

Although many transposons, DNA sequences that move within an organism's genome through shuffling or duplication, have become corrupted and inactive over time, those from the long interspersed nuclear elements (LINE) family appear to remain active in the genomes of some species. In humans, they are functionally important within the hippocampus, a brain structure that supports complex cognitive processes. When the results of molecular analysis of two species of octopus—an animal known for its intelligence—were announced in 2022, the confirmation of a LINE transposon in *Octopus vulgaris* and *Octopus bimaculoides* genomes prompted researchers to hypothesize that that transposon family is tied to a species' capacity for advanced cognition.

Which finding, if true, would most directly support the researchers' hypothesis?

The LINE transposon in *O. vulgaris* and *O. bimaculoides* genomes is active in an octopus
A. brain structure that functions similarly to the human hippocampus.

The human genome contains multiple transposons from the LINE family that are all
B. primarily active in the hippocampus.

A consistent number of copies of LINE transposons is present across the genomes of most
C. octopus species, with few known corruptions.

O. vulgaris and *O. bimaculoides* have smaller brains than humans do relative to body size,
D. but their genomes contain sequences from a wider variety of transposon families.

While attending school in New York City in the 1980s, Okwui Enwezor encountered few works by African artists in exhibitions, despite New York's reputation as one of the best places to view contemporary art from around the world. According to an arts journalist, later in his career as a renowned curator and art historian, Enwezor sought to remedy this deficiency, not by focusing solely on modern African artists, but by showing how their work fits into the larger context of global modern art and art history.

Which finding, if true, would most directly support the journalist's claim?

As curator of the Haus der Kunst in Munich, Germany, Enwezor organized a retrospective of Ghanaian sculptor El Anatsui's work entitled *El Anatsui: Triumphant Scale*, one of the largest art exhibitions devoted to a Black artist in Europe's history.

In the exhibition *Postwar: Art Between the Pacific and the Atlantic, 1945–1965*, Enwezor and cocurator Katy Siegel brought works by African artists such as Malangatana Ngwenya together with pieces by major figures from other countries, like US artist Andy Warhol and Mexico's David Siqueiros.

Enwezor's work as curator of the 2001 exhibition *The Short Century: Independence and Liberation Movements in Africa, 1945–1994* showed how African movements for independence from European colonial powers following the Second World War profoundly influenced work by African artists of the period, such as Kamala Ibrahim Ishaq and Thomas Mukarobgwa.

Enwezor organized the exhibition *In/sight: African Photographers, 1940 to the Present* not to emphasize a particular aesthetic trend but to demonstrate the broad range of ways in which African artists have approached the medium of photography.

“Loon Point” is a 1912 poem by Amy Lowell. In the poem, which presents a nighttime scene on a body of water, Lowell describes an element of nature as an active participant in the experience, writing, _____

Which quotation from “Loon Point” most effectively illustrates the claim?

- A. “Through the water the moon writes her legends / In light, on the smooth, wet sand.”
- B. “Softly the water ripples / Against the canoe’s curving side.”
- C. “Or like the snow-white petals / Which drop from an overblown rose.”
- D. “But the moon in her wayward beauty / Is ever and always the same.”

Mosasaurs were large marine reptiles that lived in the Late Cretaceous period, approximately 100 million to 66 million years ago. Celina Suarez, Alberto Pérez-Huerta, and T. Lynn Harrell Jr. examined oxygen-18 isotopes in mosasaur tooth enamel in order to calculate likely mosasaur body temperatures and determined that mosasaurs were endothermic—that is, they used internal metabolic processes to maintain a stable body temperature in a variety of ambient temperatures. Suarez, Pérez-Huerta, and Harrell claim that endothermy would have enabled mosasaurs to include relatively cold polar waters in their range.

Which finding, if true, would most directly support Suarez, Pérez-Huerta, and Harrell's claim?

Mosasaurs' likely body temperatures are easier to determine from tooth enamel oxygen-18 isotope data than the body temperatures of nonendothermic Late Cretaceous marine

A. reptiles are.

Fossils of both mosasaurs and nonendothermic marine reptiles have been found in roughly equal numbers in regions known to be near the poles during the Late Cretaceous, though in

B. lower concentrations than elsewhere.

Several mosasaur fossils have been found in regions known to be near the poles during the Late Cretaceous, while relatively few fossils of nonendothermic marine reptiles have been

C. found in those locations.

During the Late Cretaceous, seawater temperatures were likely higher throughout mosasaurs' range, including near the poles, than seawater temperatures at those same

D. latitudes are today.

Accomplished printmaker and sculptor Elizabeth Catlett (1915–2012) used her art to explore the Black experience in the United States. In a paper for an art history class, a student claims that Catlett had a particular talent for unifying various artistic traditions and styles in her work.

