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2005 was a second longer than usual

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Contents

The Article	2
Warm-ups	3
Before Reading / Listening	4
While Reading / Listening	5
Listening Gap Fill	6
After Reading	7
Discussion	8
Speaking	9
Homework	10
Answers	11

1 January, 2006

THE ARTICLE

2005 was a second longer than usual

The year 2005 was officially one second longer than usual years. On December 31st, the world's timekeepers added a leap second to atomic clocks housed in specially sealed vaults at 80 timekeeping laboratories around the world. These special timepieces record seconds, milliseconds and nanoseconds with mind-boggling precision to ensure the world doesn't lose track of time. They are certified and monitored by the International Bureau of Weights and Measures in Paris to make sure our lives run like clockwork and we don't lose even a split second. Just before midnight GMT on New Year's Eve, one second was added to this official record, which is called Coordinated Universal Time. It accounts for the fact that the earth's rotation is slowing down, albeit infinitesimally.

So what did the world do with its extra second? Did anyone notice? Keen time watchers amongst us did observe and experience the extra second. Members of the Leap Second Association met in London with their cellphones and a stopwatch. At precisely 11.59 pm according to their cellphones, the group started their stopwatches, which they then stopped when the mobiles said it was midnight. As proof that the leap second existed, their stopwatches showed that 61 seconds had elapsed in the final minute of the year. However, not everyone was happy. There were complaints from communication engineers about the time correction. They argue that it is an unnecessary hassle to update and coordinate the world's communication and navigation systems, as the Earth's rotation is too unpredictable.

2005 was a second longer than usual – 1 January, 2006

WARM-UPS

1. NEW YEAR'S EVE: Talk with your partners about what you did on New Year's Eve. Do you do similar things every year? Do you like New Year's Eve?

2. RESOLUTIONS: Do you have any New Year resolutions? Are they the same every year? Do you manage to keep them or do you break them within the first week of the year? Talk about these resolutions with your partner(s):

- a. I'm going to save a lot of money this year.
- b. I'm going to lose weight and get in better shape.
- c. For me, it's to study English every day to take my speaking ability to a new level.
- d. I simply must stop my baddest* of bad habits this year.
- e. I'm going to eat healthily.
- f. This year, I'm going to be extra nice to everyone I know and meet.

3. CHAT: In pairs / groups, decide which of these topics or words are most interesting and which are most boring.

2005 / seconds / clocks / laboratories / precision / time / clockwork / GMT / New Year's Eve / earth's rotation / cellphones / stopwatches / hassles / unpredictability

Have a chat about the topics you liked. For more conversation, change topics and partners frequently.

4. TIME: In pairs/groups, talk about how far you agree with these statements:

- I'm never late.
- Time is precious.
- I don't need a watch.
- Analogue watches are best.
- I wish there were 48 hours in a day.
- I have more than enough time.
- Time flies.
- Time is money.
- Time is on my side.
- I'd love a Rolex watch.

5. MY LEAP SECOND: In pairs / groups, brainstorm all of the different things you could do with an extra second of time. Change partners and share your ideas. Talk about how useful the things you thought of are.

6. WHAT A YEAR: In pairs / groups, talk about the year 2005. What were the best, worst and most memorable moments in your life, your town, your country, the world, and your English classes? Did everyone agree on the key world events of 2005?

7. 2005: Spend one minute writing down all of the different words you associate with the year 2005. Share your words with your partner(s) and talk about them. Together, put the words into different categories.

*This is colloquial. Of course, for exams and tests it is better to use "worst".

BEFORE READING / LISTENING

1. TRUE / FALSE: Look at the article's headline and guess whether these sentences are true (T) or false (F):

- a. The World Clock made a mistake and 2006 arrived a second late. T / F
- b. Eighty special clocks around the world help keep the world's time. T / F
- c. A bureau in Paris ensures the accuracy of Coordinated Universal Time. T / F
- d. The earth is spinning at an infinitesimally faster rate year by year. T / F
- e. Members of the Leap Second Association met in New Zealand. T / F
- f. People used cellphones and stopwatches to observe the leap second. T / F
- g. Just 59 seconds elapsed in the final minute of the year 2005. T / F
- h. Communication engineers were unhappy about the leap second. T / F

2. SYNONYM MATCH: Match the following synonyms from the article:

- | | |
|--------------------|---------------|
| a. housed | authenticated |
| b. mind-boggling | inconvenience |
| c. certified | avid |
| d. like clockwork | passed |
| e. infinitesimally | accurately |
| f. keen | smoothly |
| g. precisely | accommodated |
| h. elapsed | gripes |
| i. complaints | imperceptibly |
| j. hassle | inconceivable |

3. PHRASE MATCH: Match the following phrases from the article (sometimes more than one combination is possible):

- | | |
|--|------------------------------|
| a. atomic clocks housed | second |
| b. special timepieces record seconds... | like clockwork |
| c. to make sure our lives run | do with its extra second? |
| d. we don't lose even a split | in specially sealed vaults |
| e. the earth's rotation is slowing down, | to update and coordinate |
| f. So what did the world | with mind-boggling precision |
| g. observe and experience | is too unpredictable |
| h. their stopwatches showed that | albeit infinitesimally |
| i. it is an unnecessary hassle | the extra second |
| j. the Earth's rotation | 61 seconds had elapsed |

2005 was a second longer than usual – 1 January, 2006

WHILE READING / LISTENING

GAP FILL: Put the words in the column on the right into the gaps in the text.

2005 was a second longer than usual

The year 2005 was _____ one second longer than usual years. On December 31st, the world's timekeepers added a leap second to atomic clocks _____ in specially sealed vaults at 80 timekeeping laboratories around the world. These special _____ record seconds, milliseconds and nanoseconds with mind-boggling _____ to ensure the world doesn't lose _____ of time. They are certified and monitored by the International Bureau of Weights and Measures in Paris to make sure our lives run like clockwork and we don't lose even a _____ second. Just before midnight GMT on New Year's Eve, one second was added to this official record, which is called Coordinated Universal Time. It accounts for the _____ that the earth's rotation is slowing down, _____ infinitesimally.

So what did the world do with its extra second? Did anyone _____? _____ time watchers amongst us did observe and experience the extra second. Members of the Leap Second Association met in London with their cellphones and a stopwatch. At _____ 11.59 pm according to their cellphones, the group started their stopwatches, which they then stopped when the mobiles said it was midnight. As _____ that the leap second existed, their stopwatches showed that 61