Salgy Baran, 18, planned to become a doctor in Afghanistan, but then the Taliban took over. Read more about her on page 14.
You're passionate about the gifts God has given you. You're looking for a college that will allow you to pursue and hone your talents. You want a place that will prepare you for the life to which God has called you. You'll find it at Union University, where we equip students who don't want to sacrifice academic quality or Christian community. At Union University, be transformed.

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Editorial cartoons can be powerful media for expressing opinions and ideas with few or no words. This cartoonist is making a statement about recent developments in Afghanistan. (See Afghan Women in Fear on page 14.) Do you think the image works to convey the artist’s meaning? What do you think the picture is saying?
NIGERIA: Hyenas in the House  You might live in northern Nigeria if . . . you have a hyena for a house pet. Some Nigerians, called hyena men, keep the creatures in their homes, display them at festivals, and even use their dung or saliva to make traditional remedies. Abdullahi Jahun comes from a line of hyena men. He learned to tame and handle hyenas from his father. “This was my job from when I started walking as a child,” he says. Now Jahun makes a living entertaining crowds with his own animal, which he captured from the wild and now takes to events such as coronations of traditional rulers and durbars (a type of parade where horsemen in colorful costumes show off their skills). Hyenas can be quite dangerous to people. That doesn’t stop hyena men. Jahun even allows children to sit on his hyena’s back.

ALASKA: Native Artist Creates Postage Stamp  Alaska Native artist Rico Worl jumped at the chance to create for the U.S. Postal Service a stamp he hopes will be a gateway for people to learn about his Tlingit culture. Worl’s artwork depicts a raven trying to hold onto as many stars as possible. The image is based on Tlingit legend. In Tlingit tradition, the raven could shift shape and transform into other beings. The bird is considered a wily trickster. In the story, a raven learns that a clan leader possesses the Sun, Moon, and stars. The bird takes on human form to nab those precious celestial treasures from the leader and share them with all mankind. The Sealaska Heritage Institute hosted an event for unveiling the stamp artwork. The organization says this is the first stamp ever designed by a Tlingit artist.

NEW YORK CITY: Shows and Parade Make Comeback  The city that never sleeps is waking again. In mid-September, three shows on Broadway reopened after pandemic restrictions had closed the famous theaters. The long-running favorite, The Lion King, was among the three that opened their auditoriums to full audiences. Prior to that, only limited showings with limited attendance had been allowed. And New Yorkers are also anticipating the return of the Macy’s Thanksgiving Day Parade this year. The November 25 parade of floats and inflatables will once again meander the streets of the Big Apple. It will also be broadcast on network television as it has been for decades. “We are thrilled to welcome back in its full form the Macy’s Thanksgiving Day Parade, a world-renowned celebration that ushers in the magic of being in New York City during the holiday season,” New York City Mayor Bill de Blasio said in a statement.

Hyenas: Not every man’s best friend

AP PHOTOS
UNITED ARAB EMIRATES: No Cashiers Needed

In the high-tech, buzzing, global economic hub that is Dubai, innovation often finds an outlet ahead of the rest of the world. So no one should be surprised that this Middle Eastern locale launched a completely automated cashierless retail store in a cavernous Dubai mall. In 2018, Amazon broke ground on the unmanned grocery. Now the UAE’s retail giant Carrefour is rolling out its own vision for the future of shopping. The new Carrefour City+ mini-market looks like an ordinary convenience store. It brims with sodas, snacks, common goods, and trinkets. But hidden among the familiar fare lies a sophisticated system that tracks shoppers’ movements. Nearly a hundred cameras blanket the ceiling. Countless sensors line shelves. The system completely eliminates the checkout line. Folks with the store’s smartphone app may enter, browse, grab the products they want, and walk out. That simple. The app ties into the customer’s banking information and extracts the appropriate payment completely hands-free.

INDONESIA: Poached Sumatran Tigers

It was a tragic find: Three critically endangered Sumatran tigers, including two cubs, were found dead from injuries due to poachers’ traps on Indonesia’s Sumatra island. The mother and her male and female cubs were discovered in the Leuser Ecosystem Area. An examination showed that the protected creatures died from infected wounds caused by the traps. Agus Arianto is head of the conservation agency. He said several traps similar to ones used to catch wild pigs on farms were discovered in the area of the tigers’ bodies. “Setting traps for pigs in a conservation area is very unlikely,” Arianto says. “This was intended to poach endangered animals for economic gain.” His agency will cooperate with law enforcement in an investigation. Only an estimated 400–600 Sumatran tigers still live in the wild.

THE NETHERLANDS: A New Van Gogh

“Today and yesterday I drew two figures of an old man with his elbows on his knees and his head in his hands...” wrote Vincent van Gogh to his brother Theo in November 1882. This September, a Dutch museum unveiled a previously unknown van Gogh sketch, a study for one of his best-known drawings, “Worn Out.” Just as Vincent described to Theo, in the sketch an old man sits in a chair with his head in his hands. Even the chair seems to list to the side with exhaustion. New discoveries of van Gogh works are extremely rare. It seems the drawing was purchased by a family for a small amount—around eight dollars, in today’s money—and then hidden away for more than a century. Experts readily knew the work was legit. It was done with van Gogh’s favorite drawing tool, a carpenter’s pencil, in his distinctive style, on water-marked paper from 1877.
You approach a person with your hand extended in greeting. But he or she keeps those palms protected inside pockets. What next?

A Kansas City-area event planning business hawks “I Shake Hands” stickers to help ease awkward social encounters. That’s in spite of Dr. Anthony Fauci’s statement last year, “I don’t think we should ever shake hands ever again.”

To shake, or not to shake?

As workers return to offices, friends reunite, and church services resume, people are befuddled. Is it safe to shake hands?

Different countries have different codes of conduct, but handshakes have been around for centuries. They may have originated during medieval times to prove that a person was offering peace and not holding a hidden weapon. These days, the greeting is almost instinctual.

President Theodore Roosevelt set a record with about 8,510 handshakes at a White House reception on January 1, 1907. When someone sticks out a hand, it can be hard—or awkward—to avoid taking it.

“You can make phone calls all you want, and you can meet with people online via Zoom call. But it is just not the same as being able to reach out your hand and shake their hand, look them in the eye, and really establish that rapport,” says Dave McClain of Kansas.

Are handshakes a casualty of the coronavirus pandemic? Possibly. The pandemic has made people wary of one another, setting aside the cultural norm of handshake greetings (not to mention friendly hugs!). And cultural traditions can change over time.

Have you seen someone hold open a door for someone else recently? How often does a gentleman pull out a woman’s chair and stand until she is seated? Is it still common for a man to walk on the street side of a sidewalk in order to protect female companions from passing traffic? Do younger people give up seats on buses or trains for the elderly?

The Bible mentions a tradition that has faded since early biblical history. Foot washing was a common, welcoming practice in Hebrew homes. It showed honor to a guest. It also refreshed tired, dirty soles. In Luke 7:44, Jesus rebukes Simon the Pharisee, saying, “Do you see this woman? I entered your house; you gave me no water for my feet, but she has wet my feet with her tears and wiped them with her hair.” Over the years, as shoes and transportation developed, the foot washing tradition dissolved.

Are handshakes soon to be lost to history too? God created people for interaction and touch. We hope the handshake isn’t waving goodbye.
Social media giant Facebook has a new feature. Some folks are embracing the tool; others are wary. They say social media isn’t satisfied with having your thoughts—it wants your prayers too.

