

RIPPLE ENGLISH

ACTIVE LEARNING PROGRAM

Workbook for:

“Collapse: Mystery of the Maya Civilization”

問題は解きっぱなしにしないで！

英語資格試験の学習は、**解いた後の復習をしなければほとんど効果はありません。**

答え合わせをしておしまいせずに、テキストの音読練習やリスニング、多読学習などのインプット学習を何度も反復して記憶に定着させましょう。ホームページからダウンロードできる音読練習用のテキストをぜひご活用ください。

また、数日置いてから再度解き直すのも効果的です。答えを記憶してしまっているかもしれませんが、回答の根拠をなぞりながら繰り返し解くことで有効な復習になります！



Collapse: Mystery of the Maya Civilization

1. When you walk through the remote jungles of the Yucatan Peninsula in Mexico, you will come across magnificent stone temples and pyramids hidden by trees. Maya civilization was one of the most advanced societies in the ancient world with its incredible development in art and architecture. From the 3rd Century onwards, the Maya population increased exponentially, and so did the number of monuments and buildings. It reached its zenith in the 8th Century and then suddenly collapsed in the 9th Century. Maya kings had left beautiful hieroglyphs on stones that praise their own prosperity and glory, but those written records ceased to exist after the 9th Century. The contrast between their magnificence and the silence fascinates all of us. What were the last days of the Maya like? How did this civilization collapse?
 2. The last days of the Maya civilization are characterized by two phenomena: intense warfare and severe drought. Maya kings left vivid depictions of warfare on stone monuments to boast their conquests and glory. **Deciphering** these inscriptions unveiled that wars became more intense and frequent towards the time of the collapse. Pieces of other archeological evidence, such as excavated fortresses, also support this theory.
 3. Based on radiocarbon dating of lake sediments, climate researchers reconstructed the climate cycles that the Maya people experienced. The Maya area went through drought periods at intervals of about 208 years, probably caused by small variations in the sun's radiation. Researchers conclude that the Maya area enjoyed wetter climate after 250 BC, suitable conditions for agriculture. However, around A.D. 760, the worst drought in the last 7,000 years began, peaking around the year A.D. 800. Climate conditions have corresponded with the rise and fall of the Maya, so there must be some connection between them. However, researchers warn us not to jump to the simple and naive conclusion that their collapse was caused by warfare and drought. They could be part of the reasons, but those alone aren't enough to fully explain their downfall. Warfare in particular may be a symptom of other essential factors of collapse, rather than the cause.
- (1) According to paragraph 1, which of the following is NOT true?
 - A. The Maya civilization had a writing system.
 - B. The Maya civilization was at its peak in the 8th Century.
 - C. The Maya civilization collapsed gradually since the 9th Century.
 - D. The Maya civilization attracts many people.
 - (2) The word “decipher” in the passage is the most DISTANT in meaning to
 - A. decode
 - B. determine
 - C. interpret
 - D. translate
 - (3) According to paragraph 3, which of the following is true?
 - A. It is premature to assume the Maya failed due to climate change and violence.
 - B. The cycle of dry periods corresponds with the intensity of warfare.
 - C. The Maya experienced suitable climates for farming at every 208 years.
 - D. The Maya collapsed mainly because of warfare and droughts.

4. Just as Japanese culture has been dependent on rice farming, the prosperity of the Maya civilization has been sustained by corn. Corn we can find in a supermarket today is entirely different from its ancestors that were growing wild in Meso-America thousands of years ago. While corn today bears hundreds of kernels per ear, the original corn species produced only around 10. Mayan people had improved the breed of corn by selectively cultivating individuals convenient for farming. Around 1000 B.C., corn evolved into a form that we are familiar with today, establishing its position as a staple food for Mayan people. Along with the artificial improvement, the Maya civilization also figured out efficient farming practices to increase production and cooking methods to improve nutritional value. The Maya's population explosion from A.D. 250 onwards was supported by these agricultural innovations.
5. From the 7th Century, however, the health of the Maya citizens suddenly deteriorated. Signs of disease and malnutrition appear in many of the skeletal remains found at archaeological sites dated this period. **They were victims of their own success.** Their agricultural success led to the population increase and the cultural advancement, resulting in massive consumption of resources. Eventually there was a crash between available resources and human demands on them. Around the 9th Century, many of the Mayan cities became unable to sustain themselves and fighting became fierce for limited resources.