Which quotation from a scholar describing Catlett’s work would best support the student’s claim?

“In *Mother and Child*, a sculpture of two Black figures, Catlett used an ancient Indigenous sculpting technique and combined the visual aesthetic of modern Mexican muralists with A. that of German artist Kathe Kollwitz.”

“In her collage *New Generation*, Catlett overlaid fabric onto the canvas to represent the clothing of a father and his toddler, positioned to evoke classic images of a mother and B. child.”

“Created in 1968, Catlett’s sculpture *Black Unity*, a stylized fist sculpted from mahogany and measuring two feet across, remains an important piece and has received renewed and well- C. deserved attention in recent years.”

“One series of Catlett’s prints, made by the artist using the linoleum cut method, depicts D. several notable African American women, including Harriet Tubman and Sojourner Truth.”

A student is examining a long, challenging poem that was initially published in a quarterly journal without explanatory notes, then later republished in a stand-alone volume containing only that poem and accompanying explanatory notes written by the poet. The student asserts that the explanatory notes were included in the republication primarily as a marketing device to help sell the stand-alone volume.

Which statement, if true, would most directly support the student's claim?

The text of the poem as published in the quarterly journal is not identical to the text of the

A. poem published in the stand-alone volume.

Many critics believe that the poet's explanatory notes remove certain ambiguities of the

B. poem and make it less interesting as a result.

The publishers of the stand-alone volume requested the explanatory notes from the poet in order to make the book attractive to readers who already had a copy of the poem in a

C. journal issue.

Correspondence between the poet and the publisher reveals that the poet's explanatory

D. notes went through several drafts.

O Pioneers! is a 1913 novel by Willa Cather. In the novel, Cather portrays Alexandra Bergson as having a deep emotional connection to her natural surroundings: _____

Which quotation from *O Pioneers!* most effectively illustrates the claim?

“She had never known before how much the country meant to her. The chirping of the insects down in the long grass had been like the sweetest music. She had felt as if her heart were hiding down there, somewhere, with the quail and the plover and all the little wild things that crooned or buzzed in the sun. Under the long shaggy ridges, she felt the future A. stirring.”

“Alexandra talked to the men about their crops and to the women about their poultry. She spent a whole day with one young farmer who had been away at school, and who was B. experimenting with a new kind of clover hay. She learned a great deal.”

“Alexandra drove off alone. The rattle of her wagon was lost in the howling of the wind, but her lantern, held firmly between her feet, made a moving point of light along the highway, C. going deeper and deeper into the dark country.”

“It was Alexandra who read the papers and followed the markets, and who learned by the mistakes of their neighbors. It was Alexandra who could always tell about what it had cost to fatten each steer, and who could guess the weight of a hog before it went on the scales D. closer than John Bergson [her father] himself.”

Linguist Deborah Tannen has cautioned against framing contentious issues in terms of two highly competitive perspectives, such as pro versus con. According to Tannen, this debate-driven approach can strip issues of their complexity and, when used in front of an audience, can be less informative than the presentation of multiple perspectives in a noncompetitive format. To test Tannen's hypothesis, students conducted a study in which they showed participants one of three different versions of local news commentary about the same issue. Each version featured a debate between two commentators with opposing views, a panel of three commentators with various views, or a single commentator.

Which finding from the students' study, if true, would most strongly support Tannen's hypothesis?

On average, participants perceived commentators in the debate as more knowledgeable
A. about the issue than commentators in the panel.

On average, participants perceived commentators in the panel as more knowledgeable
B. about the issue than the single commentator.

On average, participants who watched the panel correctly answered more questions about
C. the issue than those who watched the debate or the single commentator did.

On average, participants who watched the single commentator correctly answered more
D. questions about the issue than those who watched the debate did.

