

In her 2021 article “Throwaway History: Towards a Historiography of Ephemera,” scholar Anne Garner discusses John Johnson (1882–1956), a devoted collector of items intended to be discarded, including bus tickets and campaign pamphlets. Johnson recognized that scholarly institutions considered his expansive collection of ephemera to be worthless—indeed, it wasn’t until 1968, after Johnson’s death, that Oxford University’s Bodleian Library acquired the collection, having grasped the items’ potential value to historians and other researchers. Hence, the example of Johnson serves to _____

Which choice most logically completes the text?

- A. demonstrate the difficulties faced by contemporary historians in conducting research at the Bodleian Library without access to ephemera.
- B. represent the challenge of incorporating examples of ephemera into the collections of libraries and other scholarly institutions.
- C. lend support to arguments by historians and other researchers who continue to assert that ephemera holds no value for scholars.
- D. illustrate both the relatively low scholarly regard in which ephemera was once held and the later recognition of ephemera’s possible utility.

Some businesses believe that when employees are interrupted while doing their work, they experience a decrease in energy and productivity. However, a team led by Harshad Puranik, who studies management, has found that interruptions by colleagues can have a social component that increases employees' sense of belonging, resulting in greater job satisfaction that benefits employees and employers. Therefore, businesses should recognize that _____

Which choice most logically completes the text?

- A. the interpersonal benefits of some interruptions in the workplace may offset the perceived negative effects.
- B. in order to maximize productivity, employers should be willing to interrupt employees frequently throughout the day.
- C. most employees avoid interrupting colleagues because they don't appreciate being interrupted themselves.
- D. in order to cultivate an ideal workplace environment, interruptions of work should be discouraged.

Scholars have noted that F. Scott Fitzgerald's writings were likely influenced in part by his marriage to Zelda Fitzgerald, but many don't recognize Zelda as a writer in her own right. Indeed, Zelda authored several works herself, such as the novel *Save Me the Waltz* and numerous short stories. Thus, those who primarily view Zelda as an inspiration for F. Scott's writings _____

Which choice most logically completes the text?

- A. overlook the many other factors that motivated F. Scott to write.
- B. risk misrepresenting the full range of Zelda's contributions to literature.
- C. may draw inaccurate conclusions about how F. Scott and Zelda viewed each other's works.
- D. tend to read the works of F. Scott and Zelda in an overly autobiographical light.

Songbirds learn to respond to and imitate their species' songs from an early age. With each generation, small differences are introduced that result in distinct variations—called dialects—among geographically isolated populations of the same species. A research study examined whether twelve-day-old *Ficedula hypoleuca* (pied flycatcher) nestlings prefer local dialects over the unfamiliar dialects of nonlocal *F. hypoleuca* populations: the more begging calls the nestlings made in response to a song, the stronger their preference. The researchers found that nestlings produced more begging calls in response to their own dialect than to nonlocal dialects. Since song preference plays a role in songbird mate selection, the finding suggests that

Which choice most logically completes the text?

- A. *F. hypoleuca* nestlings' preference for their own dialect likely disappears as they mature to promote socialization between different *F. hypoleuca* populations.
- B. *F. hypoleuca* nestlings who show an early preference for their own dialect are likely to receive more food from their caretakers than nestlings who show no preferences among any *F. hypoleuca* dialects.
- C. *F. hypoleuca* nestlings' preference for their own dialect likely drives them when they mature to reproduce with other *F. hypoleuca* from local rather than nonlocal populations.
- D. *F. hypoleuca* nestlings show a preference for both local *F. hypoleuca* dialects and the songs of other local songbirds over the songs of nonlocal birds of any species.

In a study of the mechanisms underlying associative memory—or the ability to learn and remember connections between inherently unrelated things—neuroscientists Kei Igarashi, Jasmine Chavez, and others presented mice with memory tests. The team discovered that fan cells, a type of cell found in the medial temporal lobe of the brain, are necessary for the acquisition of new associative memories. They also found that fan cell activity requires dopamine, a chemical the brain produces in response to pleasure and rewards. Consequently, receiving a reward should likely help to _____

Which choice most logically completes the text?