- (4) According to paragraph 4, which of the following is true?
- A. Corn is more nutritious than rice.
 - B. Corn was initially a minor crop for the Maya civilization, but it became essential later on.
 - C. The original corn was identical to the modern corn found in supermarkets today.
 - D. The Maya developed effective ways to grow corn.

- (5) Which of the following text best expresses the essential information in the highlighted sentence?

They were victims of their own success.

- A. Their success made them arrogant and prevented their effort to work on societal problems.
- B. Their success led to increased fighting for dominating the resources.
- C. Their success resulted in more consumption of resources, which undermined the basis of their society in reverse.
- D. Their success led to unbalanced diet and unequal redistribution of wealth, leading to worse health conditions of the Maya citizens.

6. One of the important lessons from the Mayans' downfall is that societal collapse is a complex phenomenon with various factors. Though there were some major causes, their collapse cannot be attributed to a single exclusive cause. Probably the most significant factor is the mismatch between available resources and resource consumption. As the population grew and cultural standards improved, the Maya began to consume more resources than the environment could provide. In addition, they cut forests down to expand farmlands and to gain timber and firewood. Deforestation led to massive soil erosion and agricultural production drastically decreased, further worsening the scarcity of resources.
7. Warfare became even more intense over limited resources. Increased violence created a vicious cycle where war required wasting resources which further intensified fighting for less supply. The drought around the 8th century delivered the final blow to the society already weakened by multiple factors. This was not the first climate change the Maya had ever lived through. However, they no longer had any room to withstand this dry period because they had already been exhausted by overpopulation, environmental destruction, and warfare.
8. Some researchers mention other factors, such as external invasions and decreased trade activities with neighboring societies. The Maya collapse was the result of complex interaction of multiple variables and can never be explained by any single factor. The intellectual virtue required of us is to exercise caution in not immediately embracing simple and easy explanations.

- (6) According to paragraph 6, which of the following is true?
- A. They cut down forests for better hunting grounds.
 - B. The downfall was mainly due to population decline.
 - C. Deforestation led to soil erosion and decreased agricultural production.
 - D. There was a mismatch between accessible resources and resource production.
- (7) According to paragraph 7, which of the following is NOT true?
- A. The Maya suffered a lack of experience to go through droughts.
 - B. Warfare led to further shortage of resources.
 - C. Due to increased fighting, the Maya fell into a downward spiral.
 - D. Maya had already been fragile for several reasons before the drought.
- (8) The word “virtue” in the passage is the closest in meaning to
- A. important lesson
 - B. desirable quality
 - C. innate talent
 - D. fallible mistake

9. The last question is about the leadership of the Maya kings. What could they have been thinking as the society was winding down? Why did the kings fail to solve these seemingly obvious problems undermining their society? Maya kings acted so as to accelerate collapse rather than to prevent it partly because their status depended on their putting up bigger monuments and winning against rival states. They were trapped in a competitive spiral, such that any king who put up smaller monuments to spare the forests would have been scorned and lost power.
10. Likewise, leaders of modern for-profit companies are usually evaluated based on short-term indicators. Their performance is often measured by growth rates and profit margins during their term. Even if a CEO personally holds a strong interest in solving long-term issues of society, he or she would face a significant dilemma about whether to risk their own career success for the greater good of society.
11. Furthermore, leaders need to have a particular courage to work on a potential problem like environmental issues. They have to expose themselves to criticism and ridicule for acting before it becomes obvious to everyone that some action is necessary. However, such criticism might be worth enduring. Leaders of the collapsed societies in history couldn't secure their own interests in the long run. They merely bought themselves the privilege of being the last people to starve to death.

