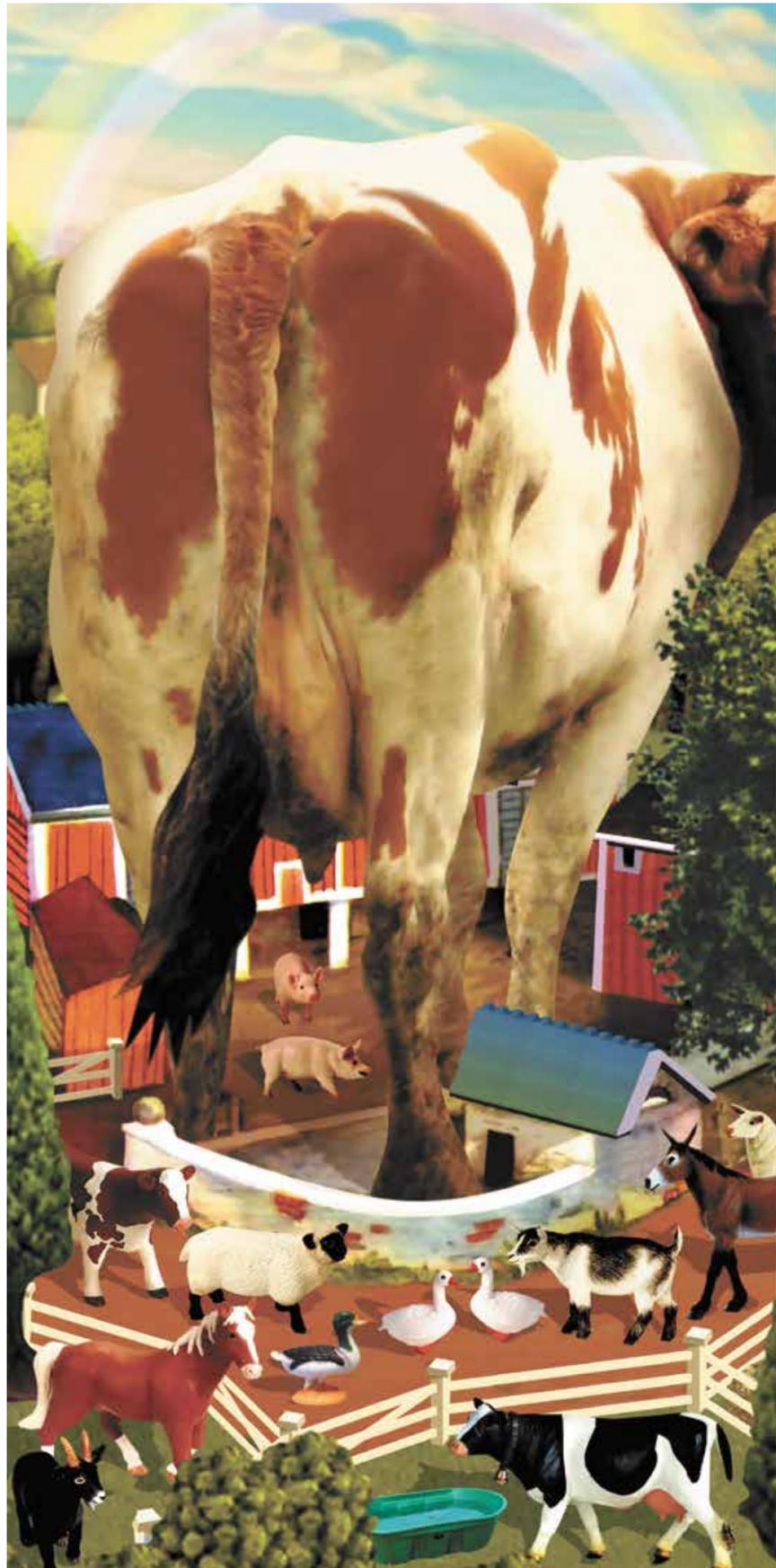


Chuck Salina
GONZAGA UNIVERSITY

Make no mistake, Sunnyside High School was in trouble. In the classes of 2007, 2008 and 2009, fewer than half the students had graduated — and the closure of the district's alternative school, sending a wave of troubled students to Sunnyside, made things even worse.

