

GENTLE.NEWS

In Today's Edition

Happy Fourth of July!

Science & Discovery

NASA's Webb Reveals Stars Sparking to Life in Cosmic Celebration

Technology & Innovation

Calculating a new view on quantum mechanics using quantum computers

The World Today

Selling identities: The commercialization of Mayan culture

Nature & Environment

Volcano Watch — Hawaii Five-O! Fifty fountaining episodes at Kīlauea summit

Life & Culture

Celebrate National Culinary Arts Month

Activity Time

Word Search Puzzle

"Time is an illusion. Lunchtime doubly so."

— Douglas Adams

NASA's Webb Reveals Stars Sparking to Life in Cosmic Celebration

Explore Webb Science James Webb Space Telescope (JWST) NASA's Webb Reveals Stars... Webb News Latest News Latest Images Webb's Blog Awards X (offsite – login reqd) Instagram (offsite – login reqd) Facebook (offsite- login reqd) Youtube (offsite) Overview About Who is James Webb? Fact Sheet Impacts+Benefits FAQ Webb Timeline Science Overview and Goals Early Universe Galaxies Over Time Star Lifecycle Other Worlds Science/Engineering Explainers Observatory Overview Launch Deployment Orbit Mirrors Sunshield Instruments & ISIM Module Instrument: NIRCам Instrument: MIRI Instrument: NIRSpec Instrument: FGS/NIRISS Optical Telescope Element Backplane Spacecraft Bus Webb vs Hubble -> Multimedia About Webb Images Images Videos What is Webb Observing? 3d Webb in 3d Solar System Podcasts Webb Image Sonifications Webb's First Images Team International Team People Of Webb More For the Media For Scientists For Educators For Fun/Learning 4 Min Read NASA's Webb Reveals Stars Sparking to Life in Cosmic Celebration In infrared light, NASA's James Webb Space Telescope reveals bright protostars in star system FS Tau and a tapestry of background galaxies. FS Tau B, the orange protostar slightly right of center, is thought to be responsible for the orange outflows amid the dusty region. Credits: Image: NASA, ESA, CSA, STScI; Image Processing: Alyssa Pagan (STScI) NASA's James Webb Space Telescope has captured the infrared light of

numerous features that previously were impossible to see beyond the thick dust of the FS Tau star system. In addition to myriad background galaxies that burst into view like fireworks for the United States' 250th anniversary celebrations, this image flickers with a number of protostars, or baby stars that are formed from dense pockets of gas and dust. These hot, clumpy, and low-mass objects eventually will become full-fledged stars capable of burning hydrogen in their cores, like our Sun. The protostars of FS Tau are about 1 to 3 million years old, which is relatively young in cosmic scales. Our Sun, by contrast, is 4.6 billion years old. Low-mass stars emit less radiation and have less energetic stellar winds than those with larger masses, which means they disrupt their environment at a much lower level. This makes the FS Tau region incredibly useful for studying low-mass star evolution without the same level of environmental interference seen near higher-mass stars. A pair of protostars that creates the largest diffraction pattern seen slightly to the left of center in the image, called FS Tau A, is about half the mass of our Sun. Image: FS Tau (Webb Image) In infrared light, NASA's James Webb Space Telescope reveals bright protostars in star system FS Tau and a tapestry of background galaxies. FS Tau B, the orange protostar slightly right of center, is thought to be responsible for the orange outflows amid the dusty region. Image: NASA, ESA, CSA, STScI; Image Processing: Alyssa Pagan (STScI) Even though these objects are young and low-mass, they still can impact their surroundings, partially due to the outflows they emit. These outflows, seen as orange and red wisps and wide sheets, are theorized to come from FS