(9) According to paragraph 9, Maya kings failed to solve the problem probably because

- A. their short-term interests collided with the long-term interests of their society.
- B. they were stupid enough to overlook the problem.
- C. their priority was to enrich themselves.
- D. their efforts to sustain the society was hindered by the ordinary people.

(10) According to paragraph 10, what kind of dilemma that CEOs may face?

- A. How to stay rational under the pressure of being evaluated.
- B. How to make the short-term success compatible with the long-term prosperity of their company.
- C. Whether to abandon their own belief or not.
- D. Whether to endanger their own position in order to work for the entire society.

(11) According to paragraph 11, which of the following is NOT true?

- A. Leaders in collapsing society may not be able to ensure their safety.
- B. It is difficult for leaders to work on a problem before it becomes imminent.
- C. Leaders dealing with environmental issues will not be rewarded.
- D. Leaders in collapsing society have ample reasons to address the problem.

(12) Within the whole passage, all of the following were mentioned, EXCEPT

- A. Mayan people left written records on stones, which partly explains their history.
- B. The climate cycle is due probably to periodic changes in the sun's radiation.
- C. The collapse of the Maya civilization is the result of complex interplay of various causes.
- D. Climate conditions in Maya area can be inferred from skeletal remains in archeological sites.

Answer

- (1) C
- (2) B
- (3) A
- (4) D
- (5) C
- (6) C
- (7) A
- (8) B
- (9) A
- (10) D
- (11) C
- (12) D

(1) 1 段落の内容に合致しないのは？

- A. The Maya civilization had a writing system. (マヤ文明は書記体系を持っていた)
- B. The Maya civilization was at its peak in the 8th Century. (マヤ文明は8世紀に繁栄の頂点にあった)
- C. The Maya civilization collapsed gradually since the 9th Century.** (マヤ文明は9世紀から徐々に崩壊した)
- D. The Maya civilization attracts many people. (マヤ文明は多くの人を惹きつけている)

(2) 文中の“decipher (解読する)”に意味的にもっとも遠いのは

- A. decode (解読する)
- B. determine (決定する)**
- C. interpret (解釈する)
- D. translate (翻訳する)

(3) 3 段落の内容に合致するのは？

- A. It is premature to assume the Maya failed due to climate change and violence.** (マヤの崩壊が気候変動と暴力によるものだとして決めてかかるのは早計だ)
- B. The cycle of dry periods corresponds with the intensity of warfare. (乾季のサイクルは戦争の激しさと一致する)
- C. The Maya experienced suitable climates for farming at every 208 years. (マヤは208年周期で農業に適した気候を経験した)
- D. The Maya collapsed mainly because of warfare and droughts. (マヤは主に戦争と旱魃によって崩壊した)

(4) 4 段落の内容に合致するのは？

- A. Corn is more nutritious than rice. (トウモロコシは米より栄養価が高い)
- B. Corn was initially a minor crop for the Maya civilization, but it became essential later on. (トウモロコシは当初はマヤの主要な作物ではなかったが、後に欠かせないものになった)
- C. The original corn was identical to the modern corn found in supermarkets today. (原初のトウモロコシは今日スーパーで見かけるものとまったく同じだ)

D. The Maya developed effective ways to grow corn. (マヤ文明はトウモロコシ生育の効果的な方法を編み出した)

(5) 下線部の意味するところをもっともよく表しているのは？

They were victims of their own success. (かれらは自分自身の成功の犠牲者だった)

- A. Their success made them arrogant and prevented their effort to work on societal problems. (成功によってかれらは傲慢になり、社会の問題に取り組むための努力を妨げた)
- B. Their success led to increased fighting for dominating the resources. (成功によって、資源を独占するための戦争が激化した)

C. Their success resulted in more consumption of resources, which undermined the basis of their society in reverse. (成功によって資源の消費が増え、逆に社会の基盤を揺るがすことになった)

D. Their success led to unbalanced diet and unequal redistribution of wealth, leading to worse health conditions of the Maya citizens. (成功によって食生活のバランスが乱れ、富の不平等な再分配がなされたことでマヤの人々の健康状態が悪化した)

