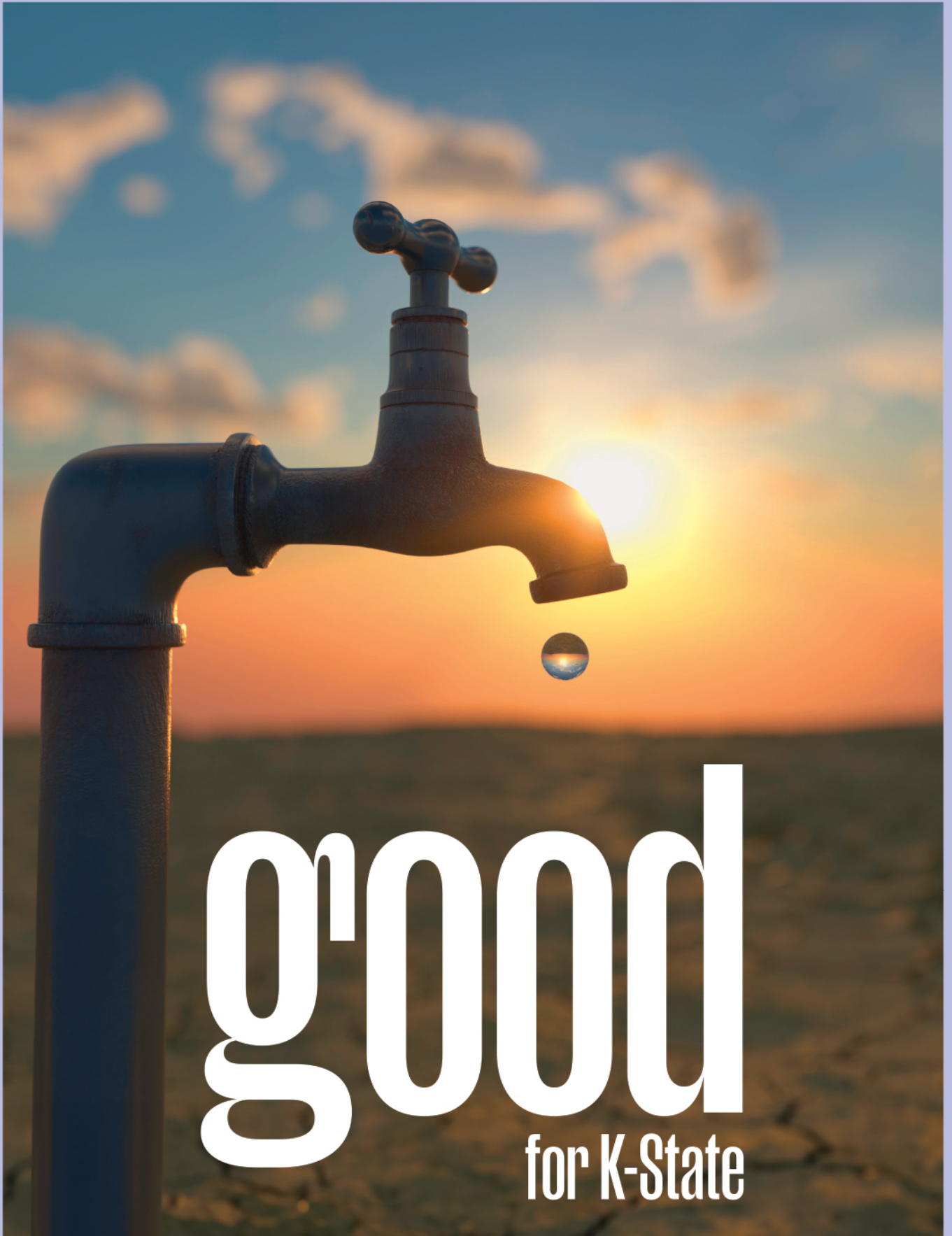


Every last drop: Tackling the water crisis

GOOD FOR K-STATE • SUMMER 2024



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KSU FOUNDATION MAGAZINE

SUMMER
2024

Can the rural grocery store survive? ^{P. 14}

Hard work and help from a K-State toolkit prove it's possible.

Good for K-State is devoted to boldly advancing K-State through private philanthropy. Send your questions and ideas to good@ksufoundation.org.

IS THE WELL ALREADY DRY? ^{P. 2}

K-State's dream team of water experts says it's not too late for smart solutions.

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ENVIRONMENT



**EVERY
LAST
DROP**

By next year, half of the world's population could be living in areas facing water scarcity, including Kansas. K-State experts are taking on this challenge.

BY MARISA LARSON

WATER IS LIFE — and it's disappearing at alarming rates.

People's thirst for water has grown more than two times faster than the population. But the increase in water usage isn't just due to more people on the planet. We're using more than ever before. The challenge we now face is how to effectively conserve, manage and distribute the water we have.

Of all the freshwater basins in the U.S. that channel rain and snow into the rivers — from which we draw the water we rely on for everything from drinking and washing to producing our food — nearly half may be unable to meet consumers' monthly demands by 2071. This will mean serious water shortages for Americans.

RUNNING DRY

In Kansas, the outlook isn't any better. As America's breadbasket, that's bad news for the state's economy and the world's food pantry.

The High Plains aquifer, which includes the Ogallala aquifer, is the most important water source for much of western and central Kansas, supplying 90% of the water used by Kansans each day. The majority of water from the High Plains aquifer supports irrigated agriculture (80%–85%), but it's also the primary water source for the region's cities, industries and homes.

More than one-fourth of the aquifer is at "minimum threshold" according to Brownie Wilson, water data manager with the Kansas Geological Survey. That means it's not possible to extract 200 gallons per minute, a minimum rate for large-scale irrigation. Within 50 years, almost half of the aquifer in southwest Kansas is expected to decline to minimum threshold, based on predictions from past groundwater declines.

CLOGGING THE WORKS

Eastern Kansas also faces water woes. Municipalities and industry are the main consumers, with their source being surface water — rivers, lakes and reservoirs. While the usually wet region has had to deal with drought in recent years, its main problem is sedimentation.

How does that work? Tuttle Creek reservoir, which provides water for a large area around Manhattan and protects areas south from floods, has lost 47% of its capacity because it is filling up with sediment. If something isn't done to fix the problem, by 2070 it will only have 10% of its capacity remaining.

FINANCIAL FORECAST

The two biggest drivers of the Kansas economy are agriculture and manufacturing — and both depend on water. Dried-up aquifers and silt-filled reservoirs will afflict all Kansans.

"Let's plan to maintain the economy out in western Kansas. Let's try to do whatever we need to do today to make sure that 100 years from now, we have a sustainably irrigated ag industry out there, because it's important," said Bill Golden, research assistant professor of agricultural economics.

SEARCHING FOR SOLUTIONS

While water scarcity is a global and local crisis, our brightest minds are working to find solutions. Attacking the issue from all sides, more than 100 K-State scientists are working together, sharing research and collaborating on projects.

Their work is being organized by the Kansas Water Institute, K-State's new interdisciplinary program to elevate critical research.

OUR THIRSTY WORLD

1.1B

people worldwide lack access to water

4B

people experience severe water scarcity for at least one month each year

OUR THIRSTY STATE

90%

of water used in Kansas is groundwater from the High Plains aquifer

47%

of Tuttle Creek reservoir's storage capacity is gone due to sedimentation

PHOTO: JONATHAN KNOWLES VIA GETTY IMAGES

MEET THE DREAM TEAM

K-State researchers are tackling the water problem from all angles — technology, farming practices, outreach and conservation methods. Here are just a few examples of this vital work.



