

Língua Inglesa**Questões de 01 a 06**

Read the text carefully. Then complete the activities according to it.

Will Climate Go Over The Edge?

Even a miracle of diplomacy wouldn't put global warming back in its box.

Fred Guterl
NEWSWEEK

From the magazine issue dated Mar 2, 2009

05 There is something compelling, in a ghoulish sort of way, about the notion that earth's climate may be headed toward a tipping point. The idea gained broad currency in 2007, when a panel of scientists, including Harvard environmental expert John Holdren—now the White House science adviser—warned that the planet is approaching a threshold beyond which damage to the environment would be irreversible. As policymakers work toward a climate treaty in Copenhagen in December that will include new limits on emissions, the question in the back of everyone's mind is whether an agreement can halt the warming trend, or at least stave off the worst consequences. Or is it already too late? A definitive answer isn't forthcoming, but the signs in recent months have been gloomy.

10 The truth is shrouded by a big scientific unknown: how quickly does climate respond to changes in carbon levels? After 30 years of research, the link between the two is still imprecise. That's why temperature trends are expressed within wide confidence intervals. The Intergovernmental Panel on Climate Change (IPCC), the U.N. group, puts the odds at two in three that a doubling of carbon levels in the atmosphere from pre-15 industrial levels would raise average temperatures anywhere from 2 degrees C to 4.5 degrees C. The difference between the top and bottom of this range, according to the 2007 report, spells the difference between bad and catastrophic. (Some scientists believe, for instance, that crop yields decline 10 percent for each degree rise in temperature.) Where future generations wind up on the scale—or even if they fall on the scale at all—is still a roll 20 of the dice.

Empirical evidence is worrying, but not particularly enlightening. Melting glaciers, changing bird-migration patterns and other observations suggest that warming is proceeding at a pace that may exceed past estimates—in other words, we may be heading toward the top of the IPCC forecast. But they don't tell us much about natural variability. 25 Arctic sea ice, for instance, is clearly shrinking faster than the climate-change computers predicted. How much is due to carbon and how much would the ice have retreated anyway? There's too little data to know—comprehensive records on Arctic sea ice go back only to 1979. "The most likely bet is that the acceleration is due to greenhouse warming," says David Battisti, an atmospheric scientist at the University of Washington in Seattle. "But 30 I'd be nervous about making that bet. To know for certain we'd want a couple hundred years of data. We have 30 years of really good data."

35 Since the real world is so messy, climate scientists Gerard Roe and Marcia Baker turned for insight to the distinctly neater world of mathematics. Last year, they published an analysis in the journal *Science* arguing that climate models were skewed in the direction of underestimating the warming effect of carbon. The report reasoned that carbon emissions have the potential to trigger many changes that amplify the warming effect—water absorbs more sunlight than ice, humidity traps more heat, and so on—but few that would mitigate it. The odds, they figure, are about one in three that temperatures will rise by 4.5 degrees C

40 (the top of the IPCC's range), but there's little chance at all that they'll rise by less than 2 degrees C. "We've had a hard time eliminating the possibility of very large climate changes," says Roe. The answer is still couched in probabilities, but they've shifted in a worrying direction.

45 What can be done? Can a diplomatic miracle in Copenhagen save the planet from the dreaded tipping point? Sea ice in the Antarctic was supposed to last for 5,000 years until scientists found that the melting was proceeding at a faster pace than expected. Now it will all be gone in a mere 850 years. Bringing it back would require something like 10,000 years of cooler temperatures. Is there any way to halt the process before it goes too far?

50 No, says Susan Solomon, a climate scientist at the National Oceanic and Atmospheric Administration in Boulder, Colorado. In a recent study in the Proceedings of the National Academies of Science, she found that most of the carbon we've already released into the atmosphere will hang around for another 1,000 years. Even if world leaders somehow managed to persuade everybody to stop driving cars and heating their homes—bringing carbon emissions down to zero immediately—the Earth would continue to warm for centuries. The effect of rising temperatures on rainfall patterns is also irreversible, says Solomon. Parts of the world that tend to be dry (Mexico, north Africa, southern Europe and the western parts of Australia and the United States) will continue to get drier, while wet areas (the South Pacific islands, the horn of Africa) will keep getting wetter. "You have to think of it as being like a dial that can only turn one way," she says. "We've cranked up the dial, and we don't get to crank it back." The point of a climate treaty, then, isn't so much to roll things back as to keep them from getting a whole lot worse—a worthy and important goal, if not a particularly inspiring one.

65 If there's a silver lining to Solomon's findings, it's that she does not take into account the possibility of one day being able to remove carbon from the atmosphere. Since researchers around the world have only recently begun to ramp up projects on carbon capture and storage technology, the fix is wholly theoretical. Still, that's better than nothing.

