

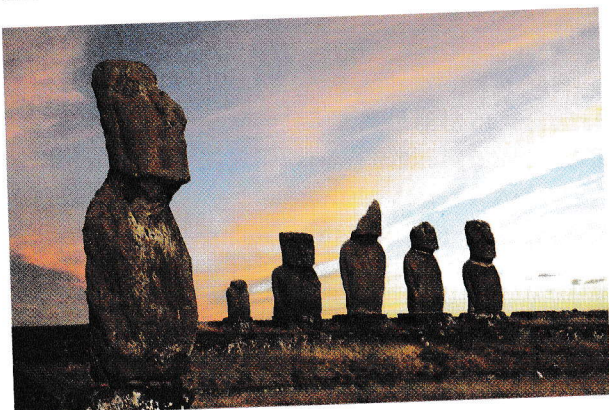
READING

You are going to read an extract about Easter Island. Decide if the statements 1-8 are True, False or Not Mentioned in the text.

ISLAND OF SECRETS

Sitting in the southern Pacific more than 3000 km off the coast of mainland Chile, Easter Island is eerily remote - as if it had been deliberately quarantined from the rest of the world. Small wonder the first Europeans to reach it sensed there was something strange about the island. When the Dutch explorer Jacob Roggeveen and his crew came across it on Easter Sunday, 1722, they were amazed to discover islanders eking out an existence there. According to some researchers, there were once far more inhabitants on Easter Island, and a plentiful supply of trees. But first the trees and then the islanders fell victim to ecological ignorance - the same ignorance that could yet spell disaster for the rest of the planet during the 21st century.

In his 2005 book *Collapse: How Societies Choose to Fail or Succeed*, Jared Diamond, a biogeographer and best selling author, made headlines by portraying the fate of Easter Island as an example of ecocide: the systematic destruction of an ecosystem by humans. The resulting loss of natural resources triggered war, chaos and cultural collapse, 'the clearest example of a society that destroyed itself by overexploiting its own resources,' says Diamond, adding: 'The parallels between Easter Island and the whole modern world are chillingly obvious.' While not the first to draw such a dark conclusion, Diamond's high profile brought it to worldwide notice.



However, new research is now casting serious doubt on this latter-day morality tale - and the supposed lessons it holds for us. Techniques ranging from radiocarbon dating and DNA analysis to satellite imaging are uncovering evidence suggesting the widely-accepted history of events on the island is seriously flawed, and with it the explanation of what happened there before the arrival of the first Europeans.

Until now, the conventional view - based partly on carbon dating and archaeological surveys - has been that the island was first colonised around 800AD by settlers from elsewhere in Polynesia. By 1200AD those settlers had started to chop down the island's extensive forests to make homes and fishing boats, and to help with the transportation and erection of the moai.

The question of what happened next is controversial. According to Diamond and others, the population soared to around 15,000, and deforestation took place at a furious rate. Within 250 years, virtually all the trees had gone, and the island's resources were simply incapable of supporting the population and its statue-building - triggering famine, war and even cannibalism. The islanders seen by Roggeveen were the only survivors of this ecological disaster.

Yet, according to Easter Island specialists such as anthropologist Professor Carl Lipo of California State University, in Long Beach, this storyline is based largely on extrapolations of known facts to fit preconceptions. While deforestation definitely took place, the claim that it was triggered by the islanders when they began erecting the moai is flawed.

Doubt has, however, been cast by new evidence published by Lipo in collaboration with fellow anthropologist Professor Terry Hunt of the University of Hawaii. Radiocarbon dating of debris found on the coast of Easter Island suggests that the first Polynesian settlers actually arrived as late as 1200AD - around 400 years later than

the standard history. This ties in well with evidence of colonisation elsewhere in Polynesia - and removes the otherwise odd 400-year gap between the conventional arrival date and the start of deforestation. But the later arrival date poses big problems for the ecocide theory, as it demands an implausibly high rate of population growth to reach the supposed figure of 15,000. And without that high figure, there is little reason to think a population crash occurred before the Europeans arrived. 'Given the evidence that exists right now,' says Lipo, 'one could say the Easter Islanders were an example of success, a population that persisted in an incredibly remote place with not a lot of resources.'