COURTESY PHOTOS

FUTURE-FORWARD FARMING

VAISHALI SHARDA

When making important decisions, wouldn't it be nice to have a glimpse of what the future holds?

Vaishali Sharda, assistant professor of biological and agricultural engineering, is creating a tool that helps farmers forecast the future.

By taking information from on-the-ground sensors, satellites and remote sensors, her system

helps crop producers conserve water, as well as manage nutrients in soils. The tool shows farmers multiple outcomes for crop production under future climate scenarios, giving them the insight needed to adjust to climate-smart practices that better manage their resources and boost their productivity.



INCREASING WATER EFFICIENCY

CHUCK RICE

Drought or deluge. Dryland farmers across Kansas face these extremes, often in a single growing season.

As part of a team of scientists across the country, Chuck Rice, university distinguished professor of soil microbiology and holder of the Mary L. Vanier University Professorship, works to improve water use efficiency and soil health for these farmers.

“What we’re trying to do is intensify and diversify those systems,” Rice said. “In the years with more water, can we double-crop instead of having land bare over the summer? Another way to intensify and diversify is to add cover crops that could also be grazed to feed livestock.”

To achieve this, his team is applying different strategies to 17 rotation systems in Kansas and Oklahoma. The researchers adjust the nitrogen/fertilizer rate. In a dry spring, less nitrogen is added; for a wet year, more nitrogen is added.

“If you have improved soil health, water from intense rainstorms is infiltrating into the soil rather than running off the field and causing erosion,” Rice said. “That allows the crops to use that water, increasing precipitation use efficiency.”



DESIGNING CONSERVATION

LEE SKABELUND

From taking shorter showers to creating landscapes that soak up snow and rain to landscaping with native plants that require little extra water — these are things everyone can do to conserve water.

Lee Skabelund, associate professor in landscape architecture/regional and community planning, works with students and communities to create gardens and landscapes that need very little supplemental irrigation.

“Landscape ecology is about making connections to how things work together,” Skabelund said. “When planting a garden or landscape, use native

plants or non-invasive plants that are well-adapted to our region. These will need less water and won’t need fertilizer or other supplements. This helps the whole ecosystem, including bees and insects, which are vital for a healthy ecosystem.”

Much of Skabelund’s career has been working with community officials, planners and engineers to design environmental systems that help with stormwater management, water conservation and restoring the local ecology. Implementing his designs not only saves water; it creates beautiful, life-filled scenery.



PEOPLE POWER

MATTHEW SANDERSON

New high-tech tools and soil-health measures created by researchers are only good if they’re put into practice by farmers and ranchers. That’s where Matt Sanderson comes in.

Sanderson, a sociologist and the Randall C. Hill professor of sociology, anthropology and social work, gets to know the people of western Kansas, finding out what they think and why they do what they do.

Sanderson has found that ag producers utilizing the High Plains aquifer do think there’s a need for conservation. His 2018 survey found that 90% of farmers said water needs to be conserved, acknowledging there’s a problem. But he also found that only 7% were doing something about it personally.

Why the dichotomy between thoughts and behavior? Sanderson said it has a lot to do with how ag policies don’t reward water conservation but actually encourage water use. And many farmers believe they’re already being as efficient as possible.

Sanderson collaborates with engineers, agronomists, hydrologists and policy analysts to ensure the human factor is considered in their work. Because when it comes down to it, nothing improves without people buying in and working together toward a solution. ■

INTERESTED IN SUPPORTING THIS WORK?

 **Contact us**
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Getting students out of the classroom and into the real world

BY HEATHER ACKERLY

CLASS DISMISSED

TODAY'S K-STATE STUDENTS — they're just like us. (Only smarter.)

Why? Because they're not stuck in the classroom. For some lucky students, their K-State journey elevates classroom learning to a real-world context — from revising a community's bicycle safety plan to isolating proteins in cancer cells.

Stepping out into the world to apply what they've learned from outstanding K-State professors drives our students to see issues from new perspectives. They develop a new understanding of how to use their education and develop valuable life skills such as financial literacy, cultural appreciation and critical thinking.

These high-impact experiences position K-State students as leaders right out of the gate after graduation and, perhaps most importantly, allow them to learn more about themselves.

Meet six students who left the classroom, put their education into action and discovered how much they're capable of.

HIGH IMPACT Andrew Navarro worked two internships and studied in Spain. What if every K-State student experienced these life-changing moments?



THE WRITER FINDING HER OWN STORY

TYONI WILLIAMS came to K-State to study architecture and is leaving as a journalist. Her mom was not surprised.

"She was confused that I didn't initially pick journalism because I've always been obsessed with storytelling," Williams said. "But then she said, 'You'll find you.'"

And she did. As a mass communications major, Williams' internship with Lents Mazur & Associates, a strategic consulting firm in St. Louis, built on her classroom learning and broadened her writing experience.

"I had never written a press release or professional social media content before," she said. "So writing things for a company to actually use was an invaluable experience."

On a trip to Costa Rica with her Latinx literature class, she cleaned parks and rivers and worked with a medical clinic for their unhoused population. Though the trip was only a week, what she learned will last a lifetime.

"It was very emotional meeting the people we were helping," she said. "I realized the experience was more likely to change my life than the people I was helping. I gained more perspective about the world."

What's her advice to other students about internships or travel?

"Just go for it," she said. "If there is not a way, make a way."

MAJOR

Mass communications

HOMETOWN

Kansas City, Missouri



THE ENGINEER MAKING HIS OWN PATH

MAJOR
Civil
engineering

HOMETOWN
Olathe,
Kansas

Over the course of three internships, civil engineering major **NICK SAIA** learned this fact of life:

"Your relationship with your boss and others can really change the course of your experience," he said. "For better or for worse."

His second internship — the one that wasn't strictly about engineering — delivered his most profound experience. As the City of Manhattan's bicycle and pedestrian coordinator, he put his engineering education into action.

"I worked with city planners who knew more about engineering than I did," he said. "But they let me take my own path, which was great. I had agency and responsibility that I hadn't been given before."

Saia leveraged his third internship into a full-time engineering job. His next stop after graduation will be with Burns & McDonnell's transportation department.

"Because of the opportunities I had at K-State, I know I can take risks," he said. "I'm not afraid to try something a little bit different."



THE FUTURE DOCTOR WHO CAN'T STOP LEARNING

Does **MAGGIE BANHART** have more hours in her day than the rest of us?

It's a reasonable thing to wonder when you hear everything she does: volunteers with K-State's food pantry, works as a nursing assistant at a Kansas City assisted-living facility, serves as an ambassador for prospective students.

She's also trying to cure cancer. Her research? Isolating proteins in cancer cells.

"There is a certain protein that inhibits some cancer cells," she said. "But in colon cancer, it makes it an oncogene, which causes it to regenerate super fast. We're trying to figure out how to disable oncogenes in certain types of cancers."

Because Banhart wanted to improve her Spanish, she found a healthcare-focused learning experience in Argentina.

"We would follow the doctors around and listen to patients' hearts and see x-rays and CT scans," she said. "My favorite part was getting to speak Spanish every day. The aspect I was dreading initially improved my confidence."

Schedule-packing Banhart likes to always be learning.

"If I hadn't taken advantage of all these unique opportunities, I would have been bored," she said. "And spent too much time on TikTok!"