In 1534 CE, King Henry VIII of England split with the Catholic Church and declared himself head of the Church of England, in part because Pope Clement VII refused to annul his marriage to Catherine of Aragon. Two years later, Henry VIII introduced a policy titled the Dissolution of the Monasteries that by 1540 had resulted in the closure of all Catholic monasteries in England and the confiscation of their estates. Some historians assert that the enactment of the policy was primarily motivated by perceived financial opportunities.

Which quotation from a scholarly article best supports the assertion of the historians mentioned in the text?

- “At the time of the Dissolution of the Monasteries, about 2 percent of the adult male population of England were monks; by 1690, the proportion of the adult male population
- A. who were monks was less than 1 percent.”
- “A contemporary description of the Dissolution of the Monasteries, Michael Sherbrook’s *Falle of the Religious Howses*, recounts witness testimony that monks were allowed to keep
- B. the contents of their cells and that the monastery timber was purchased by local yeomen.”
- “In 1535, the year before enacting the Dissolution of the Monasteries, Henry commissioned a survey of the value of church holdings in England—the work, performed by sheriffs,
- C. bishops, and magistrates, began that January and was swiftly completed by the summer.”
- “The October 1536 revolt known as the Pilgrimage of Grace had several economic motives: high food prices due to a poor harvest the prior year; the Dissolution of the Monasteries, which closed reliable sources of food and shelter for many; and rents and taxes throughout
- D. Northern England that were not merely high but predatory.”

"To You" is an 1856 poem by Walt Whitman. In the poem, Whitman suggests that readers, whom he addresses directly, have not fully understood themselves, writing, _____

Which quotation from "To You" most effectively illustrates the claim?

"You have not known what you are, you have slumber'd upon yourself / all your life, / Your
A. eyelids have been the same as closed most of the time."

"These immense meadows, these interminable rivers, you are immense / and interminable
B. as they."

"I should have made my way straight to you long ago, / I should have blabb'd nothing but
C. you, I should have chanted nothing / but you."

"I will leave all and come and make the hymns of you, / None has understood you, but I
D. understand you."

Roasted green chiles are a popular ingredient in Southwestern cuisine, but the traditional roasting method of burning propane is not environmentally friendly. To see if solar power could provide a better alternative, engineer Kenneth Armijo and his team roasted batches of green chiles using between 38 and 42 heliostats, which are devices that concentrate sunlight. The team was successful in reaching the same roasting temperature used in traditional propane roasting, but they found that propane yielded faster results. While the fastest solar-roasted green chiles took six minutes, batches using propane took only four. Armijo hypothesizes that they can reduce the roasting time for solar-roasted green chiles by using more heliostats.

Which finding, if true, would most directly support Armijo's hypothesis?

The temperature inside the roasting drum is distributed more evenly when roasting green
A. chiles with solar power than with propane.

B. Attempts to roast green chiles using 50 heliostats yields results in fewer than six minutes.

Green chile connoisseurs prefer the flavor of solar-roasted green chiles over the flavor of
C. propane-roasted green chiles.

The skins of solar-roasted green chiles are easier to peel than the skins of propane-roasted
D. green chiles.

O Pioneers! is a 1913 novel by Willa Cather. In the novel, Cather depicts Alexandra Bergson as a person who takes comfort in understanding the world around her: _____

Which quotation from *O Pioneers!* most effectively illustrates the claim?

“She looked fixedly up the bleak street as if she were gathering her strength to face something, as if she were trying with all her might to grasp a situation which, no matter how
A. painful, must be met and dealt with somehow.”

“She had never known before how much the country meant to her. The chirping of the insects down in the long grass had been like the sweetest music. She had felt as if her heart were hiding down there, somewhere, with the quail and the plover and all the little wild things that crooned or buzzed in the sun. Under the long shaggy ridges, she felt the future
B. stirring.”

“Alexandra drove off alone. The rattle of her wagon was lost in the howling of the wind, but her lantern, held firmly between her feet, made a moving point of light along the highway,
C. going deeper and deeper into the dark country.”

“Alexandra drew her shawl closer about her and stood leaning against the frame of the mill, looking at the stars which glittered so keenly through the frosty autumn air. She always loved to watch them, to think of their vastness and distance, and of their ordered march. It fortified her to reflect upon the great operations of nature, and when she thought of the law
D. that lay behind them, she felt a sense of personal security.”

