



IELTS Reading Diagram Completion

Objectives: to practice answering sentence completion, diagram completion, and multiple-choice

El Nino

The weather phenomenon called El Nino was first recorded in the 1500s when fishermen in South America noticed that near Christmas some years the water was noticeably warmer than others. They named this El Nino, or the infant, as it happened near the celebration of the birth of Christ.

Only in recent years has there been any serious investigations into the causes and results of El Nino. The 1997 – 1998 El Nino was the first to be studied extensively. Scientists from France, Japan, Korea and Taiwan combined the various readings they had from satellite and surface measurements of wind speeds and water temperatures to make the Tropical Atmosphere Ocean Array. This combined information allowed them to see the overall patterns of an El Nino and helped them predict when one was starting.

Weather pattern rely heavily on the operation of the “planetary heat engine”. Essentially, this means that because the sun is closest to the equator the seawater in that region is the warmest. The warm water evaporates and forms clouds, which move toward the poles powered by their heat. These atmospheric loops, which move heat from the tropics to the poles, are called “connective cells”. Without this process the equatorial regions would be hotter than they are and the north and south would be much colder.

The wind in the central Pacific tends to blow from the east. This pushes water from South America towards Australia and Indonesia. As a result, sea levels have been found to be up to 60 centimetres higher in the west. The water that is pushed westward from the South American coast is replaced by colder water, which has a high nutrient level that consequently attracts fish. This makes the waters off Peru and Ecuador good fishing grounds.

An El Nino happens when the winds weaken and sea levels drop. The warmer water moves east and less water evaporates to form clouds. The results of this are twofold. The warmer water in the east reduces the number of fish and the lack of rain causes droughts. This can cause problems such as the forest fires that have plagued Indonesia and Australia in recent years. Additionally, El Nino is thought to be one of the causes of hurricanes that have devastated Central and North West America.

As the population has increased the effects of changing weather have had a greater impact. People are living in places, often in areas more likely to be affected by adverse weather, than they ever did before and in increased densities. This means that natural disasters affect more people. Natural resources are being used closer to their limits, so small changes in their availability can cause disruption. For example, in the past, South American fishermen could make a profit even during an EL Nino, but modern industrial fishing needs larger fish stocks to be profitable.



Knowing when an El Nino is developing allows people to make plans to lessen its negative effects. The system of buoys and satellites monitoring the Pacific allows scientists to predict the start of the 12 to 18 month El Nino cycle. As a result people can prepare. For example, in North East Brazil during the 1987 El Nino, farmers only got 15% of their normal grain harvest, but in 1992, when the government advised them to plant fast maturing plants, they got 82%.

The question of whether El Nino has been strengthened by global warming is unanswered. The National Centre for Atmospheric research believes that El Nino could be responsible for the increased temperatures in North America by changing the jet stream. Global warming may not be the direct cause. However, global warming may cause the local warming changes that cause El Nino and change atmospheric circulation. The National Oceanic and Atmospheric Administration suggests that global warming may increase El Nino effects by increasing temperatures and increasing water evaporation over land leading to floods.

El Nino is only one factor in the complex inter-relations that cause weather patterns, but it appears to be a major factor. By monitoring the phenomenon, we can limit its effects and avoid disasters and droughts.

Reading Passage Questions

Questions 1 – 2

Complete each of the following statements with words or phrases taken from the text.

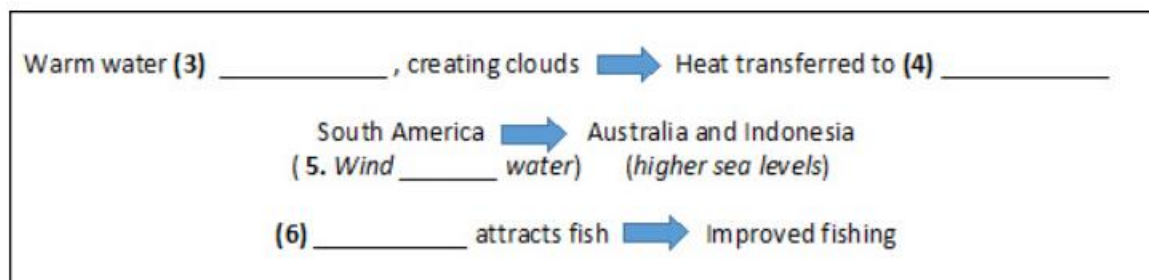
Use **NO MORE THAN FOUR WORDS**.