Tau B, the protostar slightly to the right of center that has an orange diffraction pattern. As FS Tau B feeds on the surrounding dust and gas to grow, it ejects some of that matter outward. The wider outflows are thought to come from the interaction between the protostar's magnetic field and superheated matter closest to the protostar within its accretion disk. The disk is seen as a dark band that cuts across at a 30-degree angle. The gaps between the outflows, newly discovered in this Webb observation, add to growing evidence that protostars accrete matter in discrete episodes. In the periods where protostars gather material and increase in mass, they also eject superheated matter in different directions. In between these episodes, they are relatively quiet. Image: FS Tau Side-by-Side (Webb and Hubble Image) A comparison between the observations of FS Tau by NASA's Hubble and James Webb space telescopes. Hubble's visible-light view shows the star-forming region mostly obscured by thick dust. Webb sees through the dust, revealing how the protostars are shaping their surroundings. Image: NASA, ESA, CSA, STScI; Image Processing: Alyssa Pagan (STScI) As protostars eject these outflows, they shape their surroundings. This is best shown by the prominent light-blue ridges of dust and gas near FS Tau B. These thicker regions were likely created as outflows struck and compressed matter together. The brightness of these light-blue ridges shows that the nearby protostar's light is reflected. Moreover, Webb's sensitivity reveals the varying textures of dust and gas across the entire region. The range of colors seen in this observation also provides a wealth of information, specifically about where dust is and how

much of it obscures the region. Light with bluer wavelengths is absorbed and scattered by dust, while redder-wavelength light is able to slip through. Therefore, background galaxies behind thicker foreground dust appear redder. Alternatively, yellow galaxies have much less dust obscuring them. The few white stars visible in this image are likely in the foreground. The James Webb Space Telescope is the world's premier space science observatory. Webb is solving mysteries in our solar system, looking beyond to distant worlds around other stars, and probing the mysterious structures and origins of our universe and our place in it. Webb is an international program led by NASA with its partners, ESA (European Space Agency) and CSA (Canadian Space Agency). To learn more about Webb, visit: <https://science.nasa.gov/webb>

Downloads & Related Information

The following sections contain links to download this article's images and videos in all available resolutions followed by related information links, media contacts, and if available, research paper and Spanish translation links.

Related Images & Videos

FS Tau (Webb Image) In infrared light, NASA's James Webb Space Telescope reveals bright protostars in star system FS Tau and a tapestry of background galaxies. FS Tau B, the orange protostar slightly right of center, is thought to be responsible for the orange outflows amid the dusty region.

FS Tau Side-by-Side (Webb and Hubble Image) A comparison between the observations of FS Tau by NASA's Hubble and James Webb space telescopes. Hubble's visible-light view shows the star-forming region mostly obscured by thick dust. Webb sees through the dust, revealing how the protostars are

shaping their surroundings. FS Tau (Webb Compass Image) An image of FS Tau captured by Webb's NIRCams (Near-Infrared Camera), with compass arrows, scale bar, and color key for reference. Related Links Read more: Webb's Star Formation Discoveries Explore more: ViewSpace | Image Tour: Herbig-Haro 46/47 Watch: Herbig-Haro 49/50 Stellar Jets Visualization Explore more: ViewSpace | Star formation in the Eagle Nebula Watch: Celestial Lightsabers: Stellar Jets in HH24 More Webb: News | Images | Science | Home Page Share Details Last Updated Jul 02, 2026 Location NASA Goddard Space Flight Center Contact Media Laura Betz NASA's Goddard Space Flight Center Greenbelt, Maryland laura.e.betz@nasa.gov Matthew Brown Space Telescope Science Institute Baltimore, Maryland Abigail Major Space Telescope Science Institute Baltimore, Maryland Related Terms James Webb Space Telescope (JWST) Astrophysics Goddard Space Flight Center Protostars Science & Research Stars The Universe Keep Exploring Related Topics James Webb Space Telescope Webb is the premier observatory of the next decade, serving thousands of astronomers worldwide. It studies every phase in the... Stars Stars Stories Universe

Calculating a new view on quantum mechanics using quantum computers

Researchers leverage IBM quantum hardware through the OLCF's QCUP to model a key particle physics process, laying the groundwork to push beyond the limits of classical computation. Published: June 30, 2026 Updated: June 30, 2026