MAJOR

Biochemistry and Spanish
(pre-med)

HOMETOWN

Lee's Summit, Missouri



THE STATISTICIAN WHO CAN SAVE THE WORLD

DURU DOĞAN has loved math since high school. As she says, "Math just makes sense."

Itching to put her classroom learning to work, Doğan joined a research project to determine whether increased drone strikes in Pakistan would increase anti-American sentiment.

"I measured the number of Pakistani visa applications to study higher education in the U.S. and compared it to previously gathered drone strike data," she said.

Not satisfied with just one research project, she found another focused on the correlation between high-flavonoid foods and cancer. No class credit — it was just for fun.

She studied abroad twice: in Turkey and Belgium. In Belgium, she looked at political science from a new vantage point.

"It's a lot more theoretical than at K-State," she said. "Here it's more modeling and quantifying conflict or political concepts."

How did research and studying abroad change Doğan's view of her K-State experience? "If you don't step past the classroom," she said, "you're not getting the most out of your college experience. Right?"

MAJOR

Statistics,
political
science and
French

HOMETOWN

Manhattan,
Kansas

THE SCIENTIST LEARNING MORE THAN SHE EVER IMAGINED

MAJOR
Biology (pre-med)
HOMETOWN
Dodge City, Kansas



It's understandable that **LIDIA LOPEZ-VAZQUEZ** was nervous when she came to K-State. She was taking a big step — from community college to a big-time research university.

"I think applying to come here was one of the most rewarding things I've done," she said.

Opportunities at K-State evolved her research experience from testing household cleaners on bacteria to studying how environmental stress can cause the development of a second cell type in multicellular algae and examining the changes in cellular differentiation.

"We're trying to get the basis of cellular differentiation," she said. "If we can understand it in this simple model system, we can apply what we've learned to other systems, such as cancer development."

K-State also opened the world to Lopez-Vazquez. On a trip to Italy as part of the First-Generation Experience, she met new people, marveled at the Colosseum and soaked up some viniculture science — aka winemaking.

"We went on a wine tour and saw the stages of making wine," she said. "Fermentation, aging, storing — from the classroom to real life!"

Lopez-Vazquez's high-impact opportunities have been transformative.

"My education at K-State would not have been the same if I had only gone to classes," she said. "Building a community and having these experiences has shown me that I can do so much more than I can imagine."



THE POLITICO BROADENING HIS PERSPECTIVE

MAJOR
Political science
(pre-law)

HOMETOWN
Leawood, Kansas

From statewide election strategy to community cemetery maintenance, **ANDREW NAVARRO**'s internships and research projects put him in the room to learn about public service firsthand.

After an internship in the Kansas State Treasurer's office — where issues were statewide — a research project through K-State's Chapman Center for Rural Studies gave him a hyperlocal focus.

Navarro analyzed why more women tend to hold locally elected offices rather than state or federal positions. His research found that while men viewed local positions as entry points to higher office, women were more interested in seeing that a competent person would handle local responsibilities well.

"For example, a county clerk often seems to go above and beyond and help others in a way that's out of their job description," he said. "From budgets to fishing licenses to community cemetery maintenance, their jobs can have enormous scope."

To help with his Spanish minor, he spent a semester in Granada, Spain. In addition to enjoying the paella and patatas bravas, Navarro was taken with the way the local residents interact with each other.


"The way they communicate is very genuine and intimate. It helped me understand their culture and be open to new experiences," he said. "Their communication style definitely made me feel more accepted in an unfamiliar place." ■

SUPPORT HIGH-IMPACT LEARNING FOR ALL

Let's make it happen! Giving all students opportunities to learn outside the classroom is a central part of the Next-Gen K-State strategic plan.

While redefining what a K-State education looks like comes with a price tag, imagine the potential payoff:

What new medical discoveries would we see? What innovative city designs might be born? What could the next generation of young leaders do for our world?

 **Learn more about applied learning experiences**
ksufoundation.org/gfks/highimpact





PHOTOS: DAVID MAYES PHOTOGRAPHY INC.



MAIN STREET in Axtell, a town that saved its grocery store.

MORE THAN A STORE

Grocery stores are the glue that helps rural communities stick together, so K-State helps them keep the shelves stocked

BY ALISON ROGERS

ON A COOL, clear Thursday morning in March, the town of Axtell woke to one of those striking sunrises that only emerge after a night of severe storms in northeast Kansas. As the light glinted off windows and damp streets, many of the town's 398 residents headed to school and work. Several ducked into the Axtell Community Grocery for a slice of breakfast pizza and a neighborly chat on their way.

The scene may sound commonplace, but the grocery store at the center of it is anything but.

Axtell fought for it. Through an outstanding showing of community pride and grassroots action — combined with the guidance of Kansas State University's Rural Grocery Initiative (RGI) — this store became a small-town success story worth telling.

WHAT'S THE BIG DEAL?

In 2022, Axtell's longtime grocer decided to sell. The town was at risk of losing a vital resource, and it wasn't alone. According to K-State Research and Extension, 105 grocery stores in rural Kansas closed between 2008 and 2018. And of the affected communities, only half filled the gap with another grocer.

Can't residents just drive to the next town 26 minutes down the road? Is a closing grocery store really a catastrophe? Yes, if you consider the role it plays in Axtell. For this small town and others like it, a grocery store is more than a place to grab food staples.

"This is so much bigger than a grocery store," said Bob Lozier, store manager.

grocery stores also supply much-needed jobs.

"We were aware of K-State's research showing that housing, population and property values drop off a lot if you lose your store. We'd still have a school, but if we lose the store, we knew it could snowball," said Bill Buessing, a local farmer and president of Axtell's grocery board. "At the town meeting, one guy in the back stood up and said, 'Sometimes you have to do something — you have to just put your head down and bull through it.' And that's what we did."

A SHOT IN THE ARM

Odd as it may seem for a farming community to become a food desert, research by the Department

in rural communities, K-State learned how dire the circumstances were. The Rural Grocery Initiative was born and quickly became a goldmine of information and resources to keep rural grocery stores afloat nationwide.

"The stakes for rural communities are high, and we've seen that a rural grocery store can serve as a barometer for the vibrancy of a small town," said Rial Carver, rural grocery extension specialist and RGI program leader. "The Rural Grocery Initiative is the national leader in supporting rural grocery stores and rural food access."

RGI partnered with the Kansas Rural Center and Nebraska's Center for Rural Affairs to create the Rural Grocery Toolkit, a step-by-step guide to establish or revive a grocery store. Communities can also consult the initiative's free publications, research and webinars, and find support at RGI's annual national rural grocery summit.

Think of RGI as a defibrillator for small towns, administering a jolt of energy to restore a pulse.

"Declining populations, aging infrastructure, fierce competition and many owners nearing retirement mean that far too many small-town grocery stores are on the brink of closure, yet these stores are anchor institutions across rural America," Carver said.

Think of the Rural Grocery Initiative as a defibrillator for small towns, delivering a jolt of energy to restore a pulse.

At the checkout, Assistant Manager Haley Coonce nodded in agreement, adding, "A lot of our more elderly folks don't get out as much, and when they do, they're able to chat for 10, 15 minutes with someone they haven't seen in a while. It's not just a place to buy groceries but a central place to interact with others."

Losing a grocery store is more than an inconvenience for those who can't drive to the next town. And it's a serious predicament for cities that can't afford to send one of their largest sources of tax revenue elsewhere. In rural areas struggling to sustain population numbers,

of Agriculture's Economic Research Service shows the number of grocery stores outside the nation's metros declined from 1990 to 2015, while other food retail stores — mostly convenience stores — increased. Drilling down further to nonmetro counties with a population under 2,500 people, the share of grocery stores declined by 15 percentage points.