Facebook’s 2020 Year in Review revealed great user traffic the week between Easter and Passover. So the social networking site unveiled a “prayer post” feature in the United States. Company officials endorse the posts as part of efforts to assist faith communities. The feature allows some Facebook group members to rally support for job interviews, illnesses, and the like. Readers can tap an “I prayed” button, respond with a “like” or another reaction, leave a comment, or send a message.

Response from religious communities has been mixed. Dallas Southern Baptist pastor Robert Jeffress welcomes the feature. “While any tool can be misused,” he says, “I support any effort like this that encourages people to turn to the one true God in our time of need.”

Jacki King, a minister to women in Arkansas, sees potential benefit for struggling people who are isolated during the pandemic. “They’re much more likely to get on and make a comment than they are to walk into a church right now,” King says.

Not everyone is thrilled with Facebook’s foray into religious territory. Many weigh it against privacy, security, and appropriateness concerns they already have with social media.

Under its data policy, Facebook can use information it gathers to personalize advertisements. But the company says advertisers cannot use prayer posts to target ads.

Bob Stec, a Catholic pastor in Ohio, doubts that online prayer can be “deeply authentic.” “We need to stand shoulder to shoulder with each other and walk through great moments and challenges together,” he says.

Thomas McKenzie, an Anglican priest in Tennessee who very recently went to be with the Lord, went on record with his views shortly before his passing. He saw Facebook as willing to exploit anything for money. However, much like Joseph’s experience in Genesis 50:20, McKenzie had confidence that, under God’s sovereignty, “Facebook’s evil motivations might have actually provided a tool that can be for good.”

His chief concern was that technology can encourage people to stay physically apart under even healthy conditions. “You cannot participate fully in the body of Christ online,” McKenzie said. “These tools may give people the impression that it’s possible.”

Gabe Moreno, a pastor of ministries in Washington, is practical about the feature. He realizes Facebook’s goal is more user engagement. Still, Moreno says, “The people are on Facebook. So we’re going to go there.”

How does your family view the “prayer post” feature? Other than those mentioned in the article, what positive aspects might there be? Negative?
Do you ever just want to climb up into a tree-house and escape the world? So did Jessica Brookhart. When an acre-sized slice of land in Gold Hill, Colorado, came on the market earlier this year, Brookhart snapped it up for $80,000 . . . because it came with a treehouse. Brookhart thought it was the perfect place to hang out with her husband and two young boys. “I had never been inside it,” she says, “but had admired it from a distance.”

The treehouse, built with materials from a recycling center, fits two adults and two children. It has no bathroom or running water, just a squat potty outside on the ground and a camping stove for cooking. So, yes, visitors to the treehouse will be “roughing it,” but they’ll also get a view from the treehouse windows of Longs Peak and the Continental Divide.

“Since I was a little girl, I was obsessed with little mini-houses, or sheds and treehouses,” Brookhart says. She sometimes rents the treehouse out online. It turns out other people are as eager to enjoy it as she was.

Treehouses of all kinds are experiencing a renaissance, and many kids-at-heart got to act out their treehouse dreams when grounded at home during the pandemic.

It’s just the newest episode in the long history of living in homes among the branches. Today, many kids use treehouses to play house. But once, treehouses
A parking lot burger cart, a trailside chicken shack: Many pop-up restaurants started as pandemic stopgaps. But as diners continue choosing take-out over sit-down, these intended-to-be-temporary ventures may have staying power.

In 2020, pandemic measures devastated the restaurant industry. Crowding diners into enclosed spaces wasn’t wise.

Enter the pop-up restaurant, a temporary eating establishment. Pop-ups come in many forms. A ramen cook might appear for one night only at an established restaurant; an empanada maker could rent an empty space or set up a tent to offer meals for delivery only.

Pop-ups can help beginning chefs gain exposure with both diners and future investors. With less overhead and staffing costs, pop-ups are cheaper to operate than established, full-service brick-and-mortar locations. They also can bring buzz to restaurants that host crowd-drawing special events to entice diners. Some pop-ups have even morphed into permanent new businesses.

Work is a gift from God. He encourages His people to work hard. (Colossians 3:23) During the early days of the pandemic, pop-ups allowed chefs and traditional restaurant owners to keep on working.

Alex Thaboua is co-owner of Electric Burrito in New York City. His venture began as a pop-up at another restaurant in 2020. A permanent location opened in May 2021. It focuses on take-out and delivery. Even if there’s another lockdown, Electric Burrito can keep operating.

“This flexibility was something we found very important during our pop-up stages,” Thaboua says. “We can continue to operate with a lean team.”

Since the pandemic began, Nashville’s Hathorne restaurant has benefited from hosting about 10 pop-up events featuring local chefs. The chefs receive publicity and access to a professional kitchen; Hathorne fills empty seats.

“We knew, when we reopened, we were not going to be able to be open six or seven days a week because staffing and business wasn’t going to be there,” says owner John Stephenson.

Stephenson knew chefs who were creating take-out dinners or starting food trucks just to stay afloat. He invited them to pop up at Hathorne.

Currently, Hathorne hosts Chef Michael Hanna’s pizza company, St. Vito Focacciaria, on Sundays. Hanna and his staff get work, and “it keeps people coming in our doors,” Stephenson says.

Marisa Iocco co-owns Spiga Ristorante in Massachusetts. “During the pandemic it was very challenging to survive,” she says.

So Iocco got creative. She opened Polpettiamo around an hour away in Rhode Island. The pop-up serves take-out meatballs only. The same meatballs are appetizers at Spiga.

Iocco says building something new during the pandemic gave her a “vitamin B12 shot” of energy. Now she’s considering two new restaurants. Sounds like she’ll need that boost.
For 27 years, 81-year-old David Lidstone lived in the New Hampshire woods along the Merrimack River in a small cabin adorned with solar panels. He grew his own food, cut his own firewood, and tended to his pets and chickens.

Lidstone claims that a previous owner gave his word—but nothing in writing—allowing him to live there. But in the eyes of the current owner, he was a squatter.

A squatter is someone who occupies a property with no legal title or lease. That’s a form of stealing. But even so, it can be difficult for a rightful owner to have a squatter removed.

Merrimack County Judge Andrew Schulman says the law was clearly on the landowner’s side.

“You're doing your own thing in the ‘Live Free or Die’ state, so there’s a lot of sympathy to you for that,” he said at a hearing. “But there’s a lot of weight on the other side... not just about what the [landowner] wants to do with the land, but the weight I feel to uphold the judgment of the court and the rule of law.”

Property owner Leonard Giles didn’t know Lidstone was there until 2015. Squatting wasn’t the only problem. Lidstone's dwelling violated zoning and environmental regulations, and there was no access to a road. Neither side could come to an agreement. Lidstone remained defiant. He was jailed for a short time as he refused to leave the property.

Then his cabin burned down. He was released from jail after a judge ruled that he would have less incentive to return now that the cabin is gone.

In the meantime, many people have offered to help Lidstone, either through fundraising or finding him a place to live. Now “River Dave” says he doesn’t think he can go back to being a hermit.

“Maybe the things I’ve been trying to avoid are the things that I really need in life,” says Lidstone, who drifted apart from his family. “I’ve never loved anybody in my life. And I shocked myself because I hadn’t realized that. And that’s why I was a hermit. Now I can see love being expressed that I never had before.”

River Dave's story echoes our own. As fallen humans, we despise our authority, God, and His law. We separate ourselves from God. We don’t know how to love. Yet God shows us love. (Romans 5:6-11)

Maybe along with a new home, Lidstone will find a new life.
Jin Park was awarded a prestigious Rhodes Scholarship in 2018. The scholarship includes two years of study at the University of Oxford in England. He planned to study migration and political theory. But he put off his plans amid uncertainty about whether the United States would allow him to return home after completing his studies.