String breaking is a fundamental mechanism in the hadronization process. Quarks are linked by “strings” of gluons that stretch as the quarks collide and spin away, ultimately releasing enough energy to “snap” the gluon string apart as a new quark-antiquark pair bind together to form a hadron. Credit: Getty Images. By remotely accessing an IBM quantum computer through the Quantum Computer User Program (QCUP) — a quantum computing access program managed by the Oak Ridge Leadership Computing Facility, a Department of Energy Office of Science user facility located at DOE's Oak Ridge National Laboratory — a research scientist at Lawrence Berkeley National Laboratory successfully simulated a key process in particle physics: hadronization. Although based on a simplified model of quantum mechanics, the project lays the groundwork for how physicists can leverage the power of quantum computers to make large scientific calculations beyond the capabilities of classical supercomputers. Hadronization occurs when two or more quarks — the subatomic building blocks of matter — bind together through the strong nuclear force to form composite particles called hadrons. The most

familiar examples of hadrons are protons and neutrons, which form the nuclei of atoms. So, having a better understanding of the hadronization process means having a better understanding of the structure of matter and, in turn, the universe. Physical experiments have not been able to reveal every step of the process, however. Researchers at the Large Hadron Collider (LHC) at CERN accelerate protons to near light speeds, guide them into collisions and study the resulting debris of quarks and antiquarks. But these particles can only be indirectly measured before they immediately undergo hadronization — hence the need for computer simulations to fill in the gaps of these scientific observations. “In principle, we know the theory that describes hadronization, but we are unable to make predictions using it because the calculations have been too difficult for a classical computer. However, on a quantum computer, we should be able to directly make predictions for the details of how hadronization occurs, which will help with the searches for new physics performed at colliders such as the LHC,” said Anthony Ciavarella, the Berkeley Lab research scientist who led the project. His findings were published in *Physical Review D*. Quantum computing — a technology still in the early stages of development relative to classical supercomputers such as the OLCF’s exascale-class Frontier — utilizes quantum bits, or qubits, to perform calculations. Unlike binary bits used by classical computers, qubits don’t employ only ones and zeroes to encode information. Rather, they use a quantum superposition of combined ones and zeroes that may exponentially increase processing power for certain kinds of problems, such as

the quantum mechanical interactions of subatomic particles. Accurately simulating quantum chromodynamics (QCD) — the theory describing how the strong force binds quarks and gluons — overwhelms classical computers. The strong force binds and entangles the subatomic particles so that their representation and manipulation on classical computers requires exponential amounts of processing power and memory to predict observable results. This is because binary computers must separately represent all the different possible quantum states of the particles, which becomes an exponential scaling problem — the amount of memory needed doubles for every new particle or time step added to the simulation. On the other hand, quantum computers are far more efficient at describing subatomic systems because their qubits can exist in multiple states just like the particles themselves. Furthermore, their computational power grows exponentially with each additional qubit. “One of the original motivations for building quantum computers was that they naturally have this quantum phenomenology built into how they’re constructed. And in these simulations of subatomic systems, we’ve got large amounts of entanglement and quantum correlations that you just can’t efficiently represent on a regular computer,” Ciavarella said. Setting the template for quantum calculations Ciavarella’s project ultimately aims to develop the computational techniques needed to simulate the QCD of large subatomic systems on quantum computers of the near future. (Current quantum computers have limited numbers of qubits and are prone to high error rates, but the technology is rapidly evolving.) For this initial step, he