- A. decrease an individual's capacity to utilize dopamine.
- B. increase an individual's capacity to recognize differences between unrelated things.
- C. increase an individual's capacity to form associative memories.
- D. decrease an individual's capacity to create fan cells.

Although military veterans make up a small proportion of the total population of the United States, they occupy a significantly higher proportion of the jobs in the civilian government. One possible explanation for this disproportionate representation is that military service familiarizes people with certain organizational structures that are also reflected in the civilian government bureaucracy, and this familiarity thus _____

Which choice most logically completes the text?

- A. makes civilian government jobs especially appealing to military veterans.
- B. alters the typical relationship between military service and subsequent career preferences.
- C. encourages nonveterans applying for civilian government jobs to consider military service instead.
- D. increases the number of civilian government jobs that require some amount of military experience to perform.

Herbivorous sauropod dinosaurs could grow more than 100 feet long and weigh up to 80 tons, and some researchers have attributed the evolution of sauropods to such massive sizes to increased plant production resulting from high levels of atmospheric carbon dioxide during the Mesozoic era. However, there is no evidence of significant spikes in carbon dioxide levels coinciding with relevant periods in sauropod evolution, such as when the first large sauropods appeared, when several sauropod lineages underwent further evolution toward gigantism, or when sauropods reached their maximum known sizes, suggesting that _____

Which choice most logically completes the text?

- A. fluctuations in atmospheric carbon dioxide affected different sauropod lineages differently.
- B. the evolution of larger body sizes in sauropods did not depend on increased atmospheric carbon dioxide.
- C. atmospheric carbon dioxide was higher when the largest known sauropods lived than it was when the first sauropods appeared.
- D. sauropods probably would not have evolved to such immense sizes if atmospheric carbon dioxide had been even slightly higher.

Dutch painters in the sixteenth and seventeenth centuries often showed tables filled with large wheels of cheese or carved shards of butter. Some art historians, noting that dairy products were a major component of the Dutch diet, interpret these depictions as reflections of everyday Dutch eating habits. However, a group of researchers recently reviewed hundreds of food-related paintings and found that lemons—which could only be acquired in the Netherlands at great cost, since they had to be imported from warmer climates—feature in Dutch paintings of the period more than three times as frequently as dairy products do, thereby casting doubt on the idea that _____

Which choice most logically completes the text?

- A. dairy products were a more significant component of the Dutch diet of the period than lemons were.
- B. food was a more popular subject among Dutch painters than it was among painters from other countries at the time.
- C. depictions of food in Dutch paintings of the period should be taken as realistic representations of Dutch eating habits.
- D. Dutch painters of the period may have depicted foods for symbolic reasons rather than to show what Dutch people typically ate.

Colonized by Spain in the 1600s, New Mexico is home to a dialect of Spanish that differs significantly from dialects spoken in Spain's other former colonies in the Americas. Most notably, the New Mexican dialect retains older features of the language that other dialects lost in later centuries. But why would it have done so? New Mexico was so distant from population centers in Spain's other colonies that it attracted few colonists after its initial colonization. Geographical isolation in turn would have limited the exposure of New Mexican colonists to changes occurring to Spanish grammar and vocabulary elsewhere in the empire. Thus, the present-day uniqueness of the New Mexican dialect suggests the extent to which _____

Which choice most logically completes the text?

- A. a language can protect itself from being influenced by other languages.
- B. the grammar and vocabulary of any given language change from one generation to the next.
- C. geographical isolation can influence how a language develops.
- D. speakers of one dialect of a language can understand speakers of another dialect of that language.

When the Vinland Map, a map of the world purported to date to the mid-1400s, surfaced in 1957, some scholars believed it demonstrated that European knowledge of the eastern coast of present-day North America predated Christopher Columbus's 1492 arrival. In 2021, a team including conservators Marie-France Lemay and Paula Zyats and materials scientist Anikó Bezur performed an extensive analysis of the map and the ink used. They found that the ink contains titanium dioxide, a compound that was first introduced in ink manufacturing in the early 1900s. Therefore, the team concluded that _____

Which choice most logically completes the text?