At the time, Park was a Harvard undergraduate studying molecular and cell biology. Now more than two years later, he’s a Harvard Medical School student, and he’s finally going. In August, immigration officials approved Park’s application to travel to England.

Park’s family brought him to the United States from South Korea when he was seven years old. But they did not immigrate through proper legal channels. In 2012, then-President Barack Obama put into place a program for kids like Park. It was called the Deferred Action for Childhood Arrivals (DACA). The president’s executive action applied to those brought illegally as children, nicknamed “Dreamers.” Those who qualified were protected from deportation and allowed to work.

Since then, Park and other DACA recipients have been caught in years of whiplash over the program.

OFF: In 2017, former president Donald Trump attempted to phase out the DACA program. One change took away the option to apply for permission for overseas travel. That meant if Park left the country, he could lose his DACA status. He wouldn’t be able to return.

ON: But a series of legal challenges effectively kept the program running. Current DACA status holders could still renew. But no new applications could be approved.

A U.S. Supreme Court ruling in June 2020 found the administration did not take the proper steps to end DACA and rejected then-President Trump’s arguments that the program is illegal.

The Trump administration fully restored DACA last December shortly before Mr. Trump left office.

Current President Joe Biden has called on Congress to put DACA into law. He has also proposed giving Dreamers a pathway to citizenship.

OFF: In July, a federal judge in Texas ruled DACA illegal. That again barred the government from approving new applications. Existing recipients can still be in the program, at least for now. The future of DACA is still in question.

Santiago Potes will join Park at Oxford. He is the second Dreamer to be awarded a Rhodes Scholarship.

“We are thrilled that two DACA Rhodes Scholars will be heading to Oxford next month to start their courses, finally knowing they can safely and legally return after their studies to the only homes they know,” says Elliot Gerson of the Rhodes organization.
A LEGO person drinks from a teeny-tiny LEGO cup. Itty-bitty garbage trucks pick up trash as a little LEGO police officer chats with a LEGO citizen. A teensy LEGO construction worker uses a cute jackhammer to fix the LEGO road. What does all this have to do with city budgeting?

Jay Warren, Director of Communication and Legislative Affairs for the city of Arlington, Texas, loves LEGO bricks. He has built a LEGO city over several tabletops in his game room. "It’s a hobby," Mr. Warren tells NBC DFW, "one that I’ve had since I was a kid." Now all grown up, Mr. Warren’s job is to explain to Arlingtonians how the city spends the dollars they pay in taxes.

City videographers stopped in at Mr. Warren’s house. They found the LEGO city ready for filming. They used stop motion animation to make a four-and-a-half-minute LEGO video explaining the city budget.

“I love my city," says a LEGO woman in the video. While she speaks, we get views of Mr. Warren’s LEGO city: streets, cars, buildings, a playground with flowers and trees, a café, the inside of a library, and more. "It has great parks for my kids, safe neighborhoods with friendly people, good libraries, and smooth roads.” Then Ms. LEGO asks, “How does all that get done?”

“Good question,” answers a LEGO man. “Keeping a city running takes a lot of work, and it starts with the annual budget. Just like with LEGOs, the parts of the city’s budget come in a lot of shapes, sizes, and colors . . .”

Why budget? Money is hard to earn and easy to spend. Keeping careful track of it helps it go further. Plus, God cares about how we use money. He owns all the wealth in the world, and entrusts nations, states, cities, families, and individuals with just a little of His treasure. Their job is to steward what He has given in a way that blesses others and gives Him glory.

Good budgeters track where every dollar goes. A national budget decides how much money in taxes will be collected. It designates how much will go to the military for people’s protection, how much will be spent on highways and hospitals, and how much will support people in need. States budget for schools, hospitals, roads, police, courts, and housing. Families budget for electricity, heat, internet, food, giving, clothes, insurance, cars, house payments or rent, medical services, education, vacations, savings . . . and much more. Remember: God doesn’t give us things mainly so we can have them. He gives to us so we can share with others—just like He does with us.

What does a city budget have to include? The video shows: clean water, trash pickup, police, firefighters, road work, and more. Now that’s fun budgeting!
Holiday Hires Look Different

With the holidays around the corner, shopper demand is clashing with supply chain problems and worker shortages. Some retailers are pursuing temporary hires; others are simply hoping their ships will come in . . . literally. Will market glitches put a damper on the season of giving and receiving?

Retailers want to move merchandise from clogged ports, into stores, and out to people’s homes quickly. But without workers, that supply chain will suffer. As a result of serious worker shortages, analysts say 2021 customers may see fewer deals, emptier shelves, and longer lines.

But even with supply chain concerns in the mix, experts predict finding workers will be the main issue this holiday season.

Still, a number of retailers have high hiring goals ahead of holiday shopping. Here are the plans of a few large retailers:

**Dick’s Sporting Goods:** largest number of seasonal associates in company history

**Kohl’s:** 90,000 seasonal workers; a rare $100-$400 holiday bonus for hourly employees

**Macy’s:** 48,000 holiday workers at call centers, stores, and warehouses

**UPS:** more than 100,000 workers and a streamlined application process

**Walmart:** 20,000 employees to handle freight and fill orders

But while many stores are ramping up for holiday hiring, Target plans to employ fewer seasonal workers. Instead, the retailer will offer more hours and flexibility to the employees it already has.

Red-shirted Target newbies will still help ring in the new year—Target aims for about 100,000 seasonal hires nationwide. However, that’s about 30,000 fewer than last year. Instead, Target will offer a total of five million additional hours of work during the holiday season to workers already on the payroll.

Already, hourly employees at Target are working nearly 15% more than last year. But according to Target, they keep requesting more hours.

The retail chain isn’t alone in the decision to lower its hiring goals. Global recruiting firm Challenger, Gray, & Christmas says retailers are focusing on hiring—and in some cases rewarding—people who will stay rather than temporary, seasonal workers. That sounds like a future-minded plan—not just a short-term fix for the predicted rush at the holidays.

Industry-wide challenges could last into the new year. Shortages in supply, staff, and delivery services could cause problems for those who delay shopping.

“Customers, families want to celebrate Christmas,” says Walmart CEO Doug McMillon. For Christians, that means that despite economic woes or supply chain disasters, celebrations will still center on the greatest gift ever given: Jesus.
The Taliban is back. For women across Afghanistan, its return means uncertainty at best—and brutal oppression at worst. After two decades of slow but positive change, women are fearful. Is there hope for Afghanistan?

**TALIBAN PRE-9/11** The Taliban ruled Afghanistan from 1996 to 2001. Back then, females endured severe restrictions. They had to wear head-to-toe burqas outside their homes—even in their own yards. They traveled only with male relative escorts. They had no right to education or work and depended entirely on the men who controlled them.

The Taliban is an Islamist religious and political movement in Afghanistan. It is also a military organization with tentacles reaching into many other countries. The Taliban is not al-Qaida, a flat-out terrorist organization. However, many Taliban leaders sympathize with and support al-Qaida’s mission, including the attack on the United States on September 11, 2001.

**PROGRESS IN AFGHANISTAN** For the two decades after 9/11, the United States and other countries stepped in, partly to help the Afghans re-take control of their country. Mindy Belz, Senior Editor at WORLD, says the U.S. occupation was “creating space for good things to happen.”

Circumstances changed for the better for Afghan women. Progress was slow and mostly limited to larger cities. But women began participating in ways they had not been able to under Taliban rule. They attended school, entered public office, engaged in business, received proper healthcare, and traveled freely. Some even competed academically and athletically on international stages.