simplified the simulation's parameters with a combination of his own techniques and ones that scientists have used for QCD simulations on classical computers. With the cloud access provided by QCUP, he applied them to a Heron processor on the IBM Quantum Platform, leveraging 104 of its 156 qubits. First, Ciavarella used a heavy quark limit while simulating string breaking, which is a fundamental mechanism in the hadronization process. Quarks are linked by "strings" of gluons that stretch as the quarks collide and spin away, ultimately releasing enough energy to "snap" the gluon string apart as a new quark-antiquark pair bind together to form a hadron. Heavy quarks (with more mass) are easier to simulate because they don't spread out as much as light quarks, so they can fit more easily as points on a simulation grid. Researchers then extrapolate these heavy results down to the light quark behavior. Second, Ciavarella used a "scalable circuit concurrent variational quantum solver," a computational technique that he co-developed as a graduate student at the University of Washington, to bring the quantum computer's qubits to a quantum vacuum state — the lowest energy level with the most stability. "The idea is to optimize these vacuum preparation circuits on a small system size. Then you do it slightly bigger and slightly bigger and slightly bigger. So, by doing this, you can understand how the parameters of your circuit depend on the system size, and you can then extrapolate that out to doing it for a large system. For example, you can optimize this on up to 10-12 qubits and then extrapolate that out to hundreds if you choose to do so," Ciavarella said. Finally, he limited his simulation to one dimension,

with particles moving only left to right and back. Ciavarella plans on adding an additional dimension in the next iteration of his work, which he'll tackle once he can access improved quantum computers and algorithms. But this project succeeded in seeing how far the existing hardware can be pushed in string-breaking simulations, with results that matched previous work on classical supercomputers. "One of the findings that we reproduced here is that, in the middle of the gluon string, it starts to look like it's gasifying at a finite temperature before it separates. This is exciting because, if we see this reproduced across a wide range of different simplified models, then it should be more likely it's an actual feature of QCD that describes the world we live in," Ciavarella said. QCUP provides computational scientists with access to state-of-the-art commercial quantum computing resources for purposes of discovery and innovation in scientific computing applications. It is managed by the Oak Ridge Leadership Computing Facility. The OLCF is a DOE Office of Science user facility at ORNL that is supported by DOE's Advanced Scientific Computing Research program. UT-Battelle manages ORNL for DOE's Office of Science. The Office of Science is the largest supporter of basic research in the physical sciences in the United States and is committed to addressing some of the most pressing challenges of our time. For more information, visit energy.gov/science . —Cory Turczyn Media Contact
Cory Z Turczyn , Science Writer , 865.341.0352 | TURCZYN-CZ@ORNL.GOV

Selling identities: The commercialization of Mayan culture

The Xcaret Group argues in favor of using Mayan identities as a trademark. Originally published on Global Voices Feature image created by Global Voices using Canva Pro elements. This story is part of Undertones, Global Voices' Civic Media Observatory's newsletter and column. [Subscribe to Undertones](#). The publication is based on conversations with Mayan language speakers from Rising Voices during the Civic Media Observatory's Narrative Spotter Workshop. The government and the private sector in Mexico frequently reference the identities and symbols of Mayan communities to promote tourism in the country. The Riviera Maya, the tourist corridor managed by the government of the state of Quintana Roo on the Yucatán Peninsula, is perhaps the best-known example. The Mayan archaeological sites in the region are among the key attractions that the tourism industry, both national and international, highlights when promoting its services. The Tren Maya, the railway line connecting southeastern Mexico, is an iconic project. Still under construction, it was inaugurated by former President Andrés Manuel López Obrador (National Regeneration Movement, or MORENA) in December 2013 with the opening of its first sections. The initiative has been publicized as an effort that “celebrates the resurgence of the great Maya nation,” immersing visitors in the heart of southeastern Mexico. Connecting the states of Chiapas, Tabasco, Campeche, Yucatán, and