While the deforestation may not have been critical, it undoubtedly took place - so what caused it? According to Hunt, the islanders may indeed have been to blame, but not in the way most environmentalists believe. Huge numbers of ancient rat bones have been found on the island, suggesting the original settlers introduced a foreign species that wreaked havoc in the forests. Research on the

other Pacific islands has shown that rats are capable of triggering deforestation by eating the seeds of palms. 'The 'cautionary tale' from the island is that invasive species can lead to a catastrophe for the native ecosystem,' says Hunt.

But while the islanders may have coped well with the resulting deforestation, they were no match for the microbial species introduced by the Europeans, in the form of smallpox and other contagious diseases. Within 150 years of the arrival of Roggeveen, Easter Island had suffered a population collapse of far greater proportions than anything suggested by environmentalists. A combination of disease and forced emigration had cut the population to barely one hundred.

Clearly the controversy over the true story of Easter Island will continue for years yet. But both sides are agreed on one thing: the need to back theories with hard evidence. 'Archaeology should be more than a prop for the current popular story,' says Professor Hunt. 'It should be a scientific means of documenting history.'



Moai are gigantic stone statues some of which are 10 metres high. There are more than 600 of them on Easter Island.

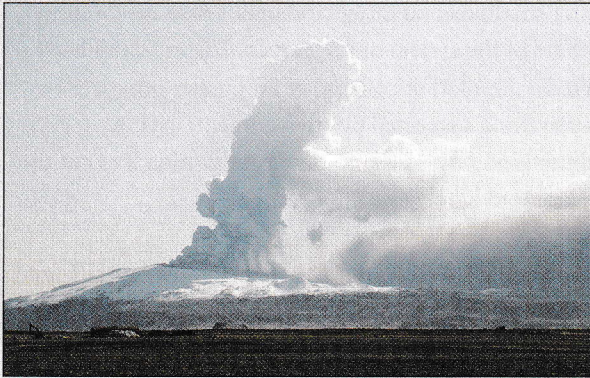
1. Roggeveen did not expect to find people inhabiting Easter Island.
2. Some researchers maintain that the modern world could suffer the same fate as Easter Island.
3. New evidence indicates that Easter island initially did not have forests.
4. Carbon dating is one of the newest techniques to be used in the assessment of historical events.
5. According to Jared Diamond, Roggeveen encountered what remained of a once thriving population.
6. Lipo and Hunt carried out carbon dating of rat bones on Easter Island.
7. Deforestation on Easter Island is attributed by some anthropologists to the introduction of an animal species that originally did not exist there.
8. The current population of Easter Island is predominantly of Polynesian descent.

VOCABULARY

A. Read the extracts from news reports below and decide which answer a, b or c best fits each gap.

THE EVENING POST

Volcanic activity in Iceland affects Europe



On April 14, 2010, the (1) _____ of a volcano in Iceland, which had been (2) _____ for 200 years, created a huge (3) _____ that covered half of Europe.

First Iceland was forced to close its air space but then airport after airport in Europe began shutting down. The reason is because the plumes of ash that volcanoes spew out contain microscopic (4) _____ that can cause aircraft engines to block up and stop functioning.

Aviation authorities across the world were forced to ground thousands of flights to and from Europe leaving hundreds of thousands of passengers stranded. Europe witnessed one of the worst disruptions to its air travel. Chaos ensued in many airports with passengers not knowing when they would be returning home. Eventually the plume slowly (5) _____ away a few days later and flights across the continent resumed. It is estimated that airlines lost approximately \$2 billion.

The human (6) _____ has not yet been fully calculated but scientists warn that the worst is yet to come. Other (7) _____ and much bigger volcanoes in Iceland, such as Katla, could erupt and the consequences will be far more disastrous.

- | | | |
|---------------------|------------------|-------------------|
| 1. a. rupture | b. eruption | c. collision |
| 2. a. seismic | b. colossal | c. dormant |
| 3. a. ashcloud | b. bulge | c. aftershock |
| 4. a. traces | b. crust | c. debris |
| 5. a. plunged | b. drifted | c. swallowed |
| 6. a. rescue effort | b. health impact | c. field hospital |
| 7. a. active | b. bleak | c. future |

Earthquakes causing worry

Scientists are extremely concerned by the increased (8) _____ activity taking place near the capital. Although the (9) _____ of the earthquakes is quite small, many fear that they are a precursor to a bigger one.

