

The radiation that \_\_\_\_\_ during the decay of radioactive atomic nuclei is known as gamma radiation.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. occurs
- B. have occurred
- C. occur
- D. are occurring

In recent years, economists around the world have created new tools that quantify the overall well-being of a country's citizens. Economists in India, for example, use an Ease of Living Index. This tool \_\_\_\_\_ economic potential, sustainability, and citizens' quality of life.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. measures
- B. had measured
- C. would have measured
- D. will have been measuring

Mathematician and meteorologist Edward Lorenz used the metaphor of the “butterfly effect” to explain how seemingly minor events can have major impacts on future weather. According to Lorenz’s metaphor, the wind from a butterfly flapping \_\_\_\_\_ in Brazil might eventually grow into a storm elsewhere across the globe.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. its wings
- B. its wings’
- C. it’s wing’s
- D. it’s wings’

In 1903, environmentalist John Muir guided President Theodore Roosevelt on a scenic, sprawling trip through California's Yosemite Valley. Upon returning from the three-day excursion, Roosevelt \_\_\_\_\_ to conserve the nation's wilderness areas, a vow he upheld for his remaining six years in office.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. is vowing
- B. vowed
- C. will vow
- D. vows

Led by Syrian American astronomer Shadia Habbal, the Solar Wind Sherpas are an intrepid team of scientists who travel the globe to study solar winds, the streams of particles emanating from the Sun that are only visible from certain locations during a total solar eclipse. When such an eclipse is imminent, the Sherpas pack up their telescopes and \_\_\_\_\_ ready.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. get
- B. had gotten
- C. got
- D. were getting

Farouk El-Baz, a geologist and space scientist, \_\_\_\_\_ part of the team that selected the lunar landing sites for the Apollo program during the 1960s and 1970s.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. are
- B. was
- C. have been
- D. were

Obsidian is a kind of volcanic glass formed when lava cools so quickly that the atoms inside it cannot arrange themselves in a crystalline structure. You \_\_\_\_\_ more about obsidian's structure, which is classified as amorphous, in a later chapter.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. had learned
- B. had been learning
- C. will learn
- D. have learned

Midway through her 1968 jazz album *A Monastic Trio*, Alice Coltrane switches instruments, swapping the piano for the harp. With the same fluid style that Coltrane was famous for on piano, she \_\_\_\_\_ her fingers across the harp strings and creates a radiant sound.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. sweep
- B. are sweeping
- C. were sweeping
- D. sweeps



Objects ranging from the Kikkoman soy sauce bottle to the Yamaha VMAX motorcycle to the Komachi bullet train \_\_\_\_\_ designed by twentieth-century industrial designer Kenji Ekuan.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. was
- B. is
- C. has been
- D. were

While exploring Nevada’s Gypsum Cave in 1930, Seneca and Abenaki archaeologist Bertha Parker made her most famous discovery: the skull of a now-extinct ground sloth (*Nothrotheriops shastensis*) alongside human-made tools. Parker’s crucial finding was the first \_\_\_\_\_ humans in North America as far back as 10,000 years ago.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. places
- B. placed
- C. place
- D. to place

The sun never sets during the Arctic summer in the Far North. In response, reindeer in this region must change their sleep habits. Instead of resting when it gets dark, they rest when they need \_\_\_\_\_ their food.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. digest
- B. will digest
- C. to digest
- D. digesting

The African Games Co-production Market, one of over 180 annual international conferences supporting video game development, \_\_\_\_\_ the growth of the African gaming industry by helping start-up studios in Africa find partners.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. promote
- B. are promoting
- C. promotes
- D. have promoted

In the early twentieth century, Joseph Kekuku and other Hawaiian \_\_\_\_\_ in the mainland United States to the bright and lilting sound of the *kīkī kila*, or Hawaiian steel guitar. The instrument soon became a fixture in American blues and country music.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. musicians introduced audiences
- B. musicians' introduced audiences'
- C. musician's introduced audience's
- D. musicians' introduced audiences