Quintana Roo, the train, according to its official website , features a design inspired by Mayan culture, “in the colors and textures of regional art.” The Travesía Sagrada (Sacred Journey), an annual event organized and celebrated by the tourism consortium Grupo Xcaret, which the Quintana Roo Tourism Secretariat promoted as a “unique experience that revives the ancient Mayan ritual by crossing the Caribbean Sea in canoes, in honor of the goddess Ixchel” in 2025, is another example of these references to symbols and identities when promoting tourist services. Narrative: The Mayan culture is a marketing tool; it is a trademark In March 2024, Grupo Xcaret shared a statement reporting on a meeting with the Great Mayan Council of Quintana Roo, in which both parties addressed the “use, protection, and development of Mayan cultural heritage” within the framework of the Federal Law for the Protection of the Cultural Heritage of Indigenous and Afro-Mexican Peoples and Communities : ... Grupo Xcaret will continue to provide suitable spaces for cultural bearers (inheritors and transmitters of traditions, knowledge, and living heritage) to share their cultural expressions with dignity, fostering a vision of prosperity and shared value. This will always be done with absolute adherence to ethics and their self-determination, and through prior, free, and informed consent in accordance with their customs and traditions, giving credit to the bearers and providing fair compensation agreed upon by both parties. Grupo Xcaret will support projects for the research, preservation, protection, promotion, enhancement, revitalization, dissemination, and transmission of the Living Heritage that the Ceremonial

Centers choose to share, including, but not limited to, Mayapaax music, the training of prayer leaders, traditional ceremonies, patron saint festivals, and the transmission of traditional medicine. This will be done while respecting the self-determination of each Ceremonial Center. The agreement acknowledges the “lack of implementation” of the transitional rules of the Federal Law for the Protection of the Cultural Heritage of Indigenous and Afro-Mexican Peoples and Communities, while seeking consent for the Xcaret Group to continue using Mayan symbols and identities across its various facilities. One of them is Xcaret Park , a theme park that offers shows such as the Travesía Sagrada. With this agreement — which, according to reports , involved a compensation of 15 million Mexican pesos (just over USD 857,000) — the Xcaret Group, together with the Great Mayan Council of Quintana Roo, shares a narrative that gives commercial value to Mayan symbols and identities, turning them, in their story, into a transactional element. For more than 30 years, as mentioned in the 2024 document, Grupo Xcaret has used Mayan symbols and identities in its commercial strategies, implicitly stating that these symbols and identities constitute a trademark. Screenshot from an Instagram post by Xcaret Park; fair use. The caption of the post reads, “The sound of the seashell announces the beginning of an ancestral spectacle. Let the mysticism of the copal and the drums immerse you in the Mayan Village.” The context surrounding the narrative The agreement between Grupo Xcaret and the Great Mayan Council of Quintana Roo follows the latter’s 2022 complaint to the National Copyright Institute

(Indautor) against the tourism consortium for appropriating Mayan cultural heritage. The case was elevated to the Supreme Court of Justice of the Nation (SCJN), which, after an appeal referencing the 2024 agreement between the parties, ruled in March 2026 that Grupo Xcaret must remove advertising content that used elements of Mayan cultural heritage. According to the SCJN press release , “tangible and intangible cultural heritage belongs collectively to Indigenous peoples and communities, and therefore its protection is a matter of public order and social interest.” In April 2026, the Great Mayan Council of Quintana Roo expressed its discontent with the SCJN ruling, accused the court of denying them a hearing to defend the actions of the Xcaret Group, and reaffirmed the agreement reached in 2024. The Great Mayan Council of Quintana Roo is an Indigenous representative body, established by the state of Quintana Roo in 1998. According to an article by Hilda Landrove Torres in the online magazine *Maya América* , it has been surrounded by conflict and political pressure. The institution was created during the administration of Mario Ernesto Villanueva Madrid (then a member of the Institutional Revolutionary Party, or PRI), who prioritized the development of tourism in the Riviera Maya . Critics of Villanueva Madrid’s governorship argue that he orchestrated unions to his advantage, including the Great Mayan Council of Quintana Roo, to ensure the growth of the state’s tourism industry. Villanueva Madrid’s term ended in 1999, and he was imprisoned years later for alleged ties to drug trafficking, charges he maintains stem from his refusal to support the business interests of former President

