

10

The Mystery of Easter Island



In this unit, you will

- read about an amazing society that all but disappeared.
- investigate different theories about vanished civilizations.
- increase your understanding of the target academic words for this unit.

READING SKILLS Identifying Multiple Causes;
Synthesizing Information from Several Sources

Self-Assessment

Think about how well you know each target word, and check (✓) the appropriate column. I have...

TARGET WORDS

AWL

- ☞ cease
- ☞ cite
- ☞ collapse
- ☞ conceive
- ☞ confirm
- ☞ culture
- ☞ deny
- ☞ derive
- ☞ nevertheless
- ☞ quote
- ☞ supplement
- ☞ transport
- ☞ valid
- ☞ widespread

	never seen the word before	seen the word but am not sure what it means	seen the word and understand what it means	used the word, but am not sure if correctly	used the word confidently in either speaking or writing	used the word confidently in both speaking and writing
cease						
cite						
collapse						
conceive						
confirm						
culture						
deny						
derive						
nevertheless						
quote						
supplement						
transport						
valid						
widespread						



Outside the Reading What do you know about Easter Island?
Watch the video on the student website to find out more.

OXFORD 3000™ keywords

Before You Read

Read this question. Discuss your answers in a small group.

In his book *Collapse*, Jared Diamond, a professor of geography at UCLA, identified eight factors within human control that have contributed to the collapse of past societies. Which of these factors do you feel are most likely to threaten civilizations today?

- The destruction of forests and other habitats
- Soil erosion and loss of soil fertility
- Water supply and management problems
- Overhunting
- Overfishing
- Damage to native plant and animal species caused by the introduction of new species
- Human overpopulation
- An increase in the impact of each individual on the environment

MORE WORDS YOU'LL NEED

archaeology: the study of ancient civilizations by examining the remains of buildings and objects; also spelled archeology

bureaucrat: an official who works for a complex organization or government, especially one who follows the rules too strictly

clan: a tribe or large social group organized according to kinship, or family relations

desecrate: to damage something that is holy

excavation: a place where people dig to search for archaeological evidence

sediment: solid material that settles at the bottom of liquids, such as rivers

 **Read**

In this article from a science magazine, biologist and geographer Jared Diamond gives background on the culture, history, and mystery of Easter Island.

Easter's End

Among the mysteries of human history, the mystery of Easter Island (called Rapa Nui in the local Polynesian language) remains unsurpassed. The mystery stems especially from the island's gigantic stone statues (called *moai*), its impoverished landscape, and the extreme isolation of a people living in what might have been an island paradise.

Easter Island, with an area of only 64 square miles¹, lies in the Pacific Ocean more than 2,000 miles west of the nearest continent (South America), and 1,400 miles from the nearest habitable island. Its subtropical location gives it a rather mild climate, while its volcanic origins make its soil rich and fertile. In theory, these blessings should have made Easter a miniature

¹ See Unit 1, page 2, for metric equivalents to measurements used in this article.

paradise, remote from problems that beset the rest of the world.

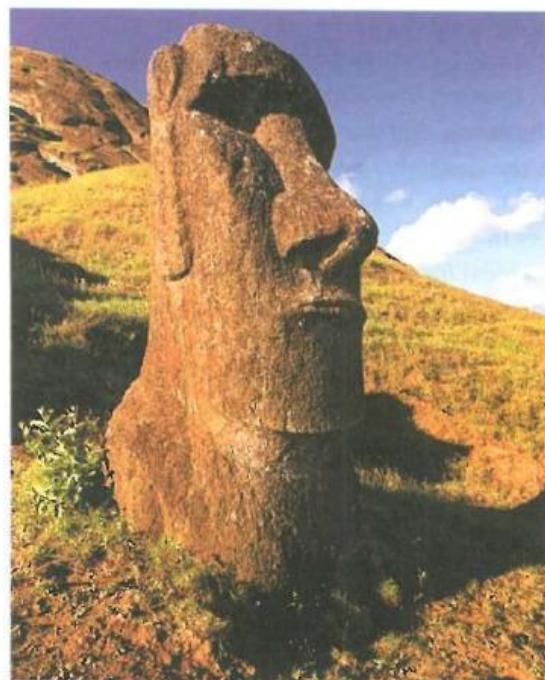
The island **derives** its name from its Easter day discovery by the Dutch explorer Jacob Roggeveen in 1722. The island Roggeveen saw was not a paradise but a grassland without a single tree or bush over ten feet high. The islanders Roggeveen encountered had no real firewood to warm themselves during Easter's cool, wet, windy winters. Their native animals included nothing larger than insects. For domestic animals, they had only chickens.