(In: < <http://www.newsweek.com/id/185822>>. Access on: March 12, 2009)

01. Replace the words in bold by their synonyms. Use the following words:

HARVESTS – UNCERTAIN – HIDDEN – BETS

The truth is **(A) shrouded** by a big scientific unknown: how quickly does climate respond to changes in carbon levels? After 30 years of research, the link between the two is still imprecise. That's why temperature trends are expressed within wide confidence intervals. The Intergovernmental Panel on Climate Change, the U.N. group, **(B) puts the odds at** two in three that a doubling of carbon levels in the atmosphere from pre-industrial levels would raise average temperatures anywhere from 2 degrees C to 4.5 degrees C. The difference between the top and bottom of this range, according to the 2007 report, spells the difference between bad and catastrophic. (Some scientists believe, for instance, that **(C) crop yields** decline 10 percent for each degree rise in temperature.) Where future generations wind up on the scale—or even if they fall on the scale at all—is still **(D) a roll of the dice**.

A) _____

B) _____

C) _____

D) _____

02. Match the phrases with the appropriate equivalents.

- A) To go over the edge (title) () to stay
B) To stave off (line 08) () to revert
C) To hang around (line 52) () to reduce
D) To bring down (line 54) () to go beyond a limit
E) To crank back (line 60) () to prevent

03. Match the words in **bold** with their references.

- A) “Last year, **they** published an analysis [...]” (lines 33-34)
B) “**The report** reasoned that carbon emissions have the potential to trigger many changes [...]” (lines 35-36)
C) “[...]but few that would mitigate **it**.” (line 37)
D) “[...] **they**’ll rise by less than 2 degrees C.” (lines 39-40)

References:

- () The warming effect
() An analysis in the journal Science
() Temperatures
() Climate scientists, Gerard Roe and Marcia Baker

04. Write the names of:

- A) two parts of the world that are expected to get **drier**:

- B) two parts of the world that are expected to get **wetter**:

05. Complete the blanks with the following words or phrases according to the information in the text:

levels / centuries / Harvard / environmental / change / White House

- A)** *John Holdren works at _____ and more recently also at the _____ as a science adviser. He warned that the _____ damage is about to become irreversible.*
- B)** *Scientists do not know exactly how carbon dioxide _____ affect climate _____.*
- C)** *David Battisti defends that it is necessary to collect data during _____ in order to get more precise information on global warming.*

06. Write T (true) or F (false):

- A)** _____ Nowadays scientists have precise answers about global warming.
- B)** _____ The text presents a pessimistic future for the climate and the environment in our planet.
- C)** _____ Global warming can be definitely reduced as long as we reduce carbon emissions.
- D)** _____ Antarctic ice is now expected to be gone in less than 1000 years.
- E)** _____ Scientists say that dry regions will become cooler with global warming.

Língua Inglesa**Questões de 01 a 06**

Read the text carefully. Then complete the activities according to it.

Will Climate Go Over The Edge?

Even a miracle of diplomacy wouldn't put global warming back in its box.

Fred Guterl

NEWSWEEK

From the magazine issue dated Mar 2, 2009

05 There is something compelling, in a ghoulish sort of way, about the notion that earth's climate may be headed toward a tipping point. The idea gained broad currency in 2007, when a panel of scientists, including Harvard environmental expert John Holdren—now the White House science adviser—warned that the planet is approaching a threshold beyond which damage to the environment would be irreversible. As policymakers work toward a climate treaty in Copenhagen in December that will include new limits on emissions, the question in the back of everyone's mind is whether an agreement can halt the warming trend, or at least stave off the worst consequences. Or is it already too late? A definitive answer isn't forthcoming, but the signs in recent months have been gloomy.

10 The truth is shrouded by a big scientific unknown: how quickly does climate respond to changes in carbon levels? After 30 years of research, the link between the two is still imprecise. That's why temperature trends are expressed within wide confidence intervals. The Intergovernmental Panel on Climate Change (IPCC), the U.N. group, puts the odds at two in three that a doubling of carbon levels in the atmosphere from pre-15 industrial levels would raise average temperatures anywhere from 2 degrees C to 4.5 degrees C. The difference between the top and bottom of this range, according to the 2007 report, spells the difference between bad and catastrophic. (Some scientists believe, for instance, that crop yields decline 10 percent for each degree rise in temperature.) Where future generations wind up on the scale—or even if they fall on the scale at all—is still a roll 20 of the dice.

Empirical evidence is worrying, but not particularly enlightening. Melting glaciers, changing bird-migration patterns and other observations suggest that warming is proceeding at a pace that may exceed past estimates—in other words, we may be heading toward the top of the IPCC forecast. But they don't tell us much about natural variability. 25 Arctic sea ice, for instance, is clearly shrinking faster than the climate-change computers predicted. How much is due to carbon and how much would the ice have retreated anyway? There's too little data to know—comprehensive records on Arctic sea ice go back only to 1979. "The most likely bet is that the acceleration is due to greenhouse warming," says David Battisti, an atmospheric scientist at the University of Washington in Seattle. "But 30 I'd be nervous about making that bet. To know for certain we'd want a couple hundred years of data. We have 30 years of really good data."