Smaller than poppy seeds, tardigrades are tiny, but they are tough. These minuscule animals can survive for thirty years without food or water, and \_\_\_\_\_ can withstand extreme temperatures as low as minus 328 degrees and as high as 304 degrees Fahrenheit.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. that
- B. it
- C. they
- D. he

The US Geological Survey wants to map every human-made structure in the United States, and it is asking volunteers to help. Cassie Tammy Wang and Ashish D’Souza are just two of the many volunteer map editors who \_\_\_\_\_ to the project since it began in 2012.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. contribute
- B. will contribute
- C. have contributed
- D. will be contributing

Food and the sensation of taste are central to Monique Truong's novels. In *The Book of Salt*, for example, the exiled character of Binh connects to his native Saigon through the food he prepares, while in *Bitter in the Mouth*, the character of Linda \_\_\_\_\_ a form of synesthesia whereby the words she hears evoke tastes.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. experienced
- B. had experienced
- C. experiences
- D. will be experiencing



Earth is not a perfect sphere. Due to the \_\_\_\_\_ gravitational pull, Earth bulges out on the sides closest to and farthest from the Moon. This distorting pull is known as a tidal force, and it is responsible for the changes in water levels that are called high and low tides.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. Moon's
- B. Moons
- C. Moons'
- D. Moon

Richard Spikes was a prolific African American inventor known for his contributions to automotive engineering. Between 1907 and 1946, he patented many inventions, \_\_\_\_\_ an automobile turn signal, a safety brake, and—most famously—the first automatic gearshift.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. included
- B. includes
- C. including
- D. will include

In the late 1960s, inspired in part by the sight of laundry hanging on a clothesline, African American abstract painter Sam Gilliam began to create his iconic “Drape” paintings. He applied bold, saturated hues to large canvases and \_\_\_\_\_ them from ceilings or walls, causing the drooping fabric to cascade in dramatic loops and curves.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. to have suspended
- B. suspending
- C. to suspend
- D. suspended

American poet Emily Dickinson wrote many of her poems on scraps of paper, but she also took steps to collect these works. From 1858 to around 1864, for example, she copied more than 800 of \_\_\_\_\_ into forty homemade booklets (known as fascicles).

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. them
- B. this
- C. that
- D. it

In the 2011 documentary *The Barber of Birmingham*, civil rights activist James Armstrong recounts how his barbershop in Birmingham, Alabama, \_\_\_\_\_ as a political hub for members of the Black community during the 1950s.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. serving
- B. having served
- C. served
- D. to serve

Occupying a significant part of modern-day Nigeria, the Kingdom of Benin was one of the major powers in West Africa between the thirteenth and nineteenth centuries. It \_\_\_\_\_ ruled by Oba Ewuare I from 1440 to 1473.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. is
- B. will be
- C. has been
- D. was

If simple sugars such as ribose and glycolaldehyde \_\_\_\_\_ Earth from elsewhere and survived impact—a possibility astrophysicist Nicolle Zellner outlined in a 2020 study—the sugars could have reacted with other molecules that were already present on the planet to form the nucleotides that are the structural components of RNA and DNA.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. reach
- B. had reached
- C. will reach
- D. are reaching

Photographer Ansel Adams's landscape portraits are iconic pieces of American art. However, many of the \_\_\_\_\_ of landscapes were intended not as art but as marketing; a concessions company at Yosemite National Park had hired Adams to take pictures of the park for restaurant menus and brochures.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. photographer's early photo's
- B. photographers early photo's
- C. photographer's early photos
- D. photographers early photos



Each year in the fall, when the weather starts to cool in the northern hemisphere, millions of North American monarch butterflies journey south. Searching for food and warmer habitats, they \_\_\_\_\_ thousands of miles—from as far north as Canada all the way down to Mexico—on this annual migration.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. flew
- B. were flying
- C. had flown
- D. fly

Wanda Diaz-Merced is an astrophysicist who lost her sight when she was young. Diaz-Merced's condition inspired her to develop software that can translate scientific data into sound. Sound-based tools \_\_\_\_\_ scientists to detect subtle patterns in data. Such patterns may not be evident in traditional graphs.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. has enabled
- B. enable
- C. is enabling
- D. enables