Despite the Polynesians' fame as seafaring people, the Easter Islanders came out to Roggeveen's ship by swimming or paddling canoes that Roggeveen described as bad and frail. The leaky canoes, only ten feet long, held at most two people, and only three or four canoes were observed on the entire island. The islanders Roggeveen met were totally isolated, unaware that other people existed.

Easter Island's most famous feature is its huge stone statues, more than 200 of which once stood on massive stone platforms lining the coast. At least 700 more, in all stages of completion, were abandoned in quarries or on ancient roads between the quarries and the coast. Most of the erected statues were carved in a single quarry² containing a soft, volcanic stone and **transported** as far as six miles—despite heights as great as 33 feet and weights up to 82 tons. The abandoned statues, meanwhile, were as much as 65 feet tall and weighed up to 270 tons. The stone platforms were equally gigantic: up to 500 feet long and 10 feet high, with facing slabs³ weighing up to 10 tons.

Roggeveen himself quickly recognized the problem the statues posed. Without wheels and with no source of power except their own muscles, how did the islanders **transport** the giant statues? To deepen the mystery, by 1864 all of the statues standing had been pulled down, by the islanders themselves. Why then did they **carve** them in the first place? And why did they stop? Such an undertaking required complex political organization. What happened to that

organization, and how could it have arisen in such a barren landscape?



One of Easter Island's famous stone statues.

65 Evidence comes from three fields: archaeology, pollen analysis, and paleontology. Modern archaeological excavations, radiocarbon dating, and linguistic evidence suggest that human activities began around ad 400 to 700. The period 70 of statue construction peaked around ad 1200 to 1500, with few if any statues erected thereafter. Archaeologists most often **cite** a population figure of 7,000, but estimates range up to 20,000.

Archaeologists have determined that twenty 75 people, using only stone chisels⁴ made from hard stones available on the island, could carve even the largest completed statue within a year. Given enough timber and fiber for rope, a few hundred people could load a statue onto wooden sleds⁵, 80 drag it over lubricated wooden tracks or rollers, and use logs as levers to stand them up. Hauling one statue would require hundreds of yards of rope made from plant fibers. Did Easter at one time have the necessary trees?

85 That question can be answered by analyzing and dating the pollen⁶ trapped in the layers of

² quarry: an open pit or mine from which large rocks are cut

³ slab: a thick, flat piece of stone, wood, or other hard material

⁴ chisel: a sharp tool for shaping wood or stone

⁵ sled: a flat vehicle without wheels, used to **transport** things by dragging or sliding them

⁶ pollen: a powdery material from flowers involved in plant reproduction

sediment in swamps and ponds. Pollen analysis shows that during the early years of Polynesian settlement, Easter was not a wasteland at all. 90 Instead, a subtropical forest of woody bushes and trees, including the rope-yielding *baubau* tree, towered over a ground layer of shrubs, herbs, ferns, and grasses. The most common tree was the Easter Island palm, a relative of the 95 Chilean palm, which grows up to 82 feet tall and 6 feet in diameter. This tall palm would have been ideal for **transporting** and erecting statues and constructing large canoes.

Excavations of garbage heaps yield an 100 equally surprising picture of Easter's original animal world. Nearly one-third of all bones came from porpoises. Porpoises generally live far out at sea, so they must have been hunted offshore, in big seaworthy canoes built from 105 palm trees. In addition to porpoise meat, the early Polynesian settlers **supplemented** their diet with seabirds, land birds, and rats.

This evidence lets us imagine that Easter's first colonists canoed into an unspoiled paradise 110 and had the resources to develop a complex society. What happened to it? The pollen grains and the bones yield a grim answer.

Pollen records show that destruction of Easter's forests was well under way by the year 115 AD 800, just a few centuries after the start of human settlement. Not long after 1400, the palm finally became extinct, not only as a result of being chopped down to clear land for agriculture and provide wood but also because 120 the growing population of rats devoured the nuts necessary for regeneration. The *hauhau* tree did not become extinct in Polynesian times, but its numbers declined drastically until there weren't enough left to make ropes from.