Convenience stores have their place in rural areas, but they don't often stock all the components of a fresh salad, let alone a full and nutritious meal without processed ingredients.

During a 2006 listening tour across Kansas to identify challenges

IF YOU WANT SOMETHING DONE

Using K-State as its compass, Axtell set out to save its grocery store. RGI connected the recently elected grocery board to other successful stores in nearby Westmoreland and Holton for shadowing and mentoring opportunities and sent four members to the 2022 National Rural Grocery Summit in Wichita.

Repairs and updates to the old store building would have clearly cost more than starting over, so demo began immediately. Axtell had a \$480,000 investment from residents to work with, along with a \$21,000 zero-interest loan from the Axtell Economic Development Corporation. The Kansas Healthy



SWING BY the new store for friendly conversation, local foods and produce as exotic as dragonfruit.



AXTELL WANTS AXTELL TO SURVIVE

Axtell resident Teresa Koch doesn't take the town's grocery store for granted — or the work ethic that keeps it running strong.

“Our town is just unique. We take care of each other. I'm an EMT, and one day I was here with a cart full of groceries when an emergency call came in. I had to leave my cart in the aisle.

“I called the store later and said, ‘My car's across the street — can you just put the stuff in there and I'll pay for it tomorrow?’ Where else are you going to find service like that?”





Food Initiative, a group comprising RGI and four other organizations, stepped in with a \$275,000 loan and \$25,000 grant. But would that be enough?

For the right community it would.

So many residents turned up to volunteer, contributing everything from skilled labor to meals for the workers, that the new store was finished less than a year after the old store closed.

“It’s absolutely wonderful what this community has done,” Coonce said. “I’ve lived in a lot of small towns, but this one is definitely strong when it comes to supporting one another.”

FROM THREATENED TO THRIVING

Between the American Legion, the Knights of Columbus, St. Michael’s Church and others, there are regular community meals needing supplies from the store.

The previous weekend, organizers of a breakfast for the local fire department needed four trips to purchase more than 100 dozen eggs and ten cases of bacon.

“I can’t imagine having to travel 20 miles one way for those things,” Buessing said.

No one said it would be easy to keep small-town grocery stores going strong, but Axtell has shown it’s possible. And RGI is there to help each step of the way. ■

 **Learn more about RGI**
ruralgrocery.org

Or donate online
ksufoundation.org/gfks/ruralgrocery



AXTELL'S NEW grocery store opened in 2023.



MAKING IT MODERN

From poetry to poli-sci, humanities coursework is fundamental for every K-State degree. Meet three innovators who make classic subjects speak to students louder than ever.

MODERATED BY SHANE SHANKS

IMMERSED IN POETRY

When we mention poetry, many of us flash back to our college days reading tons of Emily Dickinson. Is that a good thing?

Traci Brimhall, poet laureate of Kansas: Many of us were done a great disservice by being taught that two roads diverged in a wood — and Robert Frost turned left. And then we had to write a five-paragraph essay about the importance of turning left. That's an awful way to experience art!

How do you teach poetry today?

I do a lot of immersive experiences across disciplines. I've collaborated with landscape architecture and the art department, where students produce poetry broadsides for an art show. I try to make sure the things we make in class have a life beyond class.

How did you collaborate with landscape architecture?

We did a teaching swap, so a landscape architect came over to my poetry class. This was during my collaboration unit, where all the poems are built out of collaborative

efforts so we learn what other people's creative processes look like.

First the poetry students got to know their partners, and then we took a tour of campus. The landscape architect explained the plant baddies — all the poisonous, dangerous, mysterious, weird trees we have.

And then I went with the landscape class to the Konza Prairie and did a slow poetry walk. We would walk the Konza, then pause and read a poem. Then we'd write a few lines and walk some more, read a poem, write some more lines.





ILLUSTRATION: GRZEGORZ WÓJCIK VIA GETTY IMAGES

What do students get from that?

I see my creative classes as a kind of circuit training. You don't want to work the same muscle group all the time. There are things that happen through an experience that I don't think any lectures can do.

When you hear "poetry's not useful," how do you respond?

The same way I would to a student in class: I ask them to describe what makes something "useful."

But I use poetry every day! This is the thing that makes me pay attention to the world. I know most of the facts I know because I read them in

a poem, or I researched them to put in a poem. And that keeps me alive. It keeps my soul awake.

WHEN HOMEWORK GOES DIGITAL

How do digital humanities play out in today's classes?

Mark Crosby, director of the Digital Humanities Center: In the English department, we provide alternatives to the standard essay. Everyone in English has to write thesis-driven essays. People get very good at writing essays, but there are other venues, such as the digital environment, that students can use to explore their creativity.

Is it the extra creativity that gets students excited?

There's another aspect. When students, particularly undergraduates, submit their essays and get them back, that's the end of life for the essays. They'll go in a drawer or folder — virtual or otherwise — and never see the light of day again.

For digital humanities projects, we post them on websites. They're live on the internet. Generally, we find that this public impact incentivizes the students. They feel they are making an actual contribution that will be shared.

For your course on espionage, one student created a website analyzing sexpionage in Hitchcock films. What's on that class syllabus?

The reading is mainly spy literature — from MI6 documents to short stories to James Bond. We also do Hitchcock movies like “The 39 Steps” and “North by Northwest.” One student’s digital humanities project looked at the old idea of the “honey trap,” a covert intelligence technique that uses seduction to manipulate people. Hitchcock almost always used blond female characters to do that.

Shareable knowledge seems more useful than yet another essay.

Yes, and students acquire a range of new skills that, in some cases, overlap with traditional computing skills. There’s programming, concept and design, understanding how databases work — specifics they can put on their CV.

When they graduate, they have a skill set they wouldn’t ordinarily get from humanities courses.

LEARNING FROM THE GREATEST THINKERS
How do you pitch the primary texts certificate to students today?

Laurie Johnson, director of the Primary Texts Certificate program: Beyond getting a technical education in the field you’ve chosen, to be both a well-rounded person and a more successful person in that field requires you to be an *interesting* person. One who’s capable of conversing beyond your specialty, having intriguing ideas to share and understanding what others are really saying.

Those are the kinds of people who live richer lives and who tend to actually be more successful.

Your program focuses on history’s most influential thinkers (Galileo, Einstein and others) and students read their full, original works — not summaries. What’s the benefit of this unfiltered learning?

I tell them, “You will learn from the best!” You’re confronted with these texts and respond to them directly, rather than through an intermediary like a textbook or interpreter. This develops students’ analytical skills, so they become better thinkers, more critical thinkers, more creative thinkers.

Which text gets the biggest reaction?

Shakespeare, because a lot of students have never been exposed to him before. Dr. Shannon Skelton from the theater department teaches two weeks of that class. Students come in with an attitude of “Oh no. This is going to be either too hard or too boring.” Then Dr. Skelton turns Shakespeare into this really cool thing. They read it, they watch it, they’re talking about it — it’s pretty amazing.

Any other surprises?

The Platonic dialogues is the same story. Students go in thinking “Oh, my gosh. I have to trudge through this.” They’ve heard that Plato’s going to be hard and abstract and boring.