**WRITING ON THE WALL** Since the Taliban takeover this year, Belz says, “The writing is on the wall that women will be second-class citizens” again.

Already the crackdown has started. Girls riding home in a motorized rickshaw in Afghanistan’s northern Takhar province were stopped and lashed for wearing “revealing sandals.” Twitter feeds showed public floggings of women in the streets.

Taliban officials announced that women would not be allowed to compete in sports. In response, an Afghan women’s taekwondo team fled to Australia. Heather Garriock, CEO of Australian Taekwondo, helped the group evacuate. She says, “The lives of these women were in danger.”

The girls of the Afghanistan national soccer team, ages 14-16, and their families escaped to Lisbon, Portugal. “They left their homes and left everything behind,” team captain Farkhunda Muhtaj says.

Other athletes burned their jerseys and removed photos from their social media accounts in fear of Taliban retaliation.

Some Taliban leaders hinted that women and girls might attend school...
in accordance with Islamic law. That means in separate classrooms or on separate campuses from boys. Others hinted at stricter measures.

**UNCERTAINTY . . . AND HOPE**

Eighteen-year-old Salgy Baran wants to become a doctor. “I am concerned about my future,” Baran said from Kabul in August. “Will they allow me to get an education or not?”

Baran’s family moved to Kabul in 2015, where there are—or were—fewer social restrictions on women. Her family pooled its resources to support her studies.

This year’s university entrance exams—Afghanistan’s version of the SAT—took place before the takeover. Baran got the highest score out of about 174,000 boys and girls. Her score secured her a spot at Afghanistan’s top school of medicine.

Baran and her family are worried about what comes next. “I had goals under the past government,” she says. “But under this government . . . even tomorrow is uncertain.”

Some experts see hope in the next generation. According to *Time* magazine, 63% of Afghans are under age 25. They don’t remember much of life before 9/11. “This younger generation is saying, ‘I’m not going to go back.’ They’re very determined, a force to be reckoned with,” says Heather Barr at Human Rights Watch.

Marianne O’Grady worked in Kabul for Care International. She cannot see things going back to the way they were, even with a Taliban takeover. “You can’t uneducate millions of people,” O’Grady says. If women “are back behind walls and not able to go out as much, at least they can now educate their cousins and their neighbors and their own children in ways that couldn’t happen 25 years ago.”

There is hope for Baran and for Afghan women and for the whole world. That hope is the gospel of Jesus Christ “proclaimed in all creation under heaven.” (Colossians 1:23) This gospel is powerful, and it is meant for “everyone who believes” (Romans 1:16): Jew, non-Jew, male, female, rich, poor, even the “ungrateful and evil.” (Luke 6:35) And it reaches every nation, tribe, and people—even the Taliban. This is real hope.
British archaeologists at the site of a planned high-speed railway struck English history gold: remains of an Anglo-Saxon building. Crews are eager to see what else the centuries-old site holds.

God honors remembering “the former things of old”—most importantly that He alone is God. (Isaiah 46:9) He even commanded setting up stones of remembrance to remind of His might, goodness, and grace. (Genesis 28:10-22, Joshua 4:21-22, 1 Samuel 7:7-12) The ancient building appears to be a church. It shows that God was advancing His kingdom across millennia and around the Earth.

Preparation for the railway line called HS2 began in September 2020 in Buckinghamshire county. HS2 will link London, the Midlands, northern England, and eventually Scotland.

But before the project can move full steam ahead, archaeologists from LP-Archaeology are examining what lies in its path. No one wants to carelessly destroy undiscovered historical treasures.

For centuries, historians thought the Normans (1066-1154) were first to build a church on the site of the planned HS2 railway track. St. Mary’s, a Norman church dating from 1080, once lay on the route. It was demolished in the 1960s.

But after six months of digging, archaeologists discovered something much older than St. Mary’s. They found a thousand-year-old Anglo-Saxon (450-1066) structure.

Site Manager Tom Swannick says the find appears to be a church tower. “You can see . . . the actual wall itself is about a meter [a little over three feet] wide,” he says. “It’s actually quite small. It’s only about four meters by four meters [about 13 feet by 13 feet] that you could walk around.”

Workers have also found stone walls made of flint and flooring from the Anglo-Saxon site.

“We’d always kind of hoped there’d be something earlier on this site to help explain what’s going on,” says archaeologist Victoria Roberts. “When we actually found something, it was hugely exciting.”

Researchers have set up a so-called “field museum.” A tented area allows people to view the archaeological process and examples of the discoveries made there.

Among the other finds are a coin from the time of Æthelred the Unready, an English king who died in 1016, and really ancient roof tiles from the Roman occupation of Britain (43-410).

Historians will have to think again about what was here before this building, who was using the land, and how. “This earlier structure is showing that the mound that this sits on in the valley floor has some other significance to it,” explains Swannick. The importance of this overgrown patch has been forgotten. But the recent discoveries hint that there’s probably more history waiting to be unearthed.

“Studying the past helps root today’s events in history, in which God’s presence and purpose can be seen.”

Why? For inquisitive minds to understand lessons from history and for wisdom to see present circumstances in light of a faithful and sovereign God who rules over all of history.
That’s a whale of a sculpture. Actually, it’s a sculpture of a whale. The art installation, formed from a ton of recycled plastic and towering over Kyiv, Ukraine, serves as a bitter reminder: No real whales will be visiting Kyiv for the foreseeable future. “Because the river is so dirty, they won’t swim there,” says the plastic whale’s creator, Valeriy Korshunov. “We do not swim there, and whales won’t.”

Placed on six metal pillars, the artwork aims to draw people’s attention to the importance of environmental protection and recycling. It is the country’s biggest plastic sculpture, weighing about 1,653 pounds.

To create the whale, some 2,000 people, including students from dozens of Kyiv schools, collected plastic waste from city parks and rivers. The plastic was recycled, turned into the parts of the whale’s body, and attached to a metal frame.

Korshunov says it was important for him to get children involved in the project. He wanted to help them develop good habits and learn more about sorting waste. He says Ukraine has a particular problem with waste dumping.

During most of the 20th century when Ukraine was part of the Union of Soviet Socialist Republics, the nation became industrialized quickly. People intensively farmed land, and pollution was rampant. Now Ukraine comprises some of the most polluted places in the world. Farming chemicals and sewage flow into major rivers. In some spots, beaches must stay closed and fishers see greatly reduced catches. All this damage is added to the still-devastating fallout from the 1986 accident at the Chernobyl nuclear power plant. That disaster contaminated land with deadly radioactive isotopes.

Korshunov is well known for his art projects in the Chernobyl Exclusion Zone, including a giant mural on the Chernobyl power plant. The artist plans to install more sculptures in other Ukrainian cities.

Here’s a question to think about. Does a plastic whale do the trick? Could it? Even if we could replace God’s creation with animals or plants that act and look just like the originals (a BIG if, of course), would it be the same? Does your gut say “no”? Is a replica of a Vincent van Gogh painting as valuable as the original? Of course not, because the creator is unique. You could say the same of the greatest artist in the universe: God, maker of whales and everything else.

The God who made the world and everything in it, being Lord of heaven and Earth, does not live in temples made by man. — Acts 17:24

A WHALE OF A SCULPTURE

Korshunov’s whale on display in Kyiv

WHY? Ukraine shows how history can contribute to current environmental problems. People can’t replace what God has made—but they can use art to call for preservation of His creation.
For more than 70 years, Martin Adler treasured a black-and-white photo. The image shows an American soldier with three children. Adler is the soldier. And this summer, he met again the youngsters he rescued in 1944.