125 The **widespread** destruction of the island's animals was just as extreme. Every species of native land bird became extinct, and more than half of the seabird species breeding on the island were wiped out. With no trees for

130 constructing big canoes, porpoise bones disappeared abruptly from garbage heaps around 1500. In place of these meat supplies, the islanders intensified their production of chickens and also turned to the largest remaining meat 135 source available: humans, whose bones became common in late Easter Island garbage heaps.

With fewer food sources, Easter Island could no longer feed the chiefs, bureaucrats, and priests who had kept a complex society running. 140 Surviving islanders described to early European visitors how local chaos replaced centralized government and a warrior class took over. By around 1700, the population began to crash toward between one-quarter and one-tenth of its 145 former number. Around 1770 rival clans started to topple each other's statues, breaking the heads off. By 1864 the last statue had been thrown down and desecrated.

As we try to imagine the decline of Easter's 150 civilization, we ask ourselves, Why didn't they realize what they were doing, and stop before it was too late?

The disaster may have happened gradually. Consider the hundreds of abandoned statues. 155 Perhaps war interrupted the moving teams or the last rope snapped. When the last palm tree was cut, palms had probably long since **ceased** to be of economic significance. That left only smaller and smaller palm saplings to clear each 160 year. No one would have noticed the felling of the last small palm.

By now the meaning of Easter Island for us should be chillingly obvious. Today, again, a rising population confronts shrinking resources. 165 It would be easy to close our eyes or to give up in despair. But there is one crucial difference. The Easter Islanders had no books and no histories of other doomed societies. Unlike the Easter Islanders, we have histories of the past— 170 information that can save us. Our main hope is that we may now choose to learn from the fates of societies like Easter's. ■

Reading Comprehension

A. Mark each sentence as *T* (true) or *F* (false) according to the information in Reading 1. Use the dictionary to help you understand new words.

- 1. The author Jared Diamond blames human behavior for the destruction of Easter Island's ecosystem.
- 2. Diamond believes that the culture that originally inhabited Easter Island left once deforestation was complete.
- 3. Diamond believes that the statues could not have been built unless the islanders had very sophisticated and modern tools.
- 4. The excavation of garbage heaps suggests that the islanders became more desperate in their search for food.
- 5. Diamond feels that modern cultures, due to greater knowledge of history and science, are immune to the kinds of ecological disasters suffered on Easter Island.

B. Scan the reading to find the sentences paraphrased below. In the blank, write the first few words of the original sentence.

- 1. Given these advantages, we might expect Easter Island to be a tiny utopia, a society free from the difficulties of other civilizations.

In theory, these blessings should have made...

- 2. The people on the island had no contact with people from other places and did not know that there were other humans in the world.

- 3. The difficulty of accounting for the presence of these statues was immediately apparent.

- 4. Scientific studies show that when the first settlers arrived, Easter Island was not a barren, empty land.

- 5. The land could no longer support the political and religious institutions that the community needed.

READING SKILL

Identifying Multiple Causes

LEARN

Many controversies involve a dispute over causes. Why did/does something happen? Some events may have a single cause, but often we must look for multiple causes, particularly when analyzing changes in human societies. In academic settings, a test or study question may ask about multiple causes.

To establish that an event or condition is a cause, we need to provide a *rationale*: Why is this condition or event relevant? Why is it a possible factor? To be convincing, we need to show that our reasoning is valid and that our explanation is plausible.

APPLY

A. Read the paragraph and question. Then, drawing on information in Reading 1, complete the table by providing a rationale that explains why each condition is a possible factor in the construction of the statues.

Jared Diamond argues that the statues on Easter Island were constructed by the ancestors of the people living on the island in 1722. To establish this as a plausible explanation, researchers might ask this question: *What conditions made it possible for Easter Islanders to prosper and construct hundreds of large stone statues at one time in their history?*

Condition	Rationale (Why is this relevant?)
1. Pollen analysis shows that the island once had many trees, including hauhau trees.	<i>Hauhau trees can provide fiber for rope. Rope was needed to drag the statues from the quarry.</i>
2. Pollen analysis shows that the most common tree was the large Easter Island palm.	
3. There were hard stones available.	
4. There were quarries with soft stone available.	
5. The weather was mild, the soil fertile, and the ocean provided food.	