- A. mid-1400s Europeans could not have known about the eastern coast of present-day North America.
- B. the Vinland Map could not have been drawn by mid-1400s mapmakers.
- C. mapmakers must have used titanium compounds in their ink in the 1400s.
- D. there isn't enough information to determine when the ink was created.

It's common for jazz musicians and fans to refer to certain songs as having "swing," indicating that the songs provoke a strong feeling, like the impulse to tap one's foot or dance. The exact acoustic properties that give a song swing, however, have long been thought to be undefinable. To investigate swing, a team led by physicist Corentin Nélis delayed the downbeats and synchronized the offbeats in jazz piano solos and asked jazz musicians to compare the intensity of swing in each modified piece with the intensity of swing in the original piece. They found that participants were more than seven times likelier to characterize the modified songs as having swing than to characterize the original versions as having swing, suggesting that _____

Which choice most logically completes the text?

- A. synchronized offbeats tend to give a song swing regardless of whether downbeats are delayed.
- B. the acoustic properties that give a song swing are not easy for jazz musicians to manipulate.
- C. jazz songs that feature the piano are more likely to have swing than are jazz songs that do not feature the piano.
- D. the timing of downbeats and offbeats may play a crucial role in giving a song swing.

The Indus River valley civilization flourished in South Asia from 3300 BCE to 1300 BCE. Many examples of the civilization's writing system exist, but researchers haven't yet deciphered it or identified which ancient language it represents. Nevertheless, archaeologists have found historical artifacts, such as clay figures and jewelry, that provide information about the civilization's customs and how its communities were organized. The archaeologists' findings therefore suggest that _____

Which choice most logically completes the text?

- A. investigating an ancient civilization is easier without knowledge of the civilization's language.
- B. knowing an ancient civilization's language isn't necessary in order to learn details about the civilization.
- C. archaeological research should focus on finding additional artifacts rather than deciphering ancient languages.
- D. examining the civilization's historical artifacts has resolved the debate about this civilization's language.

To investigate the history of plate subduction—when one of Earth’s tectonic plates slides beneath another—Sarah M. Aarons and colleagues compared ancient rocks from the Acasta Gneiss Complex in Canada to modern rocks. Using isotope analysis, the researchers found that Acasta rocks dating to about 4.02 billion years ago (bya) most strongly resemble modern rocks formed in a plume setting (an area in which hot rocks from Earth’s mantle flow upward into the crust). By contrast, they found that Acasta rocks dating to about 3.75 bya and 3.6 bya have an isotope composition that is similar to that of modern rocks formed in a subduction setting. Aarons’s team therefore concluded that _____

Which choice most logically completes the text?

- A. subduction-like processes began occurring in some locations no later than 3.75 bya.
- B. subduction replaced mantle plume formation as the most common geological process by about 4.02 bya.
- C. the majority of the rocks in the Acasta Gneiss Complex formed through subduction.
- D. the rocks in the Acasta Gneiss Complex are of a more recent origin than scientists previously thought.

The Haitian Declaration of Independence was issued in 1804, bringing to an end the revolution against colonial France that began in 1791. Written in French, which was not the first language of most Haitians but which was used throughout Europe as the language of international diplomacy, the declaration notes that Haiti will not bring rebellion to other Caribbean nations, promises to respect the sovereignty of its neighbors—widely understood as a reassurance to the United States—and sets up Haiti as an example for future struggles against colonizers (an implicit reference to the many colonies then found in the Americas). So even though the declaration is explicitly addressed to the Haitian people, it's reasonable to conclude that

Which choice most logically completes the text?

- A. aspects of the declaration were modeled on similar documents from other countries.
- B. the French government may have been surprised by the declaration.
- C. many Haitian people opposed the revolution and the declaration.
- D. the declaration actually had several intended audiences.

Euphorbia esula (leafy spurge) is a Eurasian plant that has become invasive in North America, where it displaces native vegetation and sickens cattle. *E. esula* can be controlled with chemical herbicides, but that approach can also kill harmless plants nearby. Recent research on introducing engineered DNA into plant species to inhibit their reproduction may offer a path toward exclusively targeting *E. esula*, consequently _____

Which choice most logically completes the text?