Few schools in Washington had as many disadvantages. Nearly the entire Sunnyside student body is Hispanic, many are bilingual, and some students can't speak English at all. Poverty is so widespread that every student gets a federally funded free lunch and breakfast. Fights broke out in the halls. The surrounding town was beset by gang violence.

There was one silver lining. Those problems made Sunnyside eligible to win a federally funded School Improvement Grant, if it was willing to dismiss its current



SCHOLASTIC FANTASTIC

BIOENGINEERING

WE CAN TURN COW PIES INTO PLASTIC WRAP

BY JACOB JONES

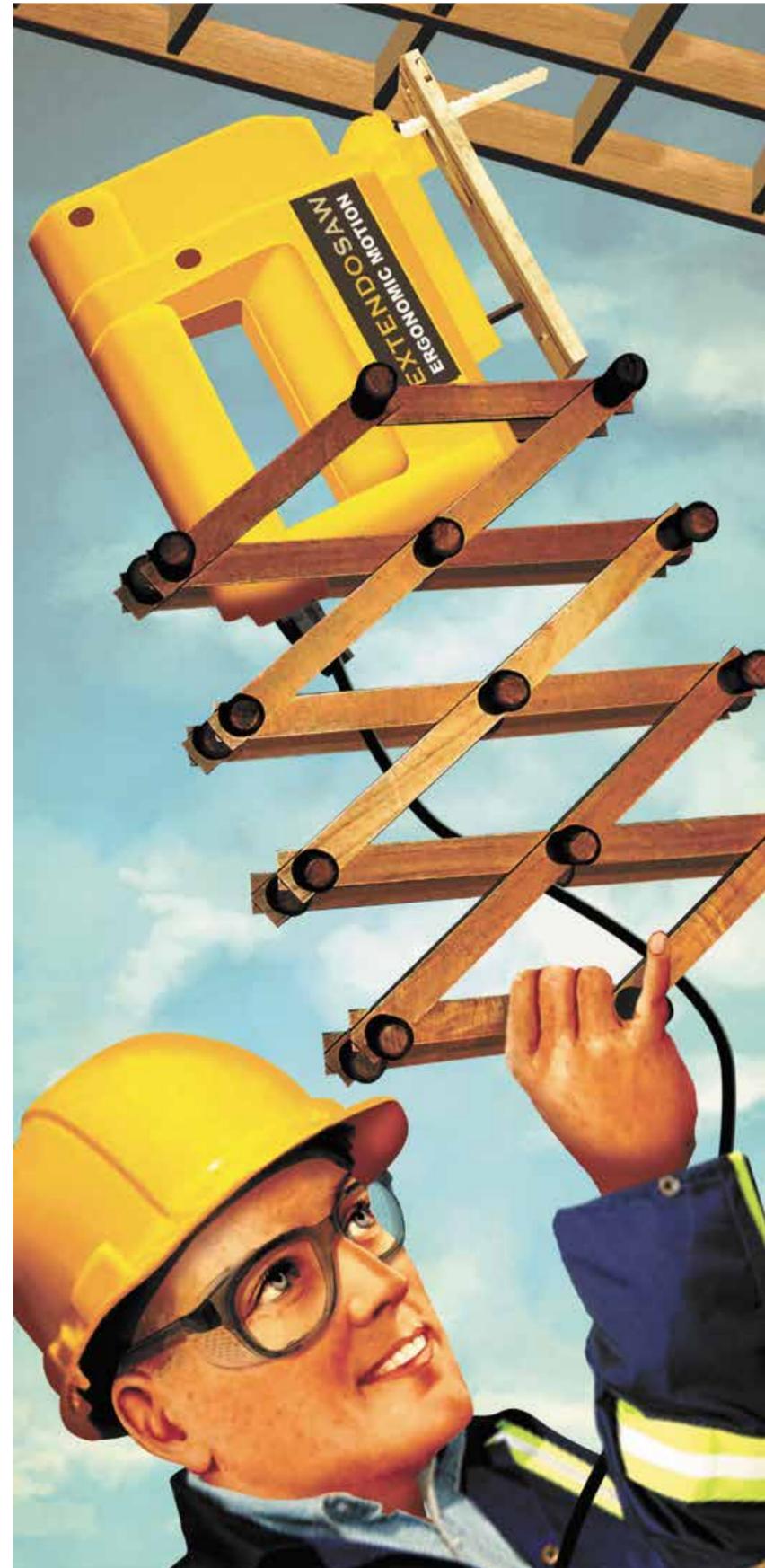
So much waste. Millions and millions of pounds of the stuff each year — a disgusting by-product no one really wants, most of it free for the taking and chock-full of unused raw materials. Erik Coats, an associate professor of civil engineering at the University of Idaho, took stock of the more than 8,000 dairy farms statewide, all of them brimming with manure.