B. Practice identifying multiple causes by discussing these questions in a small group.

1. According to Jared Diamond, what factors led to the cessation of statue building on Easter Island?
2. According to Jared Diamond, what factors contributed to the collapse of the population on Easter Island?

Vocabulary Activities

Noun	Verb	Adjective	Adverb
cessation	cease	ceaseless unceasing incessant	ceaselessly unceasingly incessantly
citation	cite		
collapse	collapse	collapsible	
derivation derivative	derive	derivative	
supplement supplementation	supplement	supplemental supplementary	
transportation transport	transport		
		widespread	

A. Here is more information on the Easter Island statues. Fill in each blank with a target word from the chart that completes the sentence in a grammatical and meaningful way.

When Europeans first saw Easter Island, they marveled at the hundreds of statues, called *moai*, placed around the island's perimeter. Nearly as remarkable as these statues was the condition of the society that had produced them. It seemed to have (1) _____, and all statue carving had (2) _____.

All told, researchers have catalogued nearly 900 statues, either on the island or in collections around the world. Interestingly, less than 20% were (3) _____ to ceremonial sites. Nearly 400 are still in the main quarry in various stages of completion. Others lie strewn along the roads.

Who were the people that engaged in such (4) _____ carving? How did they find enough workers to sustain such (5) _____ activity? The adventurer/anthropologist Thor Heyerdahl believed they came from South America. Today, researchers can (6) _____ DNA evidence as proof that the islanders migrated from Polynesia, where similar statues are found.

B. The words in bold have more than one meaning. Read these sentences and circle the meaning that best fits the context.

1. Perhaps different groups of Easter Islanders **derived** satisfaction from having a larger statue than their neighbors.
 - a. get sth from a specific source
 - b. originate from sth
2. Many argue that the society had already **collapsed** by the time Jacob Roggeveen arrived.
 - a. dropped suddenly in value
 - b. suddenly ceased to function

3. Jared Diamond **cited** environmental degradation as the primary cause for the collapse of Easter Island.
 - a. quoted sth
 - b. used sth as evidence
4. The book **transported** me back to a time when this fascinating culture thrived on an isolated island paradise.
 - a. shipped to a distant place
 - b. created the feeling of being in a different place

The word *derive* has the general meaning of something coming from another thing. It is used in many contexts.

She derived great pleasure from listening to classical music.

The notion that Easter Island was once heavily forested derives from pollen studies.

Asphalt is derived from petroleum. It is a petroleum derivative.

Critics complained that the movie was too derivative of Steven Spielberg's work.

Derive is also used to describe word origins. In this context, the noun form is *derivation*.

The word cease is derived from the Latin word cessare. It has a Latin derivation.



C. Work with a partner to find out what these things are derived from. Go online and do some research, if necessary. Discuss your results in a small group.

1. diamonds
2. paper
3. plastic
4. silk
5. cocoa
6. the word *salary*

D. In a small group, discuss which of these practices you feel will become more widespread in the future and why.

1. multitasking at work
2. using odors to enhance movies and video games
3. making movies that are entirely based on digital effects
4. watching movies on handheld devices
5. using robots to do household chores
6. using swarm bots to hunt for things

Before You Read

Read this question. Discuss your answers in a small group.

Jared Diamond claims Easter Island's civilization collapsed because it ignored the environmental crisis it had caused. But societies can fail for reasons outside their control. Possible external factors include:

- sudden natural disasters (volcanoes, earthquakes, tsunamis, fires, floods)
- long-term climate changes that affect farming, hunting, and fishing
- diseases affecting people, livestock, or crops
- foreign invasion

What external factors might have played a part in the collapse of Easter Island's population?

MORE WORDS YOU'LL NEED

artifact: an object produced by humans. Archaeologists look for artifacts from past societies.

extrapolate: assume that what is true of one thing will be true of another. We can also extrapolate by projecting a trend into the future (see Unit 6).

famine: widespread starvation

infighting: fighting among the members of one group

① Read

This article from *New Scientist* magazine discusses the work of several researchers who question the validity of Jared Diamond's conclusions about Easter Island.

A Monumental Collapse?