If you try on one of artist Nick Cave's signature Soundsuits, you can expect to swish, rustle, or clang every time you move. Cave makes his suits out of found objects, everything from ceramic birds to broken record players. He carefully considers the sound an object makes before using \_\_\_\_\_ in a suit.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. this
- B. that
- C. these
- D. it

In 1899, Swedish chemist Svante Arrhenius developed an equation to answer a long-standing question: why do chemical reactions speed up at higher temperatures? The Arrhenius equation, named for its creator, \_\_\_\_\_ an important concept in modern chemistry.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. have remained
- B. remain
- C. remains
- D. are remaining

Botanists recognize over fifty different species of sunflower. One species, the silverleaf sunflower, \_\_\_\_\_ both an early-flowering ecotype that tends to grow in coastal areas and a late-flowering ecotype that grows inland.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. having included
- B. including
- C. to include
- D. includes

In 1990, California native and researcher Ellen Ochoa left her position as chief of the Intelligent Systems Technology Branch at a NASA research center \_\_\_\_\_ the space agency's astronaut training program.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. to join
- B. is joining
- C. joined
- D. joins

Why are Rome's famous concrete structures, such as the Colosseum, still standing after 2,000-plus years, when modern concrete may not even last for fifty? Scientists \_\_\_\_\_ that the secret to Roman concrete's durability was its unique blend of ingredients, which included volcanic ash and seawater.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. explain
- B. having explained
- C. explaining
- D. to explain

In 1881, French chemist Camille Faure redesigned the rechargeable lead-acid battery. Faure's design greatly increased the amount of electricity that the original battery, which the French physicist Gaston Planté \_\_\_\_\_ fifteen years earlier, could hold.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. is inventing
- B. will invent
- C. invents
- D. had invented



The alga species *Chlorella vulgaris* is very efficient at making oxygen. For this reason, scientists are currently exploring ways to use this species in space. *C. vulgaris* might be used, for example, to build future biological air exchange systems that \_\_\_\_\_ oxygen for astronauts.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. are producing
- B. produced
- C. produce
- D. have produced

With its towering, six-spired exterior of granitelike quartz monzonite, the Salt Lake Temple is one of the most instantly recognizable structures in the state of Utah. However, many people do not know that \_\_\_\_\_ built over the course of forty years, with construction beginning in 1853 and ending in 1893.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. it was
- B. one was
- C. they were
- D. both were

Dr. Rocío Paola Caballero-Gill is a paleoceanographer. This means that Dr. Caballero-Gill doesn't just study oceans as they are today. She uses chemistry and fossil evidence \_\_\_\_\_ oceans as they were in the past.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. has studied
- B. to study
- C. studied
- D. studies

While many video game creators strive to make their graphics ever more \_\_\_\_\_ others look to the past, developing titles with visuals inspired by the “8-bit” games of the 1980s and 1990s. (The term “8-bit” refers to a console whose processor could only handle eight bits of data at once.)

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. lifelike but
- B. lifelike
- C. lifelike,
- D. lifelike, but

At eight paragraphs long, the preamble to the constitution of \_\_\_\_\_ country in Western Asia—is much longer than the one-paragraph preamble to the United States Constitution.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. Bahrain—a
- B. Bahrain, a
- C. Bahrain a
- D. Bahrain: a

In the novel *Things Fall Apart* by Chinua Achebe, Okonkwo is a leader of Umuofia (a fictional Nigerian clan) and takes pride in his culture's traditions. However, when the arrival of European missionaries brings changes to Umuofia, the novel asks a central question: How \_\_\_\_\_

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. Umuofia's traditions will be affected.
- B. will Umuofia's traditions be affected.
- C. Umuofia's traditions will be affected?
- D. will Umuofia's traditions be affected?