Sandra Cisneros's 1984 novella *The House on Mango Street* made a lasting impact on US literature. Its depiction of Mexican American culture inspired later authors to examine their own heritage within their fictional works. Also influential was the book's portrayal of the main character, Esperanza, during a pivotal year of her youth. This insightful depiction of a preteen girl encouraged authors who, like Cisneros herself, are Latina to use fictional works to examine experiences from their own youth.

Which statement, if true, would most strongly support the claim in the underlined sentence?

In interviews, a number of Latina authors say that *The House on Mango Street* inspired them
A. to write about their own adolescence in their novels.

In published writings, several prominent authors who are not Latina say that reading *The House on Mango Street* influenced their approach to writing fiction.
B.

The *House on Mango Street* has sold over six million copies and is one of the most
C. commonly read books among high school and university students in the US.

Since 1984, new novels about young Latina characters by Latina authors have often been
D. compared to *The House on Mango Street*.

Neural networks are computer models intended to reflect the organization of human brains and are often used in studies of brain function. According to an analysis of 11,000 such networks, Rylan Schaeffer and colleagues advise caution when drawing conclusions about brains from observations of neural networks. They found that when attempting to mimic grid cells (brain cells used in navigation), while 90% of the networks could accomplish navigation-related tasks, only about 10% of those exhibited any behaviors similar to those of grid cells. But even this approximation of grid-cell activity has less to do with similarity between the neural networks and biological brains than it does with the rules programmed into the networks.

Which finding, if true, would most directly support the claim in the underlined sentence?

The rules that allow for networks to exhibit behaviors like those of grid cells have no
A. equivalent in the function of biological brains.

The networks that do not exhibit behaviors like those of grid cells were nonetheless
B. programmed with rules that had proven useful in earlier neural-network studies.

Neural networks can often accomplish tasks that biological brains do, but they are typically
C. programmed with rules to model multiple types of brain cells simultaneously.

Once a neural network is programmed, it is trained on certain tasks to see if it can
D. independently arrive at processes that are similar to those performed by biological brains.

Rivers rich in sediment appear yellow, while increases in red algae make rivers appear red. To track things like the sediment or algae content of large US rivers, John R. Gardner and colleagues used satellite data to determine the dominant visible wavelengths of light measured for various segments of these rivers. The researchers classified wavelengths of 495 nanometers (nm) and below as red, wavelengths between 495 and 560 nm as blue, and wavelengths of 560 nm and above as yellow. The researchers concluded that for the Missouri River, segments flowing into lakes tend to carry more sediment than those flowing out of lakes.

Which finding, if true, would most directly support the researchers' conclusion?

The segments of the Missouri River that had higher levels of chlorophyll-a, which contributes to the green color of photosynthetic organisms, have dominant wavelengths of

A. light between 490 and 560 nm.

In lakes through which segments of the Missouri River pass, the dominant wavelength of light tended to be above 560 nm near the lakes' shores and below 560 nm in the lakes' centers.

B. centers.

The majority of the segments of the Missouri River were found to have dominant

C. wavelengths of light significantly higher than 560 nm.

Segments of the Missouri River flowing into lakes typically had dominant wavelengths of light above 560 nm, while segments flowing out of lakes typically had dominant

D. wavelengths below 560 nm.

"Mrs. Spring Fragrance" is a 1912 short story by Sui Sin Far. In the story, Mrs. Spring Fragrance, a Chinese immigrant living in Seattle, is traveling in California. In letters to her husband and friend, she demonstrates her concern for what's happening at her home in Seattle while she is away: _____

Which quotation from Mrs. Spring Fragrance's letters most effectively illustrates the claim?

- "My honorable cousin is preparing for the Fifth Moon Festival, and wishes me to compound for the occasion some American 'fudge,' for which delectable sweet, made by my clumsy hands, you have sometimes shown a slight prejudice."
- "Next week I accompany Ah Oi to the beautiful town of San José. There will we be met by the son of the Illustrious Teacher."
- "Forget not to care for the cat, the birds, and the flowers. Do not eat too quickly nor fan too vigorously now that the weather is warming."
- "I am enjoying a most agreeable visit, and American friends, as also our own, strive benevolently for the accomplishment of my pleasure."

Plants like potatoes, tomatoes, and soybeans are susceptible to bacterial wilt disease caused by the bacteria *Ralstonia solanacearum*. A multinational team of scientists led by Zhong Wei studied whether other microbes in the soil might influence the degree to which plants are affected by the disease. The team sampled soil surrounding individual tomato plants over time and compared the results of plants that became diseased with those that remained healthy. They concluded that the presence of certain microbes in the soil might explain the difference between healthy and diseased plants.