It is a familiar tale of greed, stupidity, and self-destruction. For hundreds of years the inhabitants of Easter Island competed to build ever more impressive statues, depleting their resources to feed their obsession. Ecological disaster was inevitable. As the island's last tree was felled, the society **collapsed** into warfare, starvation, and cannibalism. Rival clans toppled each other's statues. The workers rose up against their rulers. The vanquished¹ were either enslaved or eaten.

This version of events on Easter Island has become not only the accepted story, but a dark warning about a possible fate for our entire planet. "The parallels between Easter Island and



the whole modern world are chillingly obvious," writes Jared Diamond of the University of California, Los Angeles, in *Collapse*. "Easter's

¹ (the) vanquished: (people) conquered by another group or totally defeated in battle

isolation makes it the clearest example of a 20 society that destroyed itself by overexploiting its own resources." But is it true, or are we too eager to think the worst of our species?

There are problems with almost all aspects of this story, say Terry Hunt of the University of 25 Hawaii and his colleague Carl Lipo of California State University, Long Beach. Take the idea that the population was once much larger than the low estimates made by early visitors. "People say, 'Look at all these statues, there must have 30 been armies of people to do this,'" says Lipo. Many conclude that by Roggeveen's time the society had already **collapsed**. "But that is just absolute speculation," Lipo says.

Population estimates based on the remains 35 of prehistoric settlements are difficult to **validate**. Totals range from a few thousand to 20,000. It is an inexact science because no one knows how many people lived in each house, and not all settlements have been well studied. 40 Besides, recent archaeological analyses suggest a different conclusion. In 2005, a paper by Hunt and Lipo and another by Britton Shepardson of the University of Hawaii gave the first thorough analyses of Rapa Nui's networks of prehistoric 45 paths. Hunt and Lipo suggest the paths were built at different times by different groups of people. There is no evidence of an "interstate system," but rather a number of separate roads. "We suggest this indicates smaller groups 50 working on their own," says Hunt—perhaps different kin groups rather than workers operating under the control of a single authority.

Then there is Hunt and Lipo's recent 55 re-analysis of the date when Rapa Nui was colonized. Results of radiocarbon dating of charcoal from a new excavation push forward the arrival of the first Polynesian settlers by some 400 years, from an estimated AD 800 to AD 1200. Although there is no evidence to say 60 how many colonizers there were, it is likely that numbers were small.

When it comes to claims of massive deforestation, however, the evidence is 65 **undeniable**. Soil analysis suggests an estimated 16 million palms once stood on the island, and deforestation seems to have begun as soon as

the settlers arrived around 1200, and was complete by about 1500. Yet the reason the islanders wiped out their forest is still open to 70 dispute. Some palms may indeed have been cut down to assist in moving the statues, though Hunt points out that they would not have been ideal for the job since they have very soft interiors. Other trees were used for firewood, 75 and land was cleared for agriculture. Still, the blame for the disappearance of the palms might not rest entirely with people, say Lipo and Hunt. They point the finger at rats.

However it happened, was losing the forest 80 really such a bad thing? Some researchers **deny** that it was all bad. According to the theory of self-destruction, the massive deforestation loosened the topsoil², which blew into the ocean, depleting the ground of nutrients and 85 causing food shortages. However, ongoing research suggests that erosion was not the problem people have assumed.

Thegn Ladefoged of the University of Auckland in New Zealand is analyzing samples 90 of soil from locations across the island. In general, the soils are poor, he reported at the meeting of the Society for American Archaeology in San Juan, Puerto Rico, in May 2006. **Nevertheless**, he adds, there is no clear 95 evidence of extreme soil degradation across the island. "I think people have extrapolated from one area which does show extreme degradation to the whole island. I just don't see it," says Ladefoged.

What is apparent on the ground is the large 100 number of rock gardens that cover much of the island's interior, in which crops such as taro, yams, and bananas were grown. These take several forms, from windbreaks made of large 105 lava boulders to piles of smaller rocks mixed with earth that would have acted to keep moisture in the soil. Lipo and Hunt suggest that, given Easter Island's poor soils and relatively low rainfall—which struggles to top 1,500 millimeters 110 a year—it actually made sense to get rid of the forest to make way for these gardens, and to extend agriculture across a greater range of soils and levels of rainfall.