Ernesto Zedillo 's family (also linked to the PRI) in the Riviera Maya. The positioning of the Great Mayan Council of Quintana Roo as being representative of the community was pushed in 2016 by the then governor-elect Carlos Joaquín González (currently Mexico's ambassador to Canada), who represented the Party of the Democratic Revolution (PRD). According to the council's proponents, its legitimacy emanates from its members, the Mayan generals and priests who represent each of the five ceremonial centers located in the state of Quintana Roo. The council is currently led by Simón Caamal Coh, who in April 2026 denied having received 15 million Mexican pesos as part of the agreement with Grupo Xcaret, which was made public in March 2024. The National Institute for the Development of Indigenous Peoples (INPI) recognizes a separate group of representatives of the Mayan community in Quintana Roo, who have expressed their disagreement with the actions of the Great Mayan Council of Quintana Roo and are requesting an audit of the 15 million Mexican pesos allegedly granted by the Xcaret Group. Mayan communities are nowadays settled across a vast geographical area encompassing Guatemala, Belize, western El Salvador, and Honduras, as well as the Mexican states of Chiapas, Tabasco, Campeche, Yucatán, and Quintana Roo. Given its status as a cultural region, this territory transcends national and state borders and therefore cannot be defined solely by them. Each Mayan community has its distinct language, worldview, and traditions. Due to funding challenges, our Civic Media Observatory research continues on hiatus, and we are currently working at minimum capacity. Please help us maintain these

narrative insights in a nutshell by donating to Global Voices, and reach out if interested in building partnerships to conduct our Civic Media Observatory research. Written (Español) by Samanta Azpurua , Vicente Canché Mío Translated (English) by Civic Media Observatory , Samanta Azpurua View original post (Español)

Volcano Watch — Hawaii Five-O! Fifty fountaining episodes at Kīlauea summit

Volcano Watch — Hawaii Five-O! Fifty fountaining episodes at Kīlauea summit

Subscribe to receive "Volcano Watch" articles via email

By Hawaiian Volcano Observatory July 2, 2026

Hawaii, the 50th state, reached a golden anniversary last Saturday, June 27. Surprise, it's the 50th fountaining episode of the ongoing episodic eruption in Halema'uma'u at the summit of Kīlauea. Volcano Watch is a weekly article and activity update written by U.S. Geological Survey Hawaiian Volcano Observatory scientists and affiliates. There was no celebratory cake, but the north vent served up a 1030 foot (314 meter) high lava fountain, the tallest since episode 43, to the delight of visitors to Hawai'i Volcanoes National Park and Kīlauea summit livestream/webcam watchers. The weather was beautiful and the wind cooperated by blowing almost all of the tephra southward into remote parts of the National Park with only a trace dusting of Pele's hair dropping over the town of Pāhala, 18 miles (30 km) to the southwest. The Halema'uma'u eruption powered through the first 50 fountaining episodes in 551 days, averaging about 11 days between eruptions. The longest pause was just under 30 days and the shortest was less than one day. Similarly, the duration of the fountaining episodes has also shown a wide range averaging about 15 hours (0.6 days) with the longest lasting just over 140 hours (about 6 days) and the shortest 4.5

hours (0.2 days). The Pu‘u‘ō‘ō eruption currently holds the record for the longest fountaining episode at 12 days for episode 3, while the Kīlauea Iki eruption holds the record for the shortest fountaining episode duration at 1.75 hours. The double fountains are another feature of this eruption that set it apart from previous episodic fountaining Hawaiian eruptions. Thirty-two of the 50 fountaining episodes in Halema‘uma‘u have erupted double fountains. The north vent has surprisingly only sat out one episode (episode 17) while the south vent has taken 19 episodes off throughout the eruption, including the last 7 episodes. While it may seem that the south vent is taking it a bit easy, the Maunaulu eruption had the next most double fountains with a grand total of 4 episodes erupting lava fountains from both east and west vents. The south vent has made up for its extended rest periods by producing the highest fountains of this eruption at 1770 feet (540 meters) during episode 43, the same maximum height recorded in episode 9 of the Maunaulu eruption (which had 12 total episodes). This falls short of Kīlauea Iki’s record breaking height of over 1900 feet (580 meters) during episode 16 (that eruption had 17 total episodes), but clearly tops Pu‘u‘ō‘ō’s highest fountains around 1525 feet (465 meters) in episode 29 (the Pu‘u‘ō‘ō eruption had 47 fountaining episodes before transitioning to continuous effusion of lava flows). Another fact that may only be of interest to enthusiastic followers of the Halema‘uma‘u eruption (and perhaps people that like statistics) is that the north vent has initiated the precursory activity that precedes the onset of fountaining episodes 90% of the time. USGS Hawaiian Volcano Observat-