The soldier and the children saw each other for the first time in 1944 during World War II. Adler entered what he thought was an empty house in the village of Monterenzio, Italy. Suddenly, he heard a sound. He thought a German soldier was hiding inside a large wicker basket. He aimed his machine gun, ready to shoot.

Thankfully, he paused, a real-life example of Proverbs 19:2. It advises against action without knowledge, adding, “One who hurries his footsteps errs.”

A woman emerged. “[She] came out and stood right in front of my gun to stop me,” Adler recalls. “She put her stomach right against my gun, yelling, ‘Bambinis! Bambinis! Bambinis!’ pounding my chest,” he says.

Three small faces peeked out from the basket. Their mother had hidden them.

“That was a real hero: the mother, not me,” Adler insists. “Can you imagine standing yourself in front of a gun and screaming ‘Children! No!’” He still trembles knowing that he was just seconds from opening fire.

While Adler’s company remained in the village, he would stop by and play with the children, aged three to six.

In August, 97-year-old Adler traveled from Florida to meet the siblings in person for the first time since the war. The trio are now in their 80s.

“Look at my smile,” Adler said, grasping the hands of Bruno, Mafalda, and Giuliana Naldi. Then, just as he did as a 20-year-old soldier, he handed out bars of American chocolate.

Giuliana, the youngest, is the only one of the three who remembers the event. She recalls climbing out of the basket and seeing Adler and another U.S. soldier.

“They were laughing,” Naldi, now 80, reminisces. “They were happy they didn’t shoot.” She also recalls the chocolate in a blue-and-white wrapper. “We ate so much of that chocolate,” she says.

Last year, Adler’s daughter, Rachelle Donley, decided to use social media to track down the children in the photo.

Italian journalist Matteo Incerti spotted the image. He located information about Adler’s regiment. An Italian newspaper published the picture. That led to the discovery of the identities of the three children. After the easing of pandemic travel rules, Adler made the trans-Atlantic trip.

Donley is proud of her father. “Because he hesitated,” she says, “there have been generations of people.”

Giuliana Naldi’s granddaughter, Roberta Fontana, agrees. She’s one of six children, eight grandchildren, and two great-grandchildren who descended from the children in the basket.

She says, “Knowing that Martin could have shot and that none of my family would exist is something very big.”
Greg Wilfert’s name isn’t listed as part of the definition of “beach bum.” But it probably could be. The 66-year-old just celebrated 50 consecutive summers of hanging out at one particular slice of Maine shoreline. And he has no plans to stop.

Wilfert still remembers the moment he fell for Scarborough Beach State Park. It happened during his first shift as a lifeguard there in 1972.

“When I came down and saw the beach and, I guess, what do you call it, your first love? There it is,” Wilfert says.

Most days, Wilfert walks the sand, rescue buoy in hand. Or he sits near the lifeguard stand peering out over the beach and into the sparkling blue waters.

“Greg has a passion for the beach. He’s passionate about making sure our patrons are safe,” says David Currier. He’s in his 39th season working as a rescuer at Scarborough.

Over the years, Wilfert kept his summers for lifeguarding even as he worked as a physical education teacher and later ran an antique business with his late wife.

He’s retired from those businesses. But he never gave up his summer job. “Anything else can be cut,” Wilfert says. “The beach was never going to be on the chopping block. It’s just who I am.”

In 1992, the state tried to dispose of Scarborough to save money. So Wilfert leased the land and ran it himself. He still has a business interest in Black Point Resource Management, which currently operates the park.

Today, Wilfert’s official title is “park manager.” But he spends 90% of his time lifeguarding. In 50 years, the lifeguard team he oversees has conducted more than 900 rescues without a single drowning.

What a gift to the people of Scarborough! Wilfert enjoys sharing his knowledge of the surf and rip currents. He’s in good shape and swims nearly a mile in the ocean each day. That helps him remain able “to do good and share” the talents God has given him. (Hebrews 13:16)

This summer, Wilfert began training a Newfoundland puppy named Beacon. Wilfert hopes that someday the fully grown 130-pound dog will assist the rescue team. Newfies love water, are strong swimmers, and, like St. Bernards, are highly trainable for rescue work.

During the off-season, Wilfert skis and takes flying lessons. But he heads to the beach come spring.

After Wilfert’s story ran on Maine’s WMTV 8, former students, players, and beachgoers thanked the long-time lifeguard for his example, dedication, passion—and “for keeping us safe all these years!”

One remark summed up how folks feel about Wilfert: “You are Scarborough Beach State Park!”
Images of desperate Afghans competing for spots on U.S. flights out of Kabul shocked the world this fall. For some, the sights evoke painful memories. Now many Vietnamese Americans are aiding people whose lives appear hauntingly similar to their own.

The U.S. final exit from Afghanistan was frantic. In the last two weeks of August, the United States evacuated 31,000 people from the Central Asian nation. Three-quarters were Afghans who had supported American military efforts. But many Afghan allies were left behind. They had no clear way out of the land-locked country under strict Taliban control.

Similarly, in recent history, many from Vietnam worked for years to escape brutal conditions in their homeland. These Vietnamese fled by boat, hoping to survive treacherous seas. Some spent time in “re-education camps”—retaliation for their allegiance to America during and after the Vietnam War.

The stories explain why many Vietnamese Americans see a refugee crisis arising from the departure of the U.S. military from Afghanistan.

Thuy Do remembers hearing how her parents tried to leave Saigon after Vietnam fell to communists in 1975. Then, as in September, the American military airlifted allies out as terror descended on a country.

It took years for Thuy Do’s family to escape. She was nine years old when they finally arrived in the United States with two sets of clothes apiece and just $300.

The memories drove Thuy Do and husband Jesse Robbins to assist Afghan refugees now. The couple is offering their rental home to resettlement groups for newly arriving Afghans.

“We were them 40 years ago,” Thuy Do says.

Some of the United States’ two million Vietnamese Americans are telling about their harrowing departures for the first time. Many are also spurred to donate to funds for housing, furniture, and legal assistance for newly arriving Afghans. Others offer first-hand guidance to refugees: how to shop at a supermarket, enroll kids in school, and drive a car in the United States.

The empathy of many Vietnamese Americans echoes Matthew 7:12: “Whatever you wish that others would do to you, do also to them.”

Immigration attorney Thi Do was a boy when Saigon fell. His family set out by boat, hoping to reach a country that would accept them.

Thi Do’s family was forced back to sea by Thailand and Malaysia. They eventually reached a refugee camp in Indonesia.

Today, Thi Do lives in California and helps people fleeing persecution. Until now, nothing has reminded him so plainly of Vietnam. He says, “I see a lot of myself in those children who were running on the tarmac at the airport.”
Jacobo Rendon wants today’s youth to remember, “We’re the ones who’ll be here in the coming years. We’re going to be responsible for our planet.” The 14-year-old is committed to doing his part to care for creation. He set out in March 2020 with his bird-studying ornithologist mother on a mission to spot, count, and record birds in their Colombian town of El Carmen de Viboral.

Jacobo and his mother used binoculars to spot the fowl. They borrowed a camera to document birds for a school project. Colombia is home to one-fifth of the world’s bird species. According to Colombia’s Association of Ornithology update list, there are 1,954 species of birds living in the incredibly biodiverse country.

Jacobo knows dozens of those birds by name. He grew up drawing birds after school. In a video interview, the teen proudly rattled off the scientific names of several birds. He showed off his favorite illustrations, like one of a sparrow hawk. (What was his very first guide entry? A flame-rumped tanager.)