Many people still remember the catastrophic earthquake which took place 50 years ago and whose (10) _____ continued for many months afterwards. The earthquake's (11) _____ was 50 miles out at sea and it had spawned a (12) _____ that wiped out entire coastal villages causing the (13) _____ to rise to the hundreds of thousands.

However, a spokesperson for the Civil Protections Department said yesterday that things would be different this time around should a big earthquake occur. He added that (14) _____ have been practised extensively and that his country is prepared to face any natural disaster mother nature throws their way.

- | | | |
|------------------------------|---------------------|----------------------|
| 8. a. global | b. gigantic | c. seismic |
| 9. a. magnitude | b. menace | c. diameter |
| 10. a. amplitude | b. aftershocks | c. magma |
| 11. a. crest | b. epicentre | c. crater |
| 12. a. drought | b. drizzle | c. tsunami |
| 13. a. death toll | b. relief aid | c. eruptive peak |
| 14. a. international efforts | b. emergency drills | c. natural disasters |

B. Choose the word that most appropriately completes the sentence. There are two that you do not need to use.

hail drought humidity sleet blizzard
overcast breeze drizzle heatwave muggy

- Although I enjoyed my holiday in the tropics, I found the heat and _____ to be insufferable at times.
- There was a terrible _____ last summer with temperatures reaching a scorching 45 degrees Celsius.
- The _____ has led to severe crop failure which means the country will now also be facing a famine.
- It was a long and difficult hike to the top of the mountain but there was a nice cool _____ blowing which was quite refreshing.
- I had planned on going to the beach at the weekend but after listening to the weather forecast, which called for _____ skies, I decided to put it off.
- It started off as a beautiful day but then clouds appeared and it began to _____.
- The football match went on as scheduled and neither the rain nor the fine _____ could sway officials to put off the game.
- Driving in the rain was difficult and later became even more so when it turned to _____ the size of golf balls.

C. Complete the sentences using the correct form of the words in the box.

amphibian nocturnal reptile hibernating
marsupial herbivore predator scavenger

Mexican Axolotl



Snow leopard



Gila Monster

1. The Mexican Axolotl is a(n) _____ salamander that is pink and white and looks like a ghost; it is happy to live permanently in water and only rarely emerges from the water.
2. I knew that some birds like vultures are _____ and feed on the bodies of dead animals, but I didn't realise that certain insects like yellow-jackets are, too.
3. The Gila Monster is a(n) _____; it's a lizard that lives in the deserts of south-west USA and is dormant during the winter months.
4. The snow leopard is a(n) _____ that hunts the Himalayan tahr which is an animal similar to a wild goat.
5. Many desert animals are _____ as this way they are able to avoid the heat of the day.

6. _____ are one link in the food chain; they consume plants and are themselves later consumed by other meat eating animals, which in turn can be consumed by omnivores, which eat both plants and meat.
7. Most people know that kangaroos carry their young in pouches, but many do not realise that the koala is also a(n) _____.

GRAMMAR

A. Choose the word or phrase that produces a grammatically correct sentence.

1. Whenever there was a hurricane warning, we _____ stay in our basement or go to the nearest shelter.
a. must b. had to c. needed d. might
2. By the end of the year, the two cormorants _____ in the nature reserve for two years.
a. will live b. are going to live c. will have been living d. are living
3. The amplitude of the expected tsunami _____ enormously as it approaches the coastline.
a. will be increasing b. will have increased c. will increase d. will have been increasing
4. Many people believe that natural disasters _____ be a sign of nature's revenge against humans.
a. should b. would c. had to d. could
5. I believe that environmental studies _____ to be incorporated into all school curriculums.
a. could b. ought c. must d. should
6. Depending on the species, ambient conditions and the fur of the animal, hibernation _____ last several days or weeks.
a. must b. need c. is able to d. may
7. Ancient Egyptians _____ do anything at all to fertilise their fields, since the 'divine' flooding of the Nile would enrich the soil.
a. shouldn't b. didn't need to c. needn't have d. mustn't
8. It is hoped that soon more and more countries affected by desertification _____ the convention regulations.
a. are implementing b. will be implementing c. need implement d. must be implementing
9. Someone _____ be held responsible for the leak from the oil tanker that has caused the pollution of the coastline; this kind of criminal negligence should not be overlooked.
a. need b. has c. must d. may
10. By Monday, protesters _____ outside the nuclear power station for a whole week in an effort to draw the attention of the public to the dangers it poses to the community.
a. will camp b. will be camping c. will have been camping d. are camping

B. Complete the second sentence so that it has a similar meaning to the first using modal verbs (*may, might, must, can, should, needn't, etc.*).