ory (HVO) scientists are still unsure what this means, but find it interesting that one vent, the north, has been so dominant in starting eruptive activity. There have been episodes (47 and 48) with precursory overflows exclusively from the south vent; however, during both of these episodes the south vent politely bowed out and let the north vent fountain. The north vent also holds the record for the most precursory overflows in the episodes we have counted. Prior to episode 34, the north vent produced 114 overflows with none from the south vent. Episode 36 was preceded by the most overflows we have counted at 179, alternating between the north vent and south vent. The longest period of precursory overflows was 6 days preceding episode 44. The shortest was episode 17 when the south vent went directly into fountaining with no precursory overflows. A good story needs to end with a bit of suspense, and this one leaves us all pondering a few questions. Will we see the south vent fountain again? Can the Kīlauea Iki high fountain record ever be broken? How much longer will this eruption go on? And, of course, what happens next after the fountaining episodes in Halema‘uma‘u stop? If you’ve enjoyed getting caught up with Hawaii Five-O, know that HVO scientists are keeping a close watch out for any signs of a follow-up episode titled “Magma P.I.”

Volcano Activity Updates Kīlauea has been erupting episodically within the summit caldera since December 23, 2024. Its USGS Volcano Alert level is ADVISORY. Episode 50 of summit lava fountaining happened for 7 hours on June 27. Summit region inflation since the end of episode 50 indicates that another fountaining episode is possible. Models currently

indicate that episode 51 is most likely to occur between July 8-15. No unusual activity has been noted along Kīlauea's East Rift Zone or Southwest Rift Zone. Mauna Loa is not erupting. Its USGS Volcano Alert Level is at NORMAL. Three earthquakes were reported felt in the Hawaiian Islands during the past week: a M3.4 earthquake 1 km (0 mi) W of Pāhala at 31 km (19 mi) depth on June 30 at 7:06 p.m. HST, a M2.4 earthquake 8 km (4 mi) S of Leilani Estates at 0 km (0 mi) depth on June 29 at 9:43 a.m. HST, and a M3.1 earthquake 12 km (7 mi) S of Honaunau-Napoopoo at 21 km (13 mi) depth on June 25 at 8:34 a.m. HST. HVO continues to closely monitor Kīlauea and Mauna Loa. Please visit HVO's website for past Volcano Watch articles, Kīlauea and Mauna Loa updates, volcano photos, maps, recent earthquake information, and more. Email questions to askHVO@usgs.gov .

Celebrate National Culinary Arts Month

July is National Culinary Arts Month—and the perfect time to celebrate seafood by firing up the grill, trying new recipes, and exploring the delicious variety of seafood available from U.S. harvesters and farmers. Whether you're a seasoned home chef or looking to expand your recipe roster, seafood offers endless opportunities to explore new techniques and healthy flavors. Fish and shellfish are delicious sources of lean protein and other important nutrients, including omega-3 fatty acids that support heart and brain health. The latest Dietary Guidelines for Americans recommend that everyone—from about 6 months and up—enjoy three or more servings of seafood per week. Think seafood is only a dinnertime treat? Think again! Seafood is a great fit for afternoon summer gatherings, backyard barbecues, and even meal prep. And choosing seafood harvested or farmed in the United States supports a sustainable food system operating under some of the most robust and transparent environmental standards in the world. Dive into the articles below for cooking tips, recipe inspiration, and expert guidance that will help you make seafood a part of your menu—not just this month, but all year long. Culinary Tips from Seafood Experts Fire Up the Grill and Celebrate National Culinary Arts Month! Whether you're hosting a neighborhood barbecue, celebrating a holiday weekend, or simply enjoying a summer night, these techniques highlight that grilling seafood is easy with the right inspiration! Find