²topsoil: the outermost layer of the Earth, the part capable of supporting agriculture

The earliest gardens seem to date from 115 around 1300. Christopher Stevenson of the Virginia Department of Historic Resources thinks that they were abandoned from about 1600. This would have coincided with a revolt against the ruling class, triggered by food 120 shortages when the timber ran out and people could no longer make rafts for deep-sea fishing or hunt the birds and animals that died out with the palm forests. Norwegian anthropologist Thor Heyerdahl, who studied the island in the 125 1950s, pinpointed the infighting to about 1680, based on a burn layer in the soil. Diamond also settles on a date of around 1680. "The **collapse** of Easter society followed swiftly upon the society's reaching its peak of population, 130 monument construction, and environmental impact," he writes.

This all seems to support the accepted story of Easter Island history, but not everyone is convinced. Most of the evidence for 135 starvation and cannibalism comes from oral histories, which are "extremely contradictory and historically unreliable," according to John Flenley at Massey University in Palmerston North, New Zealand. He points out that by 140 the time detailed observations were made in the 19th century, the **culture** was virtually dead. Hunt and Lipo suspect that stories of cannibalism, in particular, could have been fabricated by the Europeans who 145 arrived in 1864.

What about the oral history of starvation and conflict? It is possible this could describe events that occurred not before European contact but afterwards. Between 1722 and 1862, an 150 estimated 50 European ships visited Easter Island. By the 1830s, whalers reported **widespread** disease on the island, says Benny

Peiser of Liverpool John Moores University, U.K.

Slave raids also began in about 1805, and in

155 1862 and 1863, Peruvian and Spanish slave boats captured an estimated 1,500 local people. After this, reports of smallpox are rife.³ When European settlers arrived, they found a starving people whose society **undeniably** had

160 **collapsed**. By 1872, following further slave raids and **transports** to Tahiti, only around 100 local people were left on Rapa Nui.

Diamond and others **conceive** of these disasters as the final assault on a society that 165 had already destroyed itself. Peiser, along with Hunt and Lipo, thinks the disease introduced by Europeans is a plausible trigger of the only real **collapse** of the society. They note also that while Roggeveen's impression in 1722 was of 170 "singular poverty and barrenness," there are contradictory descriptions. Peiser **quotes** an extract from the journal of a member of a French expedition that visited in 1786: "Instead of meeting with men exhausted by famine..."

175 I found, on the contrary, a considerable population, with more beauty and grace than I afterwards met with on any other island; and a soil which with very little labor furnished excellent provisions."

180 Lipo and Hunt do not claim to have all the answers. Instead, they aim to make other researchers think more critically about the history of Easter Island. The story of ecocide⁴ may usefully **confirm** our darkest fears about

185 humanity but, as Diamond points out in *Collapse*, for every society that self-destructs there is another that does the right thing. It is far from clear that the Easter Islanders made their situation much worse for themselves, but 190 only more evidence will resolve the issue. ■

³ rife: prevalent, **widespread**

⁴ ecocide: a word **derived** from the word ecology and the suffix **-cide**, meaning "kill" It is the act of destroying the environment.

Reading Comprehension

A. Mark each sentence as *T* (true) or *F* (false) according to the information in Reading 2. Use the dictionary to help you understand new words.

- 1. Hunt and Lipo doubt that the statue building would necessitate a large population.
- 2. Hunt and Lipo do not acknowledge that deforestation occurred on Easter Island.
- 3. Most researchers, including Diamond, deny that the population of Easter Island declined in the 19th century.
- 4. Peiser, Hunt, and Lipo delay the collapse of the society to after the late 1700s.
- 5. The author of this article believes that Hunt and Lipo have raised serious doubts about Jared Diamond's account.

B. Scan both readings in this unit for the answers to these questions. First think about the key word you will scan for. Use any annotations or highlighting you have done to help you. Compare answers with a partner.

1. According to Hunt and Lipo's research, when was the earliest settlement of Easter Island?
2. Is this date earlier or later than Diamond's date?
3. When was deforestation complete according to Hunt and Lipo?
4. Would Diamond agree or disagree with this date?
5. When did the slave raids begin?
6. Did the article by Diamond mention the slave raids?

READING SKILL

Synthesizing Information from Several Sources

LEARN

Researching a topic may involve synthesizing information from two or more sources. Synthesizing is particularly challenging when the sources do not agree.