When his classes went virtual during coronavirus lockdowns, young Rendon began creating a photographic and illustrated bird guide to the area’s urban avian life. The teen plans to donate the guide to a local cultural center so others can learn from his work.

Jacobo posted a video of his work online. That’s when donations began to pour in to support his illustrated bird guide. People around the world sent encouraging messages. A nature photographer volunteered to give the young artist a free photography lesson. The Action for Nature nonprofit honored him with an award for the project.

To continue raising money for his project, Jacobo offered to draw birds for people. Drawing commissions kept him busy for months and helped him collect more than $1,000. He used that to buy his first camera, some colored markers, and other materials.

Johana Reyes Herrera is Rendon’s mother. “It has been the motto of our home, our family—being able to serve the community,” she explains. “The fact that he’s doing it, and that he’s in line with this thought, makes his dad and me very happy.”

WHY? Psalm 50:11 says, “I know all the birds of the hills, and all that moves in the field is mine.” Even young people can use their God-given gifts to help others understand and preserve God’s good creation.
Robotic Hive

Around the globe, bees are in trouble. Experts say a population decline is largely due to rigorous farming, some pesticides, and natural parasites. The bee trauma forecasts problems for fruits, vegetables, flowers, and nuts. But a new robotic hive could help bees come buzzing back.

God made bees to transfer pollen from blossom to blossom, thereby participating in pollination. Once pollinated, plants produce fruits and seeds that will become new plants. Some birds and butterflies also pollinate, but honeybees are the world's top pollinators.

Bee expert Hallel Schreier says, “Bees pollinate 75 percent of the fruits, vegetables, nuts [that] we eat.” Some scientists predict that without bees, about a third of all human food would disappear.

For years, companies have experimented with technologies to slow down mass colony collapse (loss of worker bees in a hive). Tactics have included placing sensors on traditional wooden beehives as well as methods like artificial pollination.

But Israeli startup BeeWise insists the problem is beekeeping’s “150-year-old technology: a wooden box.” The company’s promo video proposes that “to save the bees, we don’t need to think outside the box. We need to reinvent the box.”

To that end, BeeWise has developed a next-generation hive.

Roughly the size of a cargo trailer, BeeWise’s high-tech hive—called a BeeHome—houses 24 colonies. The solar-powered hive allows beekeepers to monitor and treat bees and hives remotely.

A computer addresses hive and bee health onsite, when needed—without human intervention. This kind of round-the-clock care minimizes the risk of collapse.

Buzzing bees drown out the hum of a robotic arm. One after another, the BeeHome scans stacks of honeycombs housing up to two million bees. The machine inspects for disease, monitors for pesticides, and then reports any hazards threatening the colony. It can also harvest honey inside the hive, adjust temperature and humidity, apply medicine, and combine or split hives.

BeeHome features computer vision, artificial intelligence, and precision robotics. Color-coded openings on the sides allow bees to come and go. “Anything a beekeeper would do, the robotic mechanism can mimic and do it more effectively without ever getting tired, without going on vacation, and without complaining,” says BeeWise CEO Saar Safras.

BeeHome doesn’t replace the human beekeeper. Like any machine, the BeeHome must be programmed and serviced. But with an efficiency no human could match, it sure makes the apiarist’s job easier.

The BeeWise website claims its computerized BeeHome works “as if every bee had her own beekeeper 24/7, rain or shine.”
Neither snow nor salt nor heat nor volcanic acid . . . Some organisms not only survive harsh conditions but also thrive in them. Their extreme hardiness can help scientists understand more about helping humans. Expanded knowledge about extreme survival skills leads to developing technologies for protection, diagnoses, and treatments.

Jaz L. Millar is a researcher in Earth and Environmental Science. She studies organisms that love extreme environments. Here are a few of Millar’s favorite “extremophiles” and a rundown of what makes them exceptional survivalists:

### Cyanobacteria (bacteria)
**HABITAT:** beneath frozen lakes in Antarctica  
**CHALLENGE:** extremely low temperatures and low light  
**DANGER:** freezing, little light for photosynthesis  
**SUPERPOWER:** absorbing limited light in deep water and thick ice  
**STRATEGY:** Cyanobacteria use a purple pigment to absorb green light—the main type at ocean depths—efficiently.  
**HUMAN BENEFIT:** Researchers use cyanobacteria for dietary supplements, fertilizer, food production, food colorings, fuel, energy, and medicines.

### Thermus aquaticus (bacteria)
**HABITAT:** thermal springs  
**CHALLENGE:** extremely high temperatures  
**DANGER:** Heat this high is known to kill most living organisms.  
**SUPERPOWER:** T. aquaticus retains its molecular “shape” above 140°F (the temperature required to pull apart and copy DNA in order to study it).  
**STRATEGY:** This bacterium produces an enzyme that helps it tolerate high temperatures.  
**HUMAN BENEFIT:** T. aquaticus’ tolerance of temperature extremes allowed scientists to copy strands of DNA. It was also used to develop a common type of COVID test.

### Dunaliella salina (algae)
**HABITAT:** wide, flat, dried out expanses of land called salt pans  
**CHALLENGE:** extreme salt levels, ultraviolet (UV) radiation  
**DANGER:** Salty environments draw moisture from cells, often causing organisms to die. UV rays can damage or kill many life forms.  
**SUPERPOWER:** D. salina flourishes in salty conditions and protects itself from UV damage.  
**STRATEGY:** The algae carry high levels of glycerol (a liquid chemical) that offsets the salt by pulling water into its cells. The alga also holds high quantities of vitamin A to protect itself from UV damage.  
**HUMAN BENEFIT:** Scientists cultivate D. salina for dietary supplements and human skincare products. The microbe’s water retention and UV resistance “superpowers” are why this alga appears in makeup and face creams.

### Sulfobulbus (single-celled organism)
**HABITAT:** active volcanic springs  
**CHALLENGE:** extremely high heat and acidity  
**DANGER:** boiling to death, functional breakdown from acid  
**SUPERPOWER:** ability to resist changes to chemical or physical structure  
**STRATEGY:** Sulfobulbus uses protein-enriched membranes to survive its harsh environment.  
**HUMAN BENEFIT:** Sulfobulbus allows scientists to conduct studies in healthcare, genetics, and environmental research.

From single-celled organisms to mammoth blue whales, God created an Earth teeming with life. Wherever scientists search—ocean depths, volcanic springs, solid ice—they find flourishing organisms. After all, God made His creation “very good.” By studying how created beings survive extremes, scientists are learning how to benefit humans.
After four years, an extensive research-plus-technology effort culminated in the world’s first comprehensive coral reef atlas.

What was the starting point for the collection? The project’s leaders first came together with the goal to grow “super coral” for reef restoration. Corals are bleaching and dying all over the globe, largely due to pollution and water temperature changes.

The Allen Coral Atlas was named after the late Microsoft co-founder Paul Allen. In 2017, his company, Vulcan Inc., partnered with Ruth Gates, a Hawaii researcher. Together, they were determined to protect coral reefs. Allen and Gates wanted to use technology to identify and document all the reefs in the world.

Hundreds of contributors brought the atlas to fruition. Researchers from across the globe pooled their expertise and resources to create the first-ever detailed, high-resolution coral atlas. A satellite imaging company called Planet joined the project. It provided about 2.25 million high-quality satellite images for the maps in the atlas.

Researchers at Arizona State University developed technology to read the images. Technologists at the University of Queensland in Australia helped to produce the actual maps, using artificial intelligence to generate layers. National Geographic Society scientists provided the “boots on the ground.” They spent hours underwater exploring the reefs.