- A. making individual *E. esula* plants more susceptible to existing chemical herbicides.
- B. enhancing the ecological benefits of *E. esula* in North America.
- C. enabling cattle to consume *E. esula* without becoming sick.
- D. reducing invasive *E. esula* numbers without harming other organisms.

By running computer simulations of the development of our solar system, André Izidoro, Rajdeep Dasgupta, and colleagues concluded that the Sun may have been surrounded by three giant dust rings before the planets started to form. The researchers suggest that the materials in the innermost ring became the four planets closest to the Sun, the materials in the middle ring produced the rest of the planets, and the materials in the outermost ring created the asteroids and other small bodies in the region beyond Neptune. In one simulation, the researchers delayed the initial formation of the middle ring, causing oversized super-Earths to begin developing from the innermost ring. The researchers therefore hypothesize that

Which choice most logically completes the text?

- A. the middle ring formed earlier in the solar system's development than the initial simulations suggested.
- B. the timing of the initial formation of the middle ring played an important role in determining the eventual size of Earth.
- C. if the formation of the outermost ring had occurred earlier in a simulation, all the planets would have become super-Earths.
- D. the innermost ring actually formed into all the planets in our solar system, not just the four closest to the Sun.

In documents called judicial opinions, judges explain the reasoning behind their legal rulings, and in those explanations they sometimes cite and discuss historical and contemporary philosophers. Legal scholar and philosopher Anita L. Allen argues that while judges are naturally inclined to mention philosophers whose views align with their own positions, the strongest judicial opinions consider and rebut potential objections; discussing philosophers whose views conflict with judges' views could therefore _____

Which choice most logically completes the text?

- A. allow judges to craft judicial opinions without needing to consult philosophical works.
- B. help judges improve the arguments they put forward in their judicial opinions.
- C. make judicial opinions more comprehensible to readers without legal or philosophical training.
- D. bring judicial opinions in line with views that are broadly held among philosophers.

Many mosquito repellents contain natural components that work by activating multiple odor receptors on mosquitoes' antennae. As the insects develop resistance, new repellents are needed. Ke Dong and her team found that EBF, a molecular component of a chrysanthemum-flower extract, can repel mosquitoes by activating just one odor receptor—and this receptor, Or31, is present in all mosquito species known to carry diseases. Therefore, the researchers suggest that in developing new repellents, it would be most useful to _____

Which choice most logically completes the text?

- A. identify molecular components similar to EBF that target the activation of Or31 receptors.
- B. investigate alternative methods for extracting EBF molecules from chrysanthemums.
- C. verify the precise locations of Or31 and other odor receptors on mosquitoes' antennae.
- D. determine the maximum number of different odor receptors that can be activated by a single molecule.

Astronomers investigated the Arabia Terra region of Mars because it appears to contain irregularly shaped craters that may have been caused by massive volcanic explosions. In their investigations of Arabia Terra, the researchers found remnants of ash deposits in an amount and thickness that would result from a massive volcanic eruption. However, erosion and past resurfacing events could have modified the surface of the planet. Therefore, _____

Which choice most logically completes the text?

- A. the current makeup of the Arabia Terra region might not accurately reflect the volcanic activity of Mars's past.
- B. eruptions from Mars's volcanoes were likely not as massive as astronomers previously believed.
- C. ash was most likely expelled from multiple different volcanoes on Mars's surface.
- D. the craters found in the Arabia Terra region were necessarily created by events other than volcanic eruptions.

The ancient Sumerian civilization formed around 4000 BCE between two large rivers in an area that is now Iraq and Syria. The extremely hot and sunny weather in that area helped crops grow very quickly, but it also made it hard to keep the crops from drying up and dying. So, the Sumerians used water from the rivers in their farming. That method worked so well that they often could harvest even more crops than they needed in a season. As a result, the Sumerians _____

Which choice most logically completes the text?