Which finding, if true, would most directly support the team's conclusion?

- The soil surrounding healthy plants contained significantly higher concentrations of microbes known to inhibit *Ralstonia solanacearum* than the soil surrounding diseased
- A. plants did.
- The soil surrounding the plants contained high concentrations of *Ralstonia solanacearum*
- B. regardless of whether the plants were affected by wilt disease.
- The soil surrounding healthy plants tended to have significantly higher moisture levels than
- C. the soil surrounding diseased plants did.
- By the end of the experiment, over half the plants had been affected by wilt disease regardless of differences in the types and concentrations of microbes in the surrounding
- D. soil.

Although it's clear that Mars once had liquid water on its surface, astronomers have debated whether the evidence of ancient water reflects a prolonged phase of warm, wet conditions—the so-called wet and warm scenario—or a brief period of melting in an otherwise consistently frozen environment. Researchers Benjamin T. Cardenas and Michael P. Lamb recently added to this debate by using data from NASA and the Mars Orbiter Laser Altimeter to map the topography of what is now a large basin in Mars's northern hemisphere. Cardenas and Lamb concluded that the wet and warm scenario is likely correct.

Which finding about the basin, if true, would most directly support Cardenas and Lamb's conclusion?

Its dimensions and shape indicate that it is unlikely to have formed as the result of an
A. asteroid or comet impact.

It has features suggesting that it once held an ocean that underwent gradual sea-level
B. changes over an extended time.

Its physical characteristics are most consistent with it having formed as a result of a
C. massive but short-lived influx of liquid water.

It is surrounded by channels that could have been formed either by running water or by
D. flowing lava.

The Land of Enchantment is a 1906 travel book by Lilian Whiting. In the book, which describes the experience of traveling through the southwestern United States by train, Whiting reflects on the escape from everyday life that such a journey provides: _____

Which quotation from *The Land of Enchantment* most effectively illustrates the claim?

- “The opportunities and advantages already offered and constantly increasing are greater
A. than would at first be considered possible.”
- “The social and the picturesque charm of the long journey is singularly enhanced by the
B. leisurely stops made for refreshment.”
- “The real journey begins, of course, at Chicago, and as these trains leave in the evening the
C. traveller fares forth in the seclusion of his berth.”
- “One experiences a certain sense of detachment from ordinary day and daylight duties that
D. is exhilarating.”

In the 1980s, many musicians and journalists in the English-speaking world began to draw attention to music from around the globe—such as mbaqanga from South Africa and quan họ from Vietnam—that can't be easily categorized according to British or North American popular music genres, typically referring to such music as "world music." While some scholars have welcomed this development for bringing diverse musical forms to prominence in countries where they'd previously been overlooked, musicologist Su Zheng claims that the concept of world music homogenizes highly distinct traditions by reducing them all to a single category.

Which finding about mbaqanga and quan họ, if true, would most directly support Zheng's claim?

- Mbaqanga and quan họ developed independently of each other and have little in common
- A. musically.
 - B. Mbaqanga is significantly more popular in the English-speaking world than quan họ is.
 - C. connections to South Africa or Vietnam.
 - D. genres but similar to each other.

Sense and Sensibility is an 1811 novel by Jane Austen. In the novel, Austen describes Marianne Dashwood's ability to persuade others of the rightness of her artistic judgments, as is evident when Marianne visits with John Willoughby, a potential suitor: _____

Which quotation from *Sense and Sensibility* most effectively illustrates the claim?

- "Above all, when she heard him declare, that of music and dancing he was passionately fond, she gave him such a look of approbation as secured the largest share of his discourse
A. to herself for the rest of his stay."
- "Their taste was strikingly alike. The same books, the same passages were idolized by each—or if any difference appeared, any objection arose, it lasted no longer than till the force of
B. her arguments and the brightness of her eyes could be displayed."
- "It was only necessary to mention any favourite amusement to engage her to talk. She could not be silent when such points were introduced, and she had neither shyness nor
C. reserve in their discussion."
- "They speedily discovered that their enjoyment of dancing and music was mutual, and that it arose from a general conformity of judgment in all that related to either. Encouraged by this to a further examination of his opinions, she proceeded to question him on the subject
D. of books."