Since the real world is so messy, climate scientists Gerard Roe and Marcia Baker turned for insight to the distinctly neater world of mathematics. Last year, they published an analysis in the journal *Science* arguing that climate models were skewed in the direction of 35 underestimating the warming effect of carbon. The report reasoned that carbon emissions have the potential to trigger many changes that amplify the warming effect—water absorbs more sunlight than ice, humidity traps more heat, and so on—but few that would mitigate it. The odds, they figure, are about one in three that temperatures will rise by 4.5 degrees C

40 (the top of the IPCC's range), but there's little chance at all that they'll rise by less than 2 degrees C. "We've had a hard time eliminating the possibility of very large climate changes," says Roe. The answer is still couched in probabilities, but they've shifted in a worrying direction.

45 What can be done? Can a diplomatic miracle in Copenhagen save the planet from the dreaded tipping point? Sea ice in the Antarctic was supposed to last for 5,000 years until scientists found that the melting was proceeding at a faster pace than expected. Now it will all be gone in a mere 850 years. Bringing it back would require something like 10,000 years of cooler temperatures. Is there any way to halt the process before it goes too far?

50 No, says Susan Solomon, a climate scientist at the National Oceanic and Atmospheric Administration in Boulder, Colorado. In a recent study in the Proceedings of the National Academies of Science, she found that most of the carbon we've already released into the atmosphere will hang around for another 1,000 years. Even if world leaders somehow managed to persuade everybody to stop driving cars and heating their homes—bringing carbon emissions down to zero immediately—the Earth would continue to warm for centuries. The effect of rising temperatures on rainfall patterns is also irreversible, says Solomon. Parts of the world that tend to be dry (Mexico, north Africa, southern Europe and the western parts of Australia and the United States) will continue to get drier, while wet areas (the South Pacific islands, the horn of Africa) will keep getting wetter. "You have to think of it as being like a dial that can only turn one way," she says. "We've cranked up the dial, and we don't get to crank it back." The point of a climate treaty, then, isn't so much to roll things back as to keep them from getting a whole lot worse—a worthy and important goal, if not a particularly inspiring one.

60 If there's a silver lining to Solomon's findings, it's that she does not take into account the possibility of one day being able to remove carbon from the atmosphere. Since 65 researchers around the world have only recently begun to ramp up projects on carbon capture and storage technology, the fix is wholly theoretical. Still, that's better than nothing.

(In: <<http://www.newsweek.com/id/185822>>. Access on: March 12, 2009)

01. Replace the words in bold by their synonyms. Use the following words:

HARVESTS – UNCERTAIN – HIDDEN – BETS

The truth is **(A) shrouded** by a big scientific unknown: how quickly does climate respond to changes in carbon levels? After 30 years of research, the link between the two is still imprecise. That's why temperature trends are expressed within wide confidence intervals. The Intergovernmental Panel on Climate Change, the U.N. group, **(B) puts the odds at** two in three that a doubling of carbon levels in the atmosphere from pre-industrial levels would raise average temperatures anywhere from 2 degrees C to 4.5 degrees C. The difference between the top and bottom of this range, according to the 2007 report, spells the difference between bad and catastrophic. (Some scientists believe, for instance, that **(C) crop yields** decline 10 percent for each degree rise in temperature.) Where future generations wind up on the scale—or even if they fall on the scale at all—is still **(D) a roll of the dice**.

- A) _____
- B) _____
- C) _____
- D) _____

02. Complete the blanks with the following words or phrases according to the information in the text:

levels / centuries / Harvard / environmental / change / White House

A) *John Holdren works at _____ and more recently also at the _____ as a science adviser. He warned that the _____ damage is about to become irreversible.*

B) *Scientists do not know exactly how carbon dioxide _____ affect climate _____.*

C) *David Battisti defends that it is necessary to collect data during _____ in order to get more precise information on global warming.*

03. Write the names of:

A) two parts of the world that are expected to get **drier**:

B) two parts of the world that are expected to get **wetter**:

04. Match the phrases with the appropriate equivalents.

- | | |
|--------------------------------|--------------------------|
| A) To go over the edge (title) | () to stay |
| B) To stave off (line 08) | () to revert |
| C) To hang around (line 52) | () to reduce |
| D) To bring down (ine 54) | () to go beyond a limit |
| E) To crank back (line 60) | () to prevent |

05. Match the words in **bold** with their references.

- A)** “Last year, **they** published an analysis [...]” (lines 33-34)
- B)** “**The report** reasoned that carbon emissions have the potential to trigger many changes [...]” (lines 35-36)
- C)** “[...]but few that would mitigate **it**.” (line 37)
- D)** “[...] **they**’ll rise by less than 2 degrees C.” (lines 39-40)

References:

- () The warming effect
- () An analysis in the journal Science
- () Temperatures
- () Climate scientists, Gerard Roe and Marcia Baker

06. Write T (true) or F (false):

- A)** _____ Nowadays scientists have precise answers about global warming.
- B)** _____ The text presents a pessimistic future for the climate and the environment in our planet.
- C)** _____ Global warming can be definitely reduced as long as we reduce carbon emissions.
- D)** _____ Antarctic ice is now expected to be gone in less than 1000 years.
- E)** _____ Scientists say that dry regions will become cooler with global warming.