(6) 6 段落の内容に合致するのは？

- A. They cut down forests for better hunting grounds. (かれらはより良い狩り場を得るために森を切り倒した)
- B. The downfall was mainly due to population decline. (没落は主に人口の減少によるものだった)

C. Deforestation led to soil erosion and decreased agricultural production. (森林破壊は土壌流出と農業生産量の減少を引き起こした)

D. There was a mismatch between accessible resources and resource production. (利用可能な資源と資源生産量のミスマッチが起きた)

(7) 7段落の内容に合致しないのは？

A. The Maya suffered a lack of experience to go through droughts. (マヤは旱魃を乗り切る経験を持っていなかったことで苦しんだ)

B. Warfare led to further shortage of resources. (戦争はさらなる資源不足をもたらした)

C. Due to increased fighting, the Maya fell into a downward spiral. (戦争の激化によって、マヤは悪循環に陥った)

D. Maya had already been fragile for several reasons before the drought. (旱魃の前に、すでにマヤは様々な理由によって脆弱になっていた)

Aは「これはマヤにとって初めての旱魃ではなかった」という本文の内容に反するので誤り。

(8) 文中の“virtue (美德)”に意味が最も近いのは

- A. important lesson (重要な教訓)
- B. desirable quality (望ましい資質)**
- C. innate talent (生まれながらの才能)
- D. fallible mistake (陥りやすい間違い)

(9) 9 段落によると、マヤの王たちが問題を解決できなかった理由は

- A. **their short-term interests collided with the long-term interests of their society.** (彼らの短期的な利益が社会の長期的な利益と衝突した)
- B. they were stupid enough to overlook the problem. (彼らは問題を見落とすほど愚かだった)
- C. their priority was to enrich themselves. (彼らの優先事項は自分自身を豊かにすることだった)
- D. their efforts to sustain the society was hindered by the ordinary people. (社会を維持しようとする彼らの努力が一般の人々によって妨げられた)

(10) 10段落によると、CEOたちが直面するジレンマはどのようなものか？

- A. How to stay rational under the pressure of being evaluated. (評価されるプレッシャーのもとでどのように理性を保つか)
- B. How to make the short-term success compatible with the long-term prosperity of their company. (会社の短期的な利益と長期的な繁栄をどのように一致させるか)
- C. Whether to abandon their own belief or not. (自分自身の信念を捨て去るかどうか)
- D. **Whether to endanger their own position in order to work for the entire society.** (社会全体のために自分自身の地位を危険にさらすかどうか)

(11) 11段落の内容に合致しないのは？

- A. Leaders in collapsing society may not be able to ensure their safety. (崩壊しつつある社会のリーダーは自分たちの安全を確保することはできないだろう)
- B. It is difficult for leaders to work on a problem before it becomes imminent. (リーダーにとって、差し迫った事態になる前に問題に取り組むのは難しい)
- C. **Leaders dealing with environmental issues will not be rewarded.** (環境問題に取り組むリーダーは報われないだろう)
- D. Leaders in collapsing society have ample reasons to address the problem. (崩壊しつつある社会のリーダーはその問題に取り組む十分な理由がある)
- 社会が崩壊してしまえば、リーダーは最後に飢え死ぬだけだ、という主張があるので、批判に晒されてでも崩壊の問題に取り組む十分な動機があるという11段落の内容に反するのはC。

(12) 全本文中で以下のうち述べられていないのは

- A. Mayan people left written records on stones, which partly explains their history. (マヤの人々は筆記記録を残しており、そこから部分的に彼らの歴史が説明できる)
- B. The climate cycle is due probably to periodic changes in the sun's radiation. (気候のサイクルはおそらく太陽放射の周期的な変化によるものだ)
- C. The collapse of the Maya civilization is the result of complex interplay of various causes. (マヤ文明の崩壊は多様な原因の複雑な相互作用の結果だ)
- D. **Climate conditions in Maya area can be inferred from skeletal remains in archeological sites.** (マヤ地域の気候状況は遺跡の遺骨から推測できる)
- 本文中では「湖の堆積物の放射性炭素年代測定によって割り出した」とあるのでDが誤り。