But it’s full of humor, and it’s very relatable. It’s about everyday experiences, so everybody can get sucked into it. These great thinkers were talking about the same things we care about now. ■

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MEET THE INNOVATORS



Traci Brimhall

Poet laureate of Kansas
Director of creative writing
University distinguished professor of English



Mark Crosby

Director of the Digital Humanities Center
Fellow of the Society of Antiquaries
Associate professor of English



Laurie Johnson

Director of the Primary Texts Certificate program
Swogger Chair of Primary Texts
Professor of political science

GREATER g'ood

Good work and accolades

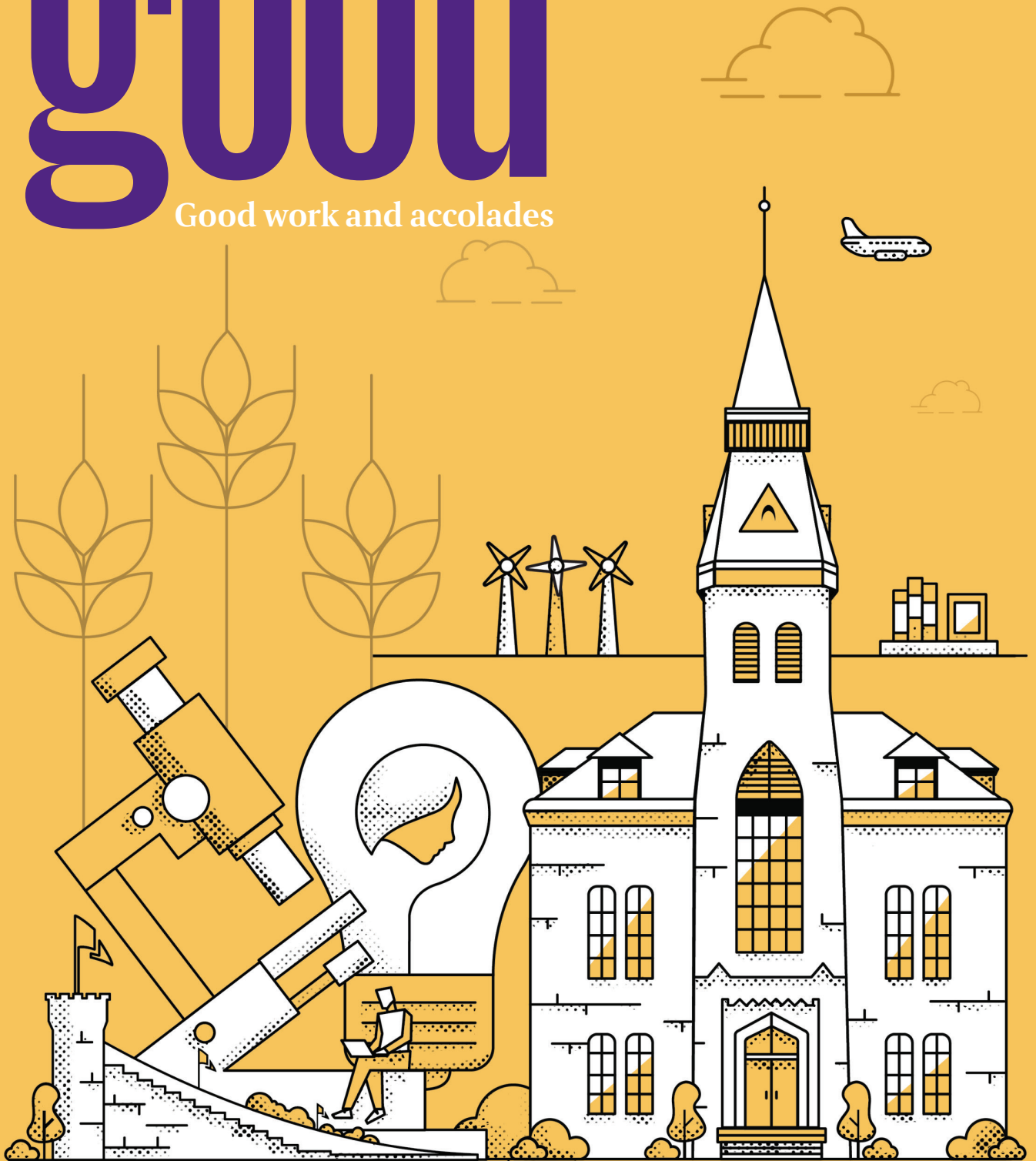
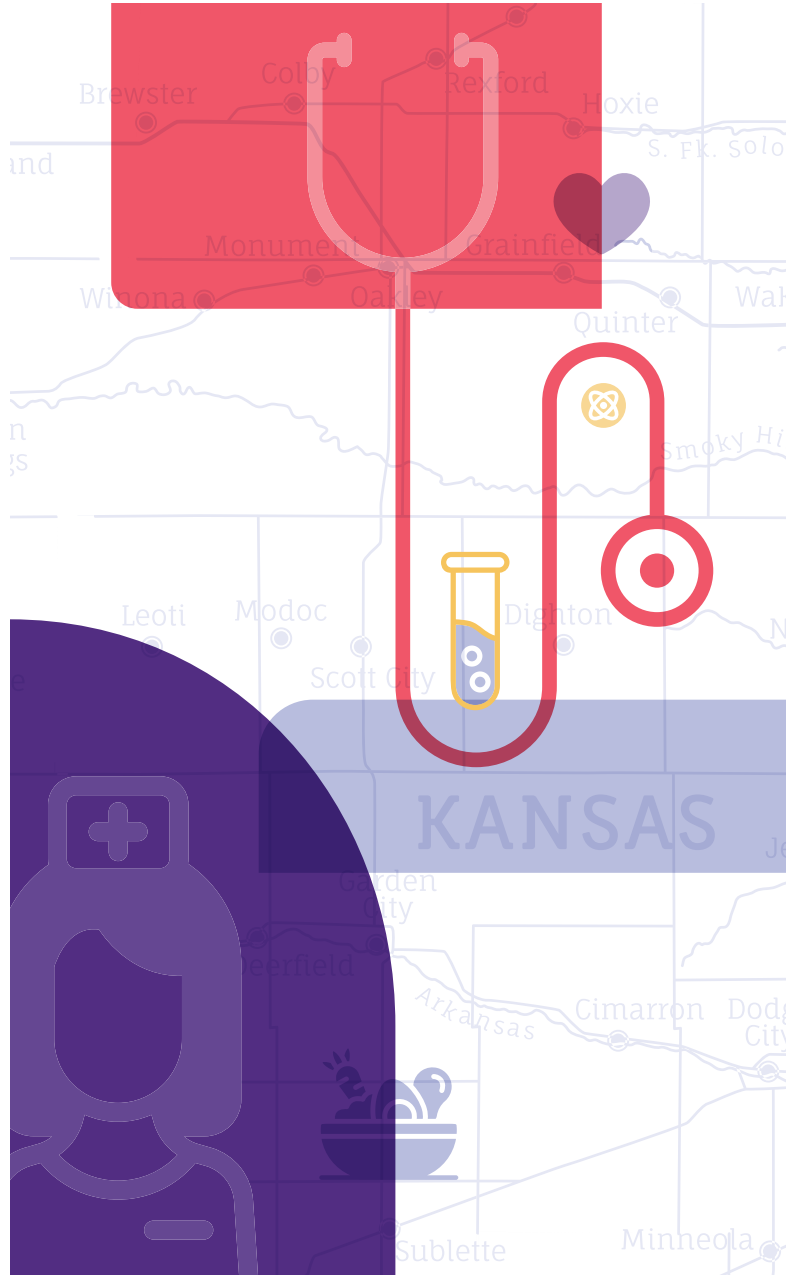


ILLUSTRATION BY JACK WILSON

WHAT IF WELLNESS PROGRAMS REACHED KANSANS EVERYWHERE?