He could smell great potential, among other odors.

“Historically, we’ve viewed waste streams as bad,” he says. “[But] it’s a raw resource that we can process into something valuable.”



Erik Coats
UNIVERSITY OF IDAHO



SCHOLASTIC FANTASTIC

ERGONOMICS

WE CAN MAKE WORK SAFER

BY E.J. IANNELLI

In the Biomechanics and Ergonomics Lab of EWU’s Department of Physical Therapy, a mannequin head lies wide-eyed next to a skeletal torso. Crowded into a corner are several beds and chairs with hard vinyl cushions and adjustable components; a photography lighting setup is jumbled in another corner.

Just below the ceiling, the room is ringed by devices that look like large security cameras. At desk height there’s another ring of hardware in the form of computer workstations.

Graduate research assistant Neil Morris is standing by one of them, holding a wire. “This is an electromyography, or EMG, electrode,” he explains. “With tape it attaches to the surface of the skin, and then through the skin it picks up the amount of electrical activity in the muscle. This then plugs into this device” — he points to what could be a ham radio set — “which communicates wirelessly with the computer to record that activity.”

“It’s actually a fancy voltmeter,” Dan Anton adds, referring to the ham radio. “But this thing costs \$15,000, so it’s not your typical voltmeter.”

Anton, an associate professor in the Physical Therapy department, heads a research effort that includes Morris and several other research assistants like Jayme Gilmore, who’s also here conducting this impromptu tour. Their grant-based research focuses on “work-related muscu-