- 1 The first extensive study of the El Nino phenomenon took place from
- 2 The system used to track variations in weather conditions is called

Questions 3 – 6

Label the diagram showing the “Planetary Heat engine.”

USE **NO MORE THAN TWO WORDS**



- 3
- 4
- 5
- 6

Questions 7 – 9

Which **THREE** of the following are effects of El Nino?. Put your three choices in the box below.

- A There are more clouds.
- B The level of the sea goes down.
- C There is a lack of rain.
- D Fewer fish for fishermen to catch.
- E There are plagues in Australia and Indonesia.
- F There are more strong storms.

7.
8.



9.

Questions 10 – 12

Choose the appropriate answer to each question and place in the box.

10. Why is El Nino more noticeable now than in previous times?

- A There are small changes in natural resources.
- B Industrial fishing.
- C People are now living in more dangerous areas than those of the past.
- D South American fishermen cannot make a profit during an El Nino.

11. What is the benefit of monitoring the weather in the Pacific?

- A Scientists can prevent El Ninos.
- B The length of an El Nino is reduced by six months.
- C Farmers will harvest more grain.
- D Provisions can be taken in advance against the El Nino.

12. In what way is there a definite link between El Nino and global warming?

- A It increases Northern American temperatures by affecting the jet stream.
- B By inducing local warming changes.
- C Increasing rain and causing floods.
- D None of the above.



In-Text Answers

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Only in recent years has there been any serious investigations into the causes and results of El Nino. **(1) The 1997 – 1998 El Nino was the first to be studied extensively.** Scientists from France, Japan, Korea and Taiwan combined the various readings they had from satellite and surface measurements of wind speeds and water temperatures to make the **(2) Tropical Atmosphere Ocean Array.** This combined information allowed them to see the overall patterns of an El Nino and helped them predict when one was starting.

Weather pattern rely heavily on the operation of the “planetary heat engine”. Essentially, this means that because the sun is closest to the equator the seawater in that region is the warmest. The warm water **(3) evaporates and forms clouds**, which move toward the poles powered by their heat. These atmospheric loops, which move heat from the tropics **(4) to the poles**, are called “connective cells”. Without this process the equatorial regions would be hotter than they are and the north and south would be much colder.

The **(5) wind** in the central Pacific tends to blow from the east. This **pushes water** from South America towards Australia and Indonesia. As a result, sea levels have been found to be up to 60 centimetres higher in the west. The water that is pushed westward from the South American coast is replaced by **(6) colder water**, which has a high **nutrient level** that consequently attracts fish. This makes the waters off Peru and Ecuador good fishing grounds.

An El Nino happens when the winds weaken and sea levels drop. The warmer water moves east and less water evaporates to form clouds. The results of this are twofold. The warmer water in the east reduces the **(7) number of fish** and **(8) the lack of rain causes droughts**. This can cause problems such as the forest fires that have plagued Indonesia and Australia in recent years. Additionally, El Nino is thought to be one of **(9) the causes of hurricanes** that have devastated Central and North West America.

As the population has increased the effects of changing weather have had a greater impact. **(10) People are living in places, often in areas more likely to be affected by adverse weather**, than they ever did before and in increased densities. This means that natural disasters affect more people. Natural resources are being used closer to their limits, so small changes in their availability can cause disruption. For example, in the past, South American fishermen could make a profit even during an EL Nino, but modern industrial fishing needs larger fish stocks to be profitable.



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