K-State is ready to hit the road



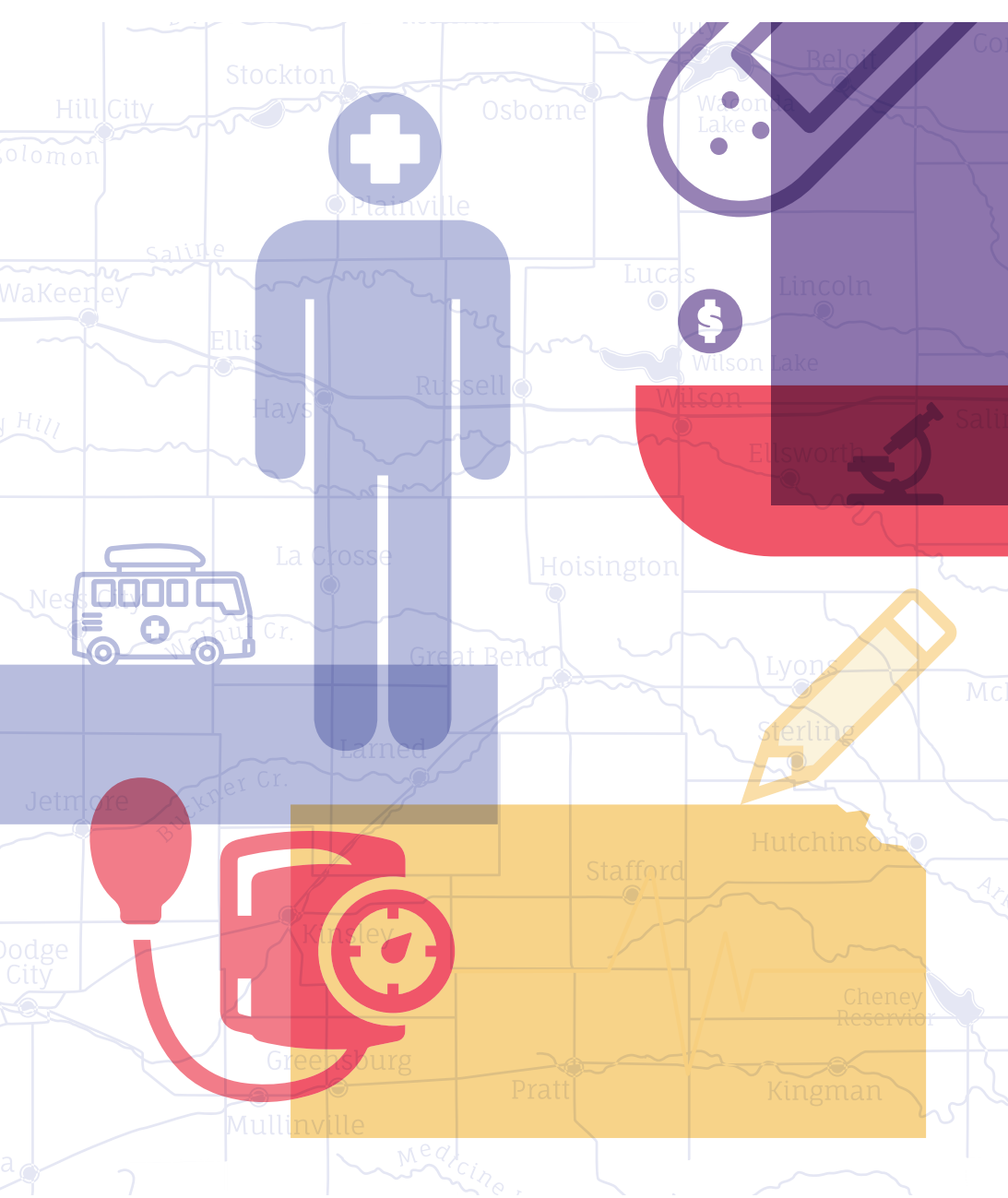
COLLEGE ROAD TRIPS are loaded with memories. But what if they were loaded with learning and improving the health and wellness of Kansans from Liberal to Overland Park?

IMPROVING LIVES AT EVERY STOP The College of Health and Human Sciences is raising funds for a mobile classroom and clinic to take K-State expertise straight to the people they serve.

Just imagine the good we could do: Help diabetics adopt a customized healthy eating plan. Teach a family how to get its

finances back on track. Help a couple learn to navigate difficult situations together. Screen for heart health and devise a doable exercise plan. Design spaces to combat childhood obesity, or provide comfort and support to those with chronic diseases such as dementia and Alzheimer's.

WHO BENEFITS MOST? The mobile program would be a win-win for all:



THE PITCH

Get on the bus! What K-State's vet med community outreach programs do for animals we could also do for people.

College of Health and Human Sciences programs span all aspects of human well-being — from healthcare to nutrition to family counseling. With a mobile unit — and donor support to fast-track the project — K-State could deliver vital services to communities in need while serving up an exceptional applied learning experience for students.

INTERESTED IN SUPPORTING THIS PROJECT?

 **Contact us**
Jeff Haug
 785-775-2061
jeffh@ksufoundation.org

- Students would get hands-on experience, putting classroom concepts into practice.
- People in underserved communities — rural and urban — would access wellness programs that are unavailable where they live.
- Faculty and students would acquire data that advances their research.
- Professionals who live in the visited communities could gain access to professional development training locally.

“The two most impactful activities an undergraduate student can be involved in are research and applied learning,” said Brad Behnke, interim Betty L. Tointon dean for the College of Health and Human Sciences. “With this mobile classroom, students will get out to the communities, meet people where they live, and put into practice what they’ve learned in class while simultaneously giving back to and supporting the communities we serve as a land-grant institution.”

The college’s mobile lab would mirror the community outreach program of the College of Veterinary Medicine’s Wellness on Wheels but for humans. Behnke hopes that once the College of Health and Human Sciences has a mobile lab, they can coordinate with WOW to bring care for animals and humans to communities across the region. ■

Let there be rock

What Wildcat wouldn't sign up for a class where the headbanging homework stretches from "Purple Haze" through "Purple Rain"?

Almost 14,000 K-Staters have taken History of Rock and Roll since 2007, and it was one of the five most-attended courses this spring. We asked Susan Maxwell, professor of bassoon, what makes her class rock.

Is the class more music than history or more history than music?

It's certainly more music than history, but it's all intertwined. Because you can't talk about Marvin Gaye's "What's Going On?" without including the civil rights movement and the Vietnam War.

Which artists are today's students discovering?

We always have the Beatles and Sam Cooke. Some students say James Brown. Marvin Gaye usually ends up near the top of the list. A lot of times they'll say Elvis, because they didn't know who he was but their parents and their grandparents have talked about him.

What does homework look like?

Their ultimate assignment is attending a live music performance that's under the umbrella of a genre that we've talked about in class. You could go see some crazy stuff at the Bottleneck in Lawrence. You could go to Auntie Mae's for a local band. You could go to a coffee shop where somebody's singing and playing guitar.

For this post-COVID crew, we've got to get them out there so they don't just sit at home and watch stuff online. I want them to go to a show!