In 1959, marine biologist Dr. Albert Jones founded the Underwater Adventure Seekers, a scuba diving \_\_\_\_\_ that is the oldest club for Black divers in the United States and that has helped thousands of diving enthusiasts become certified in the field.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. club
- B. club,
- C. club—
- D. club, and

Before the Erie Canal was completed in 1825, transporting goods by wagon between New York City and the Midwest took up to forty-five days and cost one hundred dollars per ton. By linking the Hudson River to Lake \_\_\_\_\_ canal reduced transport time to nine days and cut costs to six dollars per ton.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. Erie; the
- B. Erie (the
- C. Erie, the
- D. Erie: the



Award-winning cinematographer James Wong Howe was known for his innovative filming techniques. While filming a boxing match for the movie *Body and Soul* \_\_\_\_\_ Howe had a handheld camera operator wear roller skates. This allowed the operator to move smoothly around actors in a boxing ring, creating an immersive experience for viewers.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. (1947), and
- B. (1947),
- C. (1947) and
- D. (1947)

Winding through the ice atop Norway's Jotunheim Mountains is the Lendbreen pass, an ancient route that was used by hunters, farmers, traders, and travelers in the Middle Ages before eventually falling into disuse. Recently, archeologists have \_\_\_\_\_ knives, horseshoes, wool tunics, and thousands of other artifacts from the icy pass.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. unearthed:
- B. unearthed,
- C. unearthed—
- D. unearthed

Fans of science fiction will \_\_\_\_\_ multiple references to classic sci-fi stories in Janelle Monáe's song lyrics, including her recurring nods to the plot of the 1927 sci-fi film *Metropolis*.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. appreciate the
- B. appreciate. The
- C. appreciate, the
- D. appreciate: the

A standard Argo float, a type of autonomous robot, measures temperature and salinity in the upper regions of ice-free oceans. More advanced floats can measure a wider range of \_\_\_\_\_ and monitor seasonal ice zones.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. variables: travel to greater depths
- B. variables, travel to greater depths,
- C. variables travel to greater depths,
- D. variables, travel to greater depths;

In 2000, Nora de Hoyos Comstock, herself an owner of a successful consulting firm, sought to increase Latina representation in corporate \_\_\_\_\_. \_\_\_\_\_ founded Las Comadres para las Americas, an international community that for over two decades has served as a resource and information network for Latina business professionals.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. settings she
- B. settings, she
- C. settings and she
- D. settings. She

In 1976, the Inuit rock group Sikumiut recorded the album *People of the Ice*. Though only their first record, it shows a band already skilled at the difficult task of making music that sounds easy and fun. On songs like “Utirumavunga,” Lucassie Koperqualuk’s guitar riffs effortlessly \_\_\_\_\_ Charlie Adams’s delightfully catchy vocal melodies.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. blend, with
- B. blend. With
- C. blend; with
- D. blend with

Robin Wall Kimmerer of the Citizen Potawatomi Nation is a bryologist, a plant scientist who specializes in mosses. To Kimmerer, mosses are Earth’s most adaptable plants: they can clone \_\_\_\_\_ enter a dormant state in times of drought, and grow in areas that don’t have soil.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. themselves;
- B. themselves,
- C. themselves. And
- D. themselves

In 1959, the film industry debuted Smell-O-Vision. Theaters were fitted with specialized vents that emitted odors at specific points in a \_\_\_\_\_ as the scent of roses when roses appeared in a scene. Smell-O-Vision failed to impress, however, with one reviewer declaring it “briefly weird and not very interesting.”

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. movie such
- B. movie; such
- C. movie. Such
- D. movie, such



When particles are suspended in liquid (like pollen in a water glass), they will zigzag randomly through the liquid and collide with one another in perpetuity. This type of random, continuous \_\_\_\_\_ is known as Brownian motion, can be observed throughout the natural world.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. movement: which
- B. movement, which
- C. movement which
- D. movement. Which

The intense pressure found in the deep ocean can affect the structure of proteins in fish's cells, distorting the proteins' shape. The chemical trimethylamine N-oxide (TMAO) counters this effect, ensuring that proteins retain their original \_\_\_\_\_ is found in high concentrations in the cells of the deepest-dwelling fish.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. configurations. TMAO
- B. configurations TMAO
- C. configurations, TMAO
- D. configurations and TMAO