- A. harvested crops only on the hottest days of each season.
- B. found ways to shield their crops from the sun.
- C. did not begin farming until long after 4000 BCE.
- D. were able to store extra crops for later use.

As the name suggests, dramaturges originated in theater, where they continue to serve a variety of functions: conducting historical research for directors, compiling character biographies for actors, and perhaps most importantly, helping writers of plays and musicals to hone the works' stories and characters. Performance scholar Susan Manning observes that many choreographers, like playwrights and musical theater writers, are concerned with storytelling and characterization. In fact, some choreographers describe the dances they create as expressions of narrative through movement; it is therefore unsurprising that _____

Which choice most logically completes the text?

- A. dramaturges can have a profound impact on the artistic direction of plays and musicals.
- B. choreographers developing dances with narrative elements frequently engage dramaturges to assist in refining those elements.
- C. dances by choreographers who incorporate narrative elements are more accessible to audiences than dances by choreographers who do not.
- D. some directors and actors rely too heavily on dramaturges to complete certain research tasks.

Several artworks found among the ruins of the ancient Roman city of Pompeii depict a female figure fishing with a cupid nearby. Some scholars have asserted that the figure is the goddess Venus, since she is known to have been linked with cupids in Roman culture, but University of Leicester archaeologist Carla Brain suggests that cupids may have also been associated with fishing generally. The fact that a cupid is shown near the female figure, therefore, _____

Which choice most logically completes the text?

- A. is not conclusive evidence that the figure is Venus.
- B. suggests that Venus was often depicted fishing.
- C. eliminates the possibility that the figure is Venus.
- D. would be difficult to account for if the figure is not Venus.

Ana Castillo's 1986 novel *The Mixquiahuala Letters* is a story told entirely through expressive letters from the narrator to her friend—letters that Castillo suggests could be read in several different orders. As they began reading it in class, some students remarked that they found the novel's letter format daunting and its treatment of gender relations old-fashioned. The professor, however, pointed out that the novel is written in modern-sounding language and addresses issues that still matter today, suggesting that *The Mixquiahuala Letters* _____

Which choice most logically completes the text?

- A. has more to say about gender relations than other novels from the same period.
- B. is more relevant to contemporary audiences than it may seem at first.
- C. is easier to read than many contemporary novels that focus on friendship.
- D. is best understood after multiple readings in different orders.

Biologist Natacha Bodenhausen and colleagues analyzed the naturally occurring bacterial communities associated with leaves and roots of wild *Arabidopsis thaliana*, a small flowering plant. The researchers found many of the same bacterial genera in both the plants' leaves and roots. To explain this, the researchers pointed to the general proximity of *A. thaliana* leaves to the ground and noted that rain splashing off soil could bring soil-based bacteria into contact with the leaves. Alternatively, the researchers noted that wind, which may be a source of bacteria in the aboveground portion of plants, could also bring bacteria to the soil and roots. Either explanation suggests that _____

Which choice most logically completes the text?

- A. bacteria carried by wind are typically less beneficial to *A. thaliana* than soil-based bacteria are.
- B. some bacteria in *A. thaliana* leaves and roots may share a common source.
- C. many bacteria in *A. thaliana* leaves may have been deposited by means other than rain.
- D. *A. thaliana* leaves and roots are especially vulnerable to harmful bacteria.

Violins made by Antonio Stradivari and other craftspeople in the sixteenth to eighteenth centuries in Cremona, Italy, produce a sound that is considered superior to that of modern stringed instruments. Some experts have claimed that the type of wood used to create Cremonese violins is responsible for their prized sound, but modern and Cremonese violins are made of the same kinds of wood: maple and spruce. New analysis, however, has revealed unique indications that the wood in the older violins was chemically treated by the makers, leading researchers to suggest that _____

Which choice most logically completes the text?

- A. Cremonese violins probably were not considered superior to other instruments at the time they were made.
- B. the sound quality of Cremonese violins results in part from a method the craftspeople used to alter the wood.
- C. if modern violins were made of a wood other than maple or spruce, they likely would sound as good as Cremonese violins.
- D. the current process of making violins is the same process that was used centuries ago by Cremonese craftspeople.