 **Continue the conversation**
ksufoundation.org/gfks/rock



Work it

K-State grads aren't just smart. They really know how to work it, according to the latest report from the K-State Career Center.

Here's the scoop:

- At graduation, 96% of K-Staters are either employed or continuing their education.
- Median starting salaries for new bachelor's grads jumped to \$57,000 last year — up more than 6%.
- Top employers of new grads include Burns & McDonnell, Garmin, Koch Industries, Manhattan-Ogden USD 383, Shamrock Trading Corporation, Textron and the U.S. Army.

RESEARCH



ILLUSTRATION BY JACK WILSON

Outstanding in his field

Will the legend known for achieving greatness on Kansas football fields also work wonders on its wheat fields? Ask a farmer near you.

K-State researchers developed KS Bill Snyder, a new wheat variety named after our famed football coach. This hard red winter wheat debuts this fall in very limited supply.

Wheat breeders at the K-State Agricultural Research Center at Hays, led by Guorong Zhang, say the new variety has high yield, good drought tolerance, excellent straw strength and other advantages.

STUDENT EXPERIENCE



PHOTO: F. GAYLOR PHOTOGRAPHY

Pump up the volume

Why just win when you can dominate?

K-State swept 51.6% of all first-place prizes at the 2024 Kansas Association of Broadcasters student awards.

The 16 primo awards ranged from the Morning Mix-Up talk show to news reporting about the Kansas City Chiefs post-Super Bowl rally shooting. Even the Dungeons and Dragons podcast brought home the gold.

Wildcat Electronic Media, a combo of Wildcat 91.9 radio station and Channel 8 News, landed 40 awards — more than triple the winnings of any other college. In five categories, K-State won every prize awarded.

In 2023, Wildcat 91.9 was named best radio station in the nation by the Intercollegiate Broadcasting System.

 Watch how scholarships support radio DJs
ksufoundation.org/gfks/radio



MORE
LIKE

Carrita Hightower

While many students have the will to seek advanced degrees, the way is sometimes blocked by financial struggles. That's when graduate scholarships can make a difference in training professionals like Dr. Carrita A. Hightower, whose research is behind several flavors of toothpastes and oral care products sold worldwide. The world needs more professionals like her.

Hightower is a flavor chemist for the Procter & Gamble Company and recipient of the 2023 Distinguished Scholarly Achievements Award from the College of Health and Human Sciences.



PHOTO: MATTHEW ALLEN PHOTOGRAPHY

WHAT I'VE LEARNED

About regional tastes

"In the United States we like wintergreen flavoring for oral care products. But Europeans associate that with toilet bowl cleaner, so it's not going to fly there."

About lending a hand

"Whether it's \$5 million or \$50, we can all help someone along the way through scholarships."

About perspective

"It's important to stop periodically and ask myself what I want to be remembered for."

THE PITCH

Help more students reach the finish line.

 **Support grad students**
ksufoundation.org/gfks/hightower

Hear Dr. Hightower's story



How did scholarships impact your experience as a graduate student?

"One of the seldom-talked-about effects of receiving a scholarship is the motivation that results. You think, 'This person donated their hard-earned money. I need to make a return on their investment.'"

What's the most important lesson you learned at K-State outside the chemistry lab?

"Working in the sensory analysis center and with students in dietetics and in hotel management, I learned it's about collaboration and partnerships and connections. Even today, I cannot do my job as a flavor chemist without collaborating with other formulators or consumer researchers."

What do you enjoy most about your career?

"I love walking into a store, seeing products like Crest Whitening Plus Scope toothpaste and Crest Glamorous White mouth rinse, and saying 'I helped create that product!' You need patience — our work can sometimes take years to reach the market. But after more than a decade, I hold three U.S. patents." ■

YOUR DOLLARS AT WORK

The ripple effect

One planned gift creates ripples of progress across the university

BY MARISA LARSON

YOU LOVE K-STATE NOW, but did you know there's a way to show your purple pride forever?

Planned gifts to K-State can lift students, faculty and programs during your lifetime and long afterward. Charitable gift annuities or IRA distributions show you the impact of your generosity while alive. Naming K-State as a beneficiary in your will or life insurance will keep your spirit alive through the benefits it brings.

A LIVING LEGACY

Jim and Jeanne Baldwin are helping five programs

close to their hearts thrive — even though the couple passed away in 2018.

Jim was a 1954 K-State grad, and Jeanne worked closely with interior design faculty and students throughout her career.

In their will, they left \$5 million to K-State — \$1 million each to five different programs across campus.

In the past five years, their gifts have made education more affordable for nearly 200 students. They've renovated learning labs, provided up-to-date technology for



faculty and students, and supported the sharing of knowledge through research presentations, conferences and professional development.

“Educational debt is the most significant barrier to professional opportunities and career satisfaction for veterinarians today,” said Dr. Bonnie Rush, Hodes family dean of the College of Veterinary Medicine. “The Dr. Roy Gordon Baldwin Scholarship in Veterinary Medicine strengthens career opportunities and ultimately the professional trajectory for the

PET PROJECTS Keeping education affordable for veterinary students was just one of the Baldwins' priorities. Beyond creating new scholarships, the couple's gifts support other K-State programs from interior design to the Alumni Center.

recipients. We are grateful for this life-changing support for so many K-State students each year.”

Learn how to plan your gift
ksufoundation.org/gfks/rippleeffect





THE ONGOING GIFT

5-YEAR IMPACT OF THE BALDWIN ESTATE GIFTS

1 VETERINARY MEDICINE

- 37 Dr. Roy Gordon Baldwin scholarships awarded, making a veterinary degree more affordable

2 ARTS AND SCIENCES

- Computer and technology upgrades so faculty and students have the best tools for hands-on learning in journalism and digital media

3 ARCHITECTURE, PLANNING AND DESIGN

- Renovated and named the fine woodworking lab in honor of Jack Durgan, who founded the interior architecture program
- 91 students received Jack Durgan Interior Architecture Scholarships

4 HEALTH AND HUMAN SCIENCES

- 73 students awarded the Jeanne A. Baldwin, FIDA, and James G. Baldwin Scholarship in Interior Design

- Excellence funds supported the Angelo Donghia Digital Technology Lab remodel, and faculty and student travel to present research at conferences, gain professional development and network with industry partners

5 ALUMNI CENTER

- Provides funds so the Alumni Center will thrive as a home for many future generations of K-Staters ■





THE EYES HAVE IT

K-STATE VETERINARY STUDENTS now use 3D-printed eyeballs to polish their exam skills for all kinds of future patients — dogs, cats, horses and even rabbits.

Using oversized eye globes, developed through a collaboration between the College of Veterinary Medicine and K-State's Technology Development Institute, students master required hand skills and muscle memory before they work on live animals.

These model eyes prepare students to check the fundus — the back of the inside of the eye, including the retina and optic nerve.

Why are the models needed? Because they lower the stakes, especially in early courses where students build basic skills. With that foundation under their belts, future vets step up to the challenge of live patients with extra confidence.

And what's next? The K-State team is marketing these training aids to other vet schools. ■

 [Learn more](https://ksufoundation.org/gfks/eyeballs)
ksufoundation.org/gfks/eyeballs



PHOTO: FJ GAYLOR PHOTOGRAPHY

A different grad gift

K-State student leaders become philanthropists in the making

BY HEATHER ACKERLY

EVERY FRIDAY morning, a group of K-Staters meets to change the lives of fellow students.

The gathering students are the Student Opportunity Awards committee, and they're reviewing applications from K-Staters facing immediate financial needs.