Dan Anton
EASTERN WASHINGTON UNIVERSITY, RIVERPOINT CAMPUS



SCHOLASTIC FANTASTIC

SUSTAINABILITY

WE CAN OPEN A LOCAL MARKET TO HELP OFFSET OUR ENVIRONMENTAL SINS

BY LISA WAANANEN

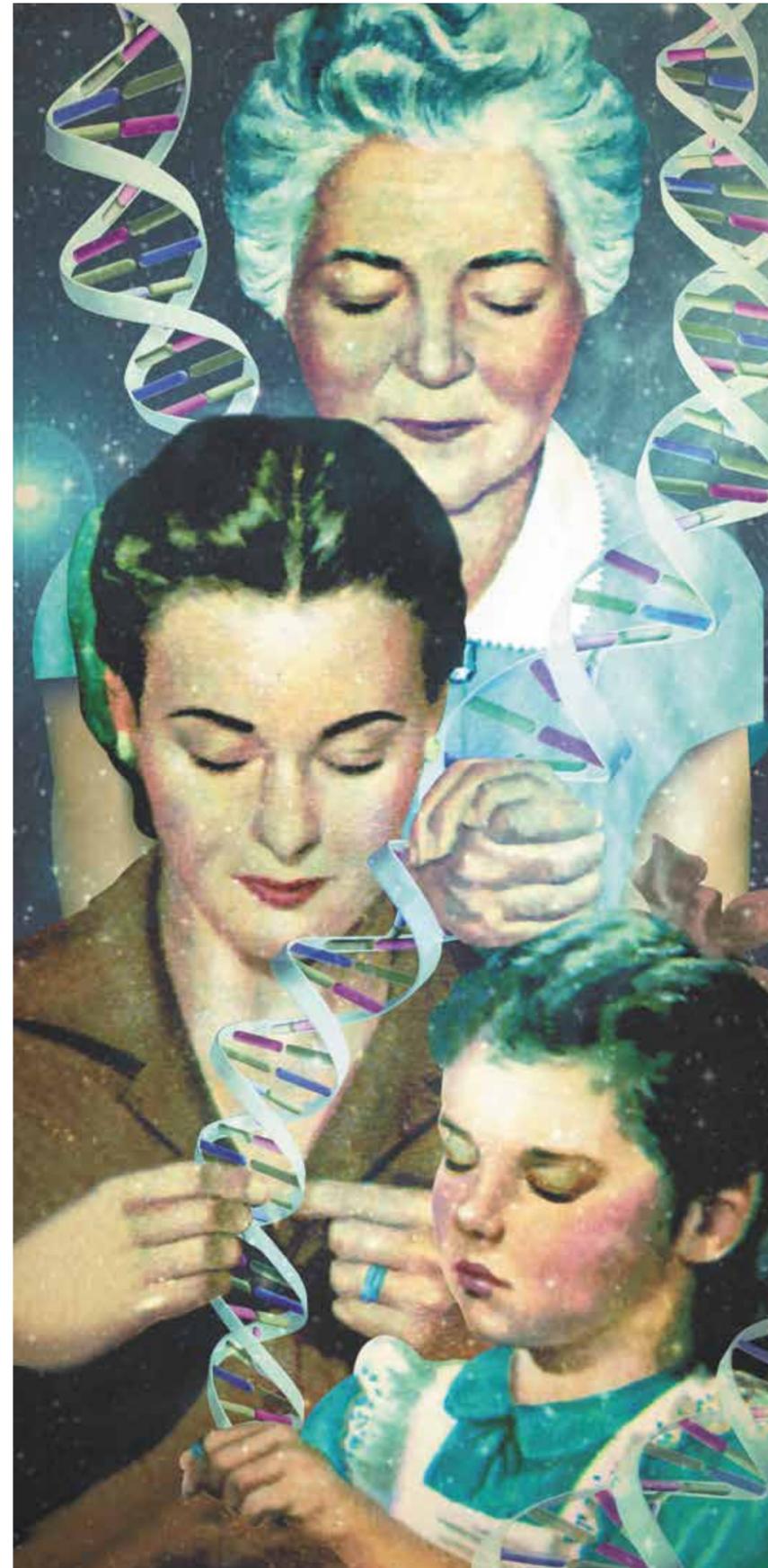
The idea started coming together last year when Patrick Van Inwegen was on sabbatical at Whitworth University's program in Costa Rica. There, the campus is built on former cow pasture land that was once tropical forest, and the community is working toward reforestation. Costa Rica as a nation is working to become carbon-neutral in the next decade, and it's a great place for Whitworth students to learn — but getting there requires a long, bad-for-the-environment flight. So visiting students spend part of an orientation day planting trees to offset the carbon emissions of their travel.



Patrick Van Inwegen
WHITWORTH UNIVERSITY

This is one instance of carbon offsetting at the local level, and it's a concept Van Inwegen, an associate professor in the Political Science department, is now bringing to Spokane.

"The idea is kind of like a farmers market to bring consumers and producers together," he says.



SCHOLASTIC FANTASTIC

BIOLOGY

WE CAN SEE HOW CHEMICALS AFFECT THE DNA OF FUTURE GENERATIONS

BY HEIDI GROOVER

In a January *Science* magazine story about his work, the word "heretic" is splashed in teal letters across the page. On those pages and elsewhere, he's been called a "maverick" and a "pioneer," winning over some of his fellow scientists while outraging others.



Michael Skinner
WASHINGTON STATE UNIVERSITY

That's because Washington State University's Michael Skinner has called into question the fundamental scientific understanding of what makes us susceptible to disease. Until now, he says, much of science has been built on the understanding of genetics as the way we inherit traits and on the belief that mutations in our genetic material — our DNA — are what make us susceptible to diseases like obesity and cancer.

"What I'm suggesting is that the DNA sequence is very critical — we can't live without it — but it's only a small piece of a much bigger story," he tells the *Inlander*.

The rest of that story, according to Skinner, can be seen in the work of his lab. There, he and his team are