- You didn't ask me before using my telescope to observe the solar eclipse and that was wrong.
You _____ before using my telescope to observe the solar eclipse.
- All students are obliged to be members of an environmental organisation if they want to participate in the project.
All students _____ members of an environmental organisation if they want to participate in the project.
- It is likely that human activity has led many animal species to extinction.
Human activity _____ many animals to extinction.
- I strongly advise you to wear gloves before touching a poison dart frog.
You _____ before touching a poison dart frog.
- There is a slight possibility that a tornado will hit our area tomorrow.
A tornado _____ our area tomorrow.
- I'm sure that you didn't see a piranha fish as they only live in South American rivers.
You _____ as they only live in South American rivers.
- It is not necessary to bring your own equipment in order to take part in the comet observation.
You _____ in order to take part in the comet observation.
- I regret that I didn't take my camera with me since it was a good opportunity to take pictures of carnivorous plants.
I _____ since it was a good opportunity to take pictures of carnivorous plants.

C. Read the text below and complete the gaps using modal verbs.

DON'T SAY YOU WEREN'T WARNED! 



Malaysian 'exploding ants'

Human beings (1) _____ have developed complex defence systems to protect them from their enemies, but many animals have also developed different kinds of mechanisms to protect and defend themselves against predators. Some of these mechanisms are very unusual and (2) _____ also seem quite funny. Take for example the Malaysian 'exploding ants'. These ants, which definitely (3) _____ not be underestimated, have large glands full of poison inside their bodies.

As soon as they realise that they are threatened, a kind of self-explosion mechanism is triggered causing the glands located on either side of their bodies to explode and spray the poison on their enemy. Another good example of a self-defence mechanism is that of the 'hairy' or 'horror' frog. This frog (4) _____ break its own bones in order to form a set of cat-like claws! This (5) _____ be very painful for the frog, of course, but it (6) _____ only happen when it feels that it is threatened. In case you are



'hairy' or 'horror' frog

wondering, scientists do not know whether the bones (7) _____ return to their former state or not. The 'bombardier beetle' is also worth mentioning. Although this animal (8) _____ look cute and innocent, it has the ability to spray boiling hot and toxic fluids in the direction of any prospective attacker. Obviously these are animals one had better avoid! Don't worry, though; if you come across any of these strange animals, you (9) _____ not panic. The only thing you really (10) _____ to do is refrain from provoking them!



'bombardier beetle'

VOCABULARY

A. Find one word that does not belong in each category and put it in the correct one. Then complete the sentences 1-8 using the correct form of the words from all the categories.

solar system	- moon	galaxy	satellite	fjord	_____
climate	- polar	temperate	vegetation	humidity	_____
flora and fauna	- meteor	biodiversity	indigenous	wildlife	_____
natural phenomena	- avalanche	tropical	landslide	aurora borealis	_____
geographical features	- plains	gorge	earthquake	jungle	_____

- The cliffs on either side of the _____ were merely a metre apart as we hiked through the narrowest point.
- It is very likely that there are very many planetary systems within our _____.
- Emperor penguins are a species of bird that cannot fly and are able to live in the freezing _____ climate.
- The _____, also called the Northern Lights, are spectacular natural light displays that can be seen during the months of October to March in northern Norway.
- The storm caused severe flooding throughout the region and _____, which in one case destroyed a whole village.
- The four large _____ that orbit Jupiter were discovered in 1610 by Galileo.
- As _____ is very sparse in arctic regions, many animals are predators.
- Boa constrictors are snakes that are _____ to Central and South America.

B. Complete the letter below with the words in the box and circle the correct linking words/phrases in bold. There are two extra words which you do not need to use.

firmly shortcomings reversed response extinction
sadly incorporated posterity deforestation emulate

Dear Sir or Madam,

I am writing in (1) _____ to the article about endangered species in the November issue of your magazine. I would like to point out that it is true that the expansion of cities and towns and (2) _____ both lead to the destruction of habitats, which in turn leads to the (3) _____ of species. However, in certain countries where habitats are intact, poaching is also a threat to the survival of many species.