“Our biggest contribution in this achievement is that we have a uniform mapping of the entire coral reef biome,” says Greg Asner. He is managing director of the atlas and director of Arizona State University’s Center for Global Discovery and Conservation.

According to Asner, a network of field contributors helped researchers program their satellites and software to focus on the right areas. The information they shared about local reefs made each map more accurate. Asner says that about three-quarters of the world’s reefs had not been mapped in this in-depth way before.

Psalm 95:5 says, “The sea is His, for He made it, and His hands formed the dry land.” God purposed coral to clean seawater, house billions of living creatures, and protect shorelines from storms by serving as buffers. The Earth needs healthy, vibrant coral reefs.

Both Allen and Gates passed away about a year after the atlas project began. But others kept their project alive. “Ruth would be so pleased, wouldn’t she?” says Asner.

The atlas is free online as a reference resource for anyone who is curious about coral. At least 14 countries are already using the reference for planning marine projects. Scientists and policymakers alike will benefit from its availability.

Human progress and cooperation provide valuable information about the location and health of all the vibrant underwater coral reef habitats that God established.

Brain corals can live for hundreds of years.
Winds blow over ocean water. The sea stirs, creating powerful waves. Those waves contain energy.

According to the United States Office of Efficiency and Renewable Energy, the amount of energy in a single ocean wave could power one electric car for hundreds of miles. So scientists are zeroing in on the usefulness of ocean waves.

Water covers 70% of the Earth’s surface. Waves crash consistently to shore, against sandbars and reefs, all over the world. Those moving waters carry kinetic energy, or energy in motion. How can that energy be captured and harnessed? Oscilla Power, Inc., (OPI) of Seattle, Washington, is developing a wave-powered, electricity-producing, floating science station.

There are more than 8,000 marine platforms floating in oceans around the world. These platforms serve as bases for oil and gas drilling, underwater exploration, and scientific research. Solar panels or batteries power many of these floating stations. Both of those energy sources require regular maintenance. Scientists at OPI don’t want to have to make service calls to their floating stations. That’s another benefit to powering up the platforms with energy from ocean waves.

The deepest ocean water produces the strongest waves. That’s where OPI researchers will plop their marine platform called Triton. The platform has tools on board that can take energy from the waves that crash into it. Triton’s surface float is a bright yellow buoy that bobs on the ocean surface. Beneath it hangs a heavy ring called a reaction ring, or heave plate. Three tight rods called tendons connect the surface float to the reaction ring. As the buoy floats, the ocean’s movement stretches and pulls the tendons. They wiggle with energy from waves. At the same time, iron-aluminum coils on each rod capture that wave energy and turn it into electricity. That electricity flows through cables connecting the platform to shore.

The United States government thinks that OPI is onto something with wave research. The United States Department of Energy gave OPI a financial grant. The government funds ideas it wants to see further developed with this gift of money. Collecting energy from ocean waves to convert into electricity could in time become a completely sustainable process.
A new technology has the world by the ears. The new aural devices can do more than just play music. They can monitor health, track fitness, and accept voice commands. And with artificial intelligence programmed in, they can determine what you already know—say, when you’re learning to speak a new language—and prompt you with the information you need to progress.

Some experts call the wearable ear tech “the future of hearing enhancement.”

Hearables (aka smart earbuds or smart headphones) are wireless in-ear microcomputers. Hearable is a portmanteau, a word that combines hearing and wearable. The term has been around since 2014, but it’s only just coming into its own.

Researchers are developing hearables as a type of always-worn personal assistant—one that’s essentially whispering right into the user’s ear. Hearables can connect to the internet and to other devices.

Hearables aren’t (yet) meant to replace hearing aids, ear plugs, headphones, headsets—or teachers. But they could someday operate in the role of each of those. As a daily wearable, hearables seem poised to revolutionize several fields, including education, health and fitness, and, well, everyday life.

Rory McGreal is an educational technology expert who sees the potential for hearables in learning. He believes hearables could result in a shift from text-based learning. He says they have the potential to support and/or develop the following:

- lectures
- podcasts
- notifications
- reminders
- student interaction
- instant replay
- recording
- translation
- music listening
- skills practice
- communication
- collaboration
- content access
- language learning
- public speaking
- interviews
- teamwork

Whew!

Beyond their use in educational settings, hearables can also integrate with ordinary home or office activities. Suppose you hear Mom or Dad ask out loud for a recipe. The in-ear device reads off ingredients while your parent scans the pantry.

There are still challenges in using hearables. The most significant are technical limitations. Manufacturers need to reduce power usage and battery size—at the same time as increasing battery life and connectivity (to internet and/or Wi-Fi).

Hearable companies must combat the stigma of hearables, which some people negatively associate with hearing aids and aging. Others think their use around others is rude and dismissive of the real, live humans nearby.

Some companies are focusing on stylishness—colors, shapes, and materials, so that the devices are worn like jewelry. Others promote these in-ear microcomputers as the next big thing in wearable tech.

Today, smart devices are everywhere among us. This isn’t true of hearables . . . yet. But it’s likely the small earpieces with the big skills are here to stay. Soon that little voice may literally be in your head.
Israeli scientists are using cells from actual patient cancers to print working 3-D models of tumors. The work is ground-breaking—and allows researchers to test treatments in a close-to-real-life situation.

Professor Ronit Satchi-Fainaro leads the revolutionary research at Tel Aviv University (TAU). Her team wanted to test how well potential treatments might work—before using them inside patients' bodies.

Satchi-Fainaro explains the process this way:

Scientists extract “a chunk” of the tumor from the brain of a patient with glioblastoma. That’s an especially aggressive and common form of brain cancer.

Glioblastoma spreads quickly and unpredictably to other parts of the brain. That makes treating the cancer difficult. Increasingly, doctors are looking to experimental medicines to defeat brain cancer instead of surgery, radiation, or chemotherapy.

But researchers eager to try new medicines face two challenges: 1) The long drug trial process complicates bringing a new brain cancer drug to market, and 2) it’s humanly impossible to know how a drug will work in a patient’s uniquely created body.

So TAU researchers built the world’s first fully operational 3-D model of a glioblastoma tumor.

Researchers have often 3-D printed organ and tumor models to plan for surgery. More recent innovations have focused on “bioprinting,” which uses live cells as a sort of ink to build up the layers. Previous bioprinting projects have included bladders, lungs, hearts, and blood vessels. (See 3-D Wonders Never Cease at teen.wng.org/node/2257.)

The revolutionary part of the TAU tumor is this: Researchers use cancer patients’ own cells to bioprint a personalized, tissue-like tumor—the first “viable,” or working, tumor.

An article in an August issue of the journal Science Advances explains the process:

Scientists use the chunk of tumor to create a gel. The substance mimics brain tissue much more accurately than other mixtures. Scientists print a 3-D model matching the patient’s MRI scans using the gel.

“[What] we wanted to create is a 3-D, as opposed to two-dimensional, plate where we grow the cells in the gel,” says Satchi-Fainaro. “This translates to the behavior of the cancer cells.”

Doctors then pump the patient’s blood through the printed tumor. They administer treatments to see how the man-made tumor responds. Scientists consider a treatment promising if the printed tumor shrinks or if its metabolic activity slows down.

Ofra Benny leads similar tumor research at the Hebrew University of Jerusalem. She says using a patient’s own cells to develop 3-D tumor models could be “a game changer in the field of personalized medicine.”
“WE ARE HERE AS THE FAMILY FOR A PERSON WE DON’T KNOW.”
—Rabbi Michael Schudrich. The Jewish community in Warsaw, Poland, gathered to offer the ministry of presence at the burial of an unidentified Holocaust victim whose remains were discovered this summer in World War II’s Warsaw Ghetto.