Polyphenols are organic compounds \_\_\_\_\_ among their many roles, provide pigment that helps protect plants against ultraviolet radiation from sunlight.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. that—
- B. that;
- C. that,
- D. that:

After the printing press was introduced in 1440, handwritten manuscripts from Europe's medieval period were often destroyed and the paper used for other purposes. In one instance, pages \_\_\_\_\_ a collection of Norse tales dating to 1270 were discovered lining a bishop's miter (hat).

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. from:
- B. from,
- C. from
- D. from—

About 70,000 meteorites have been found on Earth. Although most meteorites are fragments of \_\_\_\_\_ hundred have been identified as being from the Moon or Mars.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. asteroids. Several
- B. asteroids, several
- C. asteroids; several
- D. asteroids: several

After the United Kingdom began rolling out taxes equivalent to a few cents on single-use plastic grocery bags in 2011, plastic-bag consumption decreased by up to ninety \_\_\_\_\_ taxes are subject to what economists call the “rebound effect”: as the change became normalized, plastic-bag use started to creep back up.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. percent, such
- B. percent and such
- C. percent. Such
- D. percent such

Psychophysicist Howard Moskowitz was hired by a soda company to determine how much artificial sweetener \_\_\_\_\_. After conducting consumer taste tests, he found that no such ideal existed: participants expressed a wide range of preferences for different blends of sweetener, carbonization, and flavoring.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. do most people prefer in a diet drink?
- B. do most people prefer in a diet drink.
- C. most people prefer in a diet drink?
- D. most people prefer in a diet drink.

The fine, powdery substance that covers the Moon's surface is called regolith. Because regolith is both readily available and high in oxygen \_\_\_\_\_ scientists have wondered whether it could be used as a potential source of oxygen for future lunar settlements.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. content and
- B. content,
- C. content
- D. content, and



In her book *The Woman Warrior: Memoirs of a Girlhood Among Ghosts*, author Maxine Hong Kingston examines themes \_\_\_\_\_ childhood, womanhood, and Chinese American identity by intertwining autobiography and mythology.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. of:
- B. of
- C. of—
- D. of,

A subseasonal weather forecast attempts to predict weather conditions three to four weeks in \_\_\_\_\_ its predictions are therefore more short-term than those of the seasonal forecast, which attempts to predict the weather more than a month in advance.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. advance,
- B. advance
- C. advance;
- D. advance and

Emperor Ashoka ruled the Maurya Empire in South Asia from roughly 270 to 232 BCE. He is known for enforcing a moral code called the Law of Piety, which established the sanctity of animal \_\_\_\_\_ the just treatment of the elderly, and the abolition of the slave trade.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. life
- B. life;
- C. life:
- D. life,

Emperor penguins don't waddle out of the ocean. They launch themselves at such a high speed that they travel up to two meters before landing. How \_\_\_\_\_ A layer of microbubbles on their plumage reduces friction as the penguins speed to the surface.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. they are able to move so fast!
- B. are they able to move so fast.
- C. they are able to move so fast.
- D. are they able to move so fast?

Human-made (synthetic) fibers used in clothes and many other consumer products are more durable than most natural plant \_\_\_\_\_ the manufacture of synthetic fibers requires toxic chemical solvents that can pollute air and water.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. fibers,
- B. fibers but
- C. fibers
- D. fibers, but

While one requires oxygen and one does \_\_\_\_\_ and anaerobic respiration are both forms of cellular respiration—that is, they are processes by which cells break down glucose to use as energy.

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. not aerobic
- B. not. Aerobic
- C. not, aerobic
- D. not; aerobic

Generations of mystery and horror \_\_\_\_\_ have been influenced by the dark, gothic stories of celebrated American author Edgar Allan Poe (1809–1849).

Which choice completes the text so that it conforms to the conventions of Standard English?

- A. writers
- B. writers,
- C. writers—
- D. writers;