You have now read two articles offering somewhat different versions of the history of Easter Island. One is a story of environmental destruction triggered by a frantic effort to build giant statues; the other is a story of a culture collapsing in the face of European expansion, its population weakened by disease and reduced by slave traders. Which account is correct? Could they both be partially correct?

Disagreement is useful because it forces us to reconsider evidence, identify errors, refine our arguments, and adjust our position. Resolving a dispute demands that we clarify points of disagreement and ultimately come closer to the truth. In the Easter Island mystery, we will most likely have a clearer, more accurate history of the island than we would have had if there had been no dispute.

APPLY

A. Clarify points of agreement and disagreement in the two readings in this unit by completing the chart. Compare answers with a partner.

Condition	Diamond	Hunt and Lipo	Both
Polynesian colonists began to arrive on Easter Island around the year AD 1200.		✓	
Forests were destroyed to support agriculture.			
The destruction of forests played a major role in the population's decline.			
Rats contributed to deforestation.			
The island's population peaked at somewhere between 7,000 and 20,000.			
The statues could have been constructed by smaller tribal groups.			
The island is littered with around 700 statues that were never completed or erected.			
Destructive civil wars broke out on the island that left the culture in a weakened state.			
The most severe decline in the island's population occurred as result of disease and forced migration caused by contact with outside societies of Europe and Latin America.			
The island was functioning smoothly when Europeans first arrived.			

B. Write a paragraph in which you list points of agreement concerning Easter Island's history.

Vocabulary Activities

Noun	Verb	Adjective	Adverb/Conjunction
concept conception conceptualization	conceive conceptualize	conceptual	conceptually
confirmation	confirm	confirmable	_____
culture acculturation	acculturate	cultural	culturally
denial	deny	deniable undeniable	deniably undeniably
quote quotation	quote misquote	quotable	nevertheless
validity validation	validate invalidate	valid invalid	validly invalidly

A. The words in bold have more than one meaning. Read these sentences and circle the meaning that best fits the context.

- When Captain James Cook visited Easter Island in 1774, he wrote, “We could hardly **conceive** how these islanders, wholly unacquainted with any mechanical power, could raise such stupendous figures, and afterwards place the large cylindric stones upon their heads.”
 - form an idea
 - grasp or imagine a situation
- Denied** any contact with the outside world due to the island's remote location, the islanders were entirely self-sufficient.
 - not allowed
 - refuse to admit sth is true
- Archaeologists learn about **cultures** of the past by recovering and examining artifacts.
 - ways of life
 - art, music, and literature
- He recommended getting the **quotation** in writing before agreeing to the deal.
 - a stated price or value
 - the exact words
- Some researchers feel evidence from limited areas is not enough to **confirm** Hunt and Lipo's claim that they can identify the earliest settlement.
 - say that something is true
 - demonstrate that something is true
- The permit is **valid** for one year from date of issue, at which time it may be renewed.
 - logical, reasonable, or true
 - legal or official

Collocations Chart			
Verb	Adjective	Noun	Prepositional phrase
cite	_____	evidence, sources, experts, works	_____
grasp, understand	basic, broad, simple, general, fundamental	concept	_____
confirm	_____	findings, dates, suspicions, the existence (of sth)	_____
seek, ask for, wait for, require	official, independent, final	confirmation	in writing
_____	traditional, mainstream, pop/ popular, corporate	culture	_____
deny	_____	the existence (of sth), the fact, access, accusation	_____
_____	valid, invalid	claim, complaint, point, question, thesis, argument, passport, license	_____
question, deny, doubt, assess, prove, demonstrate	_____	(the) validity (of)	argument, theory, conclusion, evidence, concept
_____	widespread	destruction, speculation, agreement, availability	_____

B. The chart above shows some common collocations, or word partners, for selected target vocabulary. Refer to the chart and complete these sentences. Compare work with a partner.

1. The researchers doubt the validity of the method he used to determine the population of the island.
2. Lab results _____ the team's suspicions that the ruins were older than they appeared.
3. They sought independent _____ of the test results.
4. The mayor _____ all accusations of misconduct brought against him.
5. Chapter 1 introduces some fundamental _____ of archaeology.
6. There was _____ speculation that the governor would not run for reelection.
7. The study _____ evidence from both archaeological investigations and oral histories.