"The most common requests we see are for medical bills and laptops," said Abby Collins, the group's VP of campaign allocation. "If we could, we would give awards to everyone."

The awards go to students whose future at K-State is in jeopardy. Funds awarded are raised through the annual K-State Proud campaign, which is known for the sought-after T-shirts donors receive.

"Our donors are helping students graduate and maybe go on to cure a disease or be a leader in their industry," said Paige



PHOTO: DAVID MAYES PHOTOGRAPHY INC.



Miranda (pictured), a member of the awards committee. "Every award — whether it's for an expensive textbook or a medication — helps them stay in school."

"It came full circle when my professor told me he received an award," Collins said. "He is a parent and needed assistance to finish his Ph.D. You never know who might need help."

But it's not just the recipients who benefit from the awards.

"I can get in my own little world, trying to get through college," said Caden Swanson, VP of external campaigns. "This program gives me more

GRAD GIFTS Student Foundation leaders distribute up to \$3,000 every week to keep K-Staters in school.

perspective on what other people are going through."

They've seen the impact of the awards and want to pay it forward after they move on from K-State.

"Once I start making my 'big girl money,' I will always donate to K-State Proud," Miranda said. "I want to give back because it helps me stay grounded and not take things for granted." ■

[Learn about K-State Proud](https://ksufoundation.org/gfks/soa)
ksufoundation.org/gfks/soa



YOUR turn

Keep K-State moving ahead

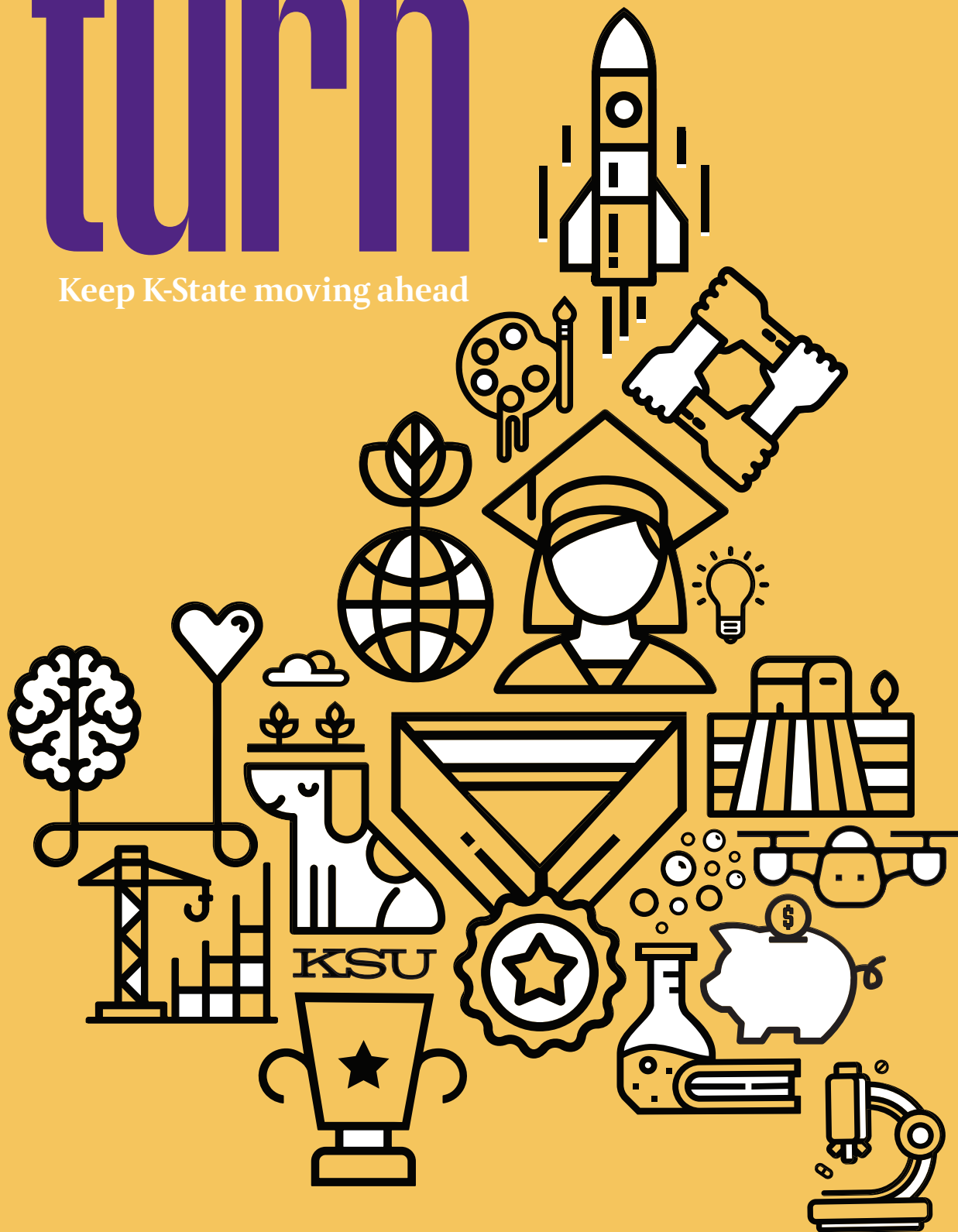


ILLUSTRATION BY JACK WILSON



COURTESY PHOTO

WOMEN IN BUSINESS is one key component of the Center for Principled Business.

Business with heart

Future business leaders learn to factor societal benefits into the bottom line

HERSHEY. BOEING. AON. PFIZER. What's one thing these big American companies have in common?

They've all had K-State grads at the helm.

K-State has an impressive track record of nurturing leaders, and the College of Business Administration's Center for Principled Business carries on that tradition. The center strives to develop future business leaders who will keep in mind prosperity for all stakeholders — including society — along with the bottom line. Some of its key programs:

BUSINESS AND SOCIETY

The business and society class and CAT (Connecting Across Topics) Community bring together first-year students to learn about the history and “why” of business.

K-STATE BUSINESS INNOVATION CHALLENGE

This competition encourages students to address challenges in the K-State and Manhattan communities by developing or improving a product, service, technology or process.

MENARD FAMILY SCHOLARS PROGRAM

A yearlong program for outstanding freshman business students, the Menard Family Scholars program develops leadership, ethical decision making and innovative thinking. Students explore leadership opportunities and career pathways through industry trips, alumni connections, one-on-one mentoring and other exclusive experiences.

PHOTO: FJ GAYLOR PHOTOGRAPHY



Elevating design

Welcome to the bustling, slightly dusty epicenter of design ingenuity. The APDesign Farris Family Fabrication Laboratory is tricked out with welding bays, glass kilns, 3D printers and woodworking tools so architecture and design students can transform their musings into tangible creations.

 **Support fifth-year fellowships in architecture, planning and design**
ksufoundation.org/gfks/apd



CHEAT SHEET

Dazzle your friends with fab facts (even though you haven't read this magazine yet)!

105 rural Kansas grocery stores closed between 2008 and 2018.
P. 14

More than 14,000 K-Staters have taken the History of Rock and Roll course. **P. 26**

Median starting salaries for K-State bachelor's degree grads jumped 6% last year.
P. 27

Ninety percent of water used in Kansas is groundwater from the shrinking High Plains aquifer. **P. 2**

3D-printed eyeballs help vet students master their exam skills. **P. 32**

Professor swaps help students learn about topics from a new perspective. **P. 20**