First of all / In fact, it is important to realise that poaching is a question of supply and demand. Poachers hunt animals even within protected areas and subsequently sell the animals either alive to zoos or dead as animal products to interested buyers. **From my point of view / I have to disagree**, trying to stop poachers is only looking at half the problem. The only way to solve the problem is to stop the demand for these animals. That would be dealing with it at its source.

However, taking legal measures against poachers and buyers is not enough. If this situation is to be (4) _____, people need to be made aware of how serious the problem is. I have three suggestions concerning this. **However / Firstly** environmental studies should be (5) _____ into school curriculums.

In conclusion / In addition, campaigns drawing the attention of the public to the problem must be funded by governments. **Last but not least / For example**, we should all set an example for others to (6) _____ by boycotting animal products, like ivory and animal skins, that are products of poaching.

In conclusion / Furthermore, I (7) _____ believe that we must act promptly if we want to protect animal species for (8) _____. We have no time to waste.

Yours faithfully,
E. Morgan
Elaine Morgan

EXAMINATION PRACTICE

A. Read the text and complete the blanks with the correct form of the words in capitals.

Mother Nature's **REVENGE**



There have been lots of films that depict an ongoing or impending disaster which is mainly caused by natural phenomena, the effects of which have a deep impact on mankind. Quite often technological arrogance or the (1) _____ of nature by men evoke Mother Nature's revenge which is cruel but not (2) _____ in any case. Thus, all of us have witnessed floods, occurring mainly due to massive (3) _____, or the continuous temperature rise with the subsequent melting of the ice caps and (4) _____ affecting many countries worldwide. Additionally, the effects of pollution are of great (5) _____ since they not only affect the flora and fauna – with the list of the (6) _____ species getting longer and longer – but also human beings due to disruptions in the food chain. In recent years, environmental organisations and (7) _____ have sounded the alarm, but it is up to the governments to take drastic measures in order to avoid more serious problems in the future. Our (8) _____ with nature has to be reciprocal. If we don't wish to see the side effects of our (9) _____ actions, then we all have to stop the (10) _____ of natural habitats and scale down pollution.

EXPLOIT

JUSTIFY

**FOREST
DESERT
SIGNIFY
DANGER**

**ACT
RELATE
SENSE
DESTROY**

B. Read the text below and choose the correct answer *a, b, c* or *d*.

THE MYTHICAL 'Mother Nature'

In many myths and legends Mother Nature, also known as Mother Earth, is a personification of nature with a focus on its nurturing features. She is often depicted as a middle-aged woman and is associated with a mother role.

The (1) _____ people of the Americas worshipped a female figure, Pachamma, who protected the flora and fauna and presided over fertility and harvesting. Moreover, some natural disasters, such as earthquakes, were attributed to her. In ancient Greek and Latin mythology, Gaia or Terra Mater, was thought to be a (2) _____ deity who existed before the birth of all the other gods and she was supposed to be their mother, too. In fact, her importance as a goddess can be easily understood by the fact that no citizen should (3) _____ from taking part in the celebrations dedicated to her. In some other cases, she is identified with the goddess Demetra who was the goddess of the harvest and she could also control the seasons. When Hades, the god of the Underworld, abducted her daughter, Persephone, and brought her to his kingdom, Demetra's sadness and anger caused the (4) _____ of the plant life on earth and, for this reason, animals were (5) _____ as well. At this point Zeus, the father of gods, acted (6) _____ by persuading Hades to let Persephone stay six months in the Upper World under the condition that she would return back for the remaining six months. The six months when Persephone is in the Upper World correspond to spring and summer, whereas her six-month stay in the Underworld corresponds to autumn and winter.

- | | | | |
|---------------------|-----------------|------------------|----------------|
| 1. a. local | b. inhabitant | c. indigenous | d. original |
| 2. a. favourable | b. significant | c. fortunate | d. symbolic |
| 3. a. emulate | b. refrain | c. date | d. entitle |
| 4. a. deforestation | b. exploitation | c. conservation | d. destruction |
| 5. a. banned | b. poached | c. threatened | d. slaughtered |
| 6. a. naturally | b. effectively | c. significantly | d. favourably |