WHEN COWS FLY Cows injured during their summer sojourn in the high Swiss Alpine meadows got a jump on their healthier herdmates this summer with helicopter rides down the mountain. About a dozen beasts were airlifted to a landing near the Klausenpass mountain pass. That’s around 6,400 feet above sea level—plus the extra footage added by the helicopter’s lift. The rest of the 1,000-strong herd moooved down the mountain afterwards. No helicopters for them. They did the old-fashioned thing and hoofed it.

DUTCH KING UNVEILS HOLOCAUST MONUMENT King Willem-Alexander of the Netherlands unveiled a new memorial in the heart of Amsterdam’s historic Jewish Quarter in September. It honors Dutch victims of the Holocaust. Each brick in the structure is inscribed with a name, birthdate, and age at death of one of the 102,163 Dutch who died from Nazi crimes. Designed by Polish-Jewish architect Daniel Libeskind, the memorial is made of walls shaped to form four Hebrew letters. They spell out a word that translates “In Memory Of.” Prime Minister Mark Rutte vowed that the monument would cause citizens to be mindful against antisemitism. He says, “The monument says—no, it screams—be vigilant.”

AL CAPONE’S TENDER SIDE AT AUCTION Ruthless mob boss. Public Enemy No. 1. Bootlegger. Gangster. Loving, devoted grandfather. Wait . . . what? According to one of the granddaughters of the infamous outlaw, Al Capone’s softer side shines through an array of family heirlooms that went to the auction block in October. Among the treasures are diamond-encrusted jewelry with his initials, family photos, and the mobster’s favorite Colt .45 handgun. Not convinced yet? Also included in the collection is a handwritten letter to Capone’s only child Albert, whom he called “Sonny.” The letter tenderly refers to Sonny as “son of my heart.” Diane Capone, Sonny’s daughter, calls the document “a poignant, beautiful letter from a father to his son.” The assortment was offered at Witherell’s Auction House in Sacramento, California. The event was called “A Century of Notoriety: The Estate of Al Capone.”
POWERING OFF
On August 29, half the New York City subway system shut down unexpectedly. More than 80 trains ground to a halt for several hours while officials scrambled to get the mass transit system back on track. New York Governor Kathy Hochul promised answers, telling city residents who depend on public transportation, “the system failed you.” She ordered a full review of operations across the Metropolitan Transportation Authority to identify and fix potential weaknesses. After a thorough evaluation, outside investigators reported that the unprecedented breakdown had an identifiable cause: Human error. Someone had pressed the “Power Off” button.

BRINGING BACK WOOLLY
Long ago, heavy-footed woolly mammoths tromped across the Arctic tundra. Where they grazed, they kept plant life under control. Their broad feet crushed shrubs and saplings and compacted snow. Scientists today believe the extinct woolly mammoths played an important role in preserving the permafrost. Some of those scientists want to bring back the woolly mammoth. They have extracted bits of DNA from frozen mammoth remains. Using a gene editing process, the scientists believe they can combine mammoth DNA with the DNA of modern elephants. They say in four to six years, they will produce the first elephant-mammoth hybrid calves. They won’t be pure woollies. But they would be “indistinguishable” from the original, the scientists say. What do you think? Is it ethical to bring back an animal that long ago passed into extinction? Why or why not?

ALMOST A DRAGON
On his lunchbreak near Richmond, Australia, Len Shaw uncovers the jawbone fossil of a dragon. Well, almost a dragon. Pterosaurs aren’t exactly dragons. They’re not even dinosaurs. What they are is big—especially this one. Now named Thapunngaka shawi, this fossil—discovered by Shaw in 2011—has at last been identified as the largest kind of pterosaur ever found in Australia. The flying reptile had a skull more than three feet long with about 40 sharp teeth nestled inside. The beast likely swooped down with its bus-sized wingspan and plucked its daily dinner from the sea.
QUIZ MY READING

1. How did the lives of three Italian children and their descendants depend upon Martin Adler’s hesitation?
   a) The soldier waited before shooting at a sound coming from a basket that contained the children.
   b) His wavering allowed the family to flee from their village and escape enemy fighters.

2. Why are Vietnamese Americans helping Afghan refugees after the United States pulled out of Afghanistan?
   a) Some want to claim the rewards given by the government for housing refugees.
   b) Many recognize that the refugees’ lives resemble their own.

3. Greg Wilfert has held the same job in Scarborough, Maine, for 50 summers. What is his job?
   a) lifeguard at Scarborough Beach State Park
   b) training dogs to be lifeguards at the local pool

4. How many species of birds live in Colombia?
   a) 190
   b) 1,954

MATCH THE CORRECT BEACH FLAG WITH THE PHOTOS.
See page 19 to refresh your memory.

WORDS TO BANK

1. reminisces
   a) sputters
   b) remembers
   c) scolds

2. retaliation
   a) payback or reprisal for a wrong done
   b) the act of giving new energy to something
   c) the repetition of something over and over

3. harrowing
   a) signaling that something will happen
   b) extremely distressing or upsetting
   c) seeding crops in rows for ease of harvest

4. consecutive
   a) intermittent
   b) understandable
   c) successive

5. biodiverse
   a) speaking many languages
   b) small
   c) having a variety of wildlife

6. avian
   a) native
   b) related to birds
   c) invasive

MIND STIR

1. What are some ways to use The Golden Rule (Matthew 7:12) to help others in hardship? Use the Vietnamese Americans as an example.

2. Do you think it’s wise to keep working past typical retirement years, like the lifeguard in Maine? Why or why not? At what age should a person think of retiring?

VIZ-QUIZ

Match the correct beach flag with the photos. See page 19 to refresh your memory.

1. [Flag A]
2. [Flag B]
3. [Flag C]
4. [Flag D]
Scan (right) to check out our “Farm News” page.

Have an ordinary kitchen blender? Sarah shows you how to turn raw wheat berries into pancakes in a short video.

Watch us harvest wheat from the field and transform it into pancakes, all in 5½ minutes.

Search our website for links on how Mennonites, fleeing the Ukraine, transformed Kansas’s agriculture and the American flour industry.

We’re going back and finding the old, good tasting grain varieties.

We grow them without synthetic chemicals in the fertility levels they traditionally thrived, and then we process them in a manner used hundreds of years ago. We accomplish this by doing everything, from planting to milling, here on our farm.

Henry Moore Yellow Corn
Bloody Butcher Red Corn
Blue Hopi Corn
Tenn. Red Cob (White Corn)
Hard Red Winter Turkey Wheat
Pennsylvania Dutch Butter Flavored Popcorn
Soft Red Winter Pastry Wheat
Hulless Oats
Hard Red Spring Bread Wheat
Buckwheat

AVAILABLE AS Whole Corn Kernels, Wheat Berries, Oat Groats & Raw Cold Rolled Oats
Stone Milled: Cornmeals, Corn Grits, Sifted/Whole Wheat & Buckwheat Flours, Scottish & Irish Oatmeals

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FROM OUR FAMILY TO YOURS. ALL DONE ON THE FARM.
Watch + LEARN

We all need a change of scenery. How about touring the world? Now your family can catch up on the latest international news in **ten minutes each day**.

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Find headlines, news briefs, and feature stories that captivate and educate. Explore topics such as science, history, technology, art, and more — **all with the Biblically sound perspective you expect from WORLD.**

We can’t keep your teens from growing up too quickly, but we can help them grow into humans equipped with news literacy.

**View a sample episode at worldwatch.news.**