grilling tips and recipes for the perfect summertime feast Seafood Chefs Around the Country Share Favorite Recipes During Culinary Arts Month, we asked a few seafood chefs around the country to share a favorite recipe and why sustainable seafood matters to them. Check out their recipes Seafood Tips From the People Bringing You Atlantic Coast Seafood Across the country, fishermen, farmers, chefs, and educators are working to keep fishing heritage alive while inspiring new generations to value the bounties of our coastal waters. Learn their stories, including what keeps them on the water and tips for how you can enjoy their harvests. Hear from the people serving up U.S. seafood Four Tips for Finding the Best Pacific Islands Seafood Looking for the freshest seafood in the Pacific? Learn how to find the best sources of fresh, local catch in Hawai‘i, American Samoa, and the Mariana Islands. Tips for finding the best Pacific Islands seafood Science: The Secret Ingredient Behind Sustainable Seafood Science supports healthy seafood harvests and thriving fishing communities today, tomorrow, and for generations to come. Staff from New England-based local seafood restaurant Row 34 visited NOAA Fisheries in Woods Hole to learn more. Read about the Row 34 team's visit to NOAA Fisheries in Woods Hole Recipes for Every Occasion A Sustainable Seafood Sampler from Coast to Coast The United States has sustainable seafood choices for every occasion. Learn more about some regional favorites and find a new recipe for your next summer gathering. Discover local favorites from around the country Seafood is Simple—Quick and Healthy Recipes for Families on the Go! Overwhelmed by daily cooking

and prep? Seafood is a healthy and delicious option for simple weeknight meals. Choosing U.S.-produced seafood ensures an environmentally sustainable option that supports U.S. fishermen and seafood farmers—and their families. Here are some suggestions for simple seafood suppers

[Swap In Surf for Turf to Add More Seafood to Your Diet](#) Seafood is a healthy source of the protein you need to get through the day. For a healthier summer menu, substitute seafood for the conventional proteins in classic American fare. Not sure where to start? We compiled several ways to “swap” seafood into your family’s diet. Celebrate Culinary Arts Month with these "seafood swap" recipes

[What Your Birth Month Says About Your Next Seafood Recipe](#) We know that “what’s for dinner?” can feel like the hardest question of the day. For Culinary Arts Month, we’ve gathered seafood recipes matched to the traits of your birth month! From January trailblazers, to July optimists, to December free spirits, these sustainable seafood flavors will match your personality—and your next summer celebration. Find recipe inspiration for every month of the year

[Listen While You Cook Podcast: Why You Should Try Monkfish](#) Monkfish is a great-tasting, sustainable seafood choice that’s often compared to lobster. Despite being caught from Maine to North Carolina, U.S. demand for monkfish is surprisingly low. In our podcast episode, we’ll hear about efforts to increase domestic demand and consumption of the humble monkfish. Listen to [Why You Should Try Monkfish Podcast: Reducing Waste and Feeding Communities in Hawai‘i with a Whole Fish Approach](#)

[A program in Hawai‘i is trying to increase food security and reduce food](#)

waste by using every part of the fish, from bone marrow to blood lines—even making the skin into leather! Listen to Reducing Waste and Feeding Communities in Hawai‘i with a Whole Fish Approach Podcast: Squid—More than Just Calamari Learn about a team of food scientists who are working to reduce food waste—starting with squid wings. Listen to Squid—More than Just Calamari

Activity Time - Word Search

Find the words below in the puzzle. Words go across or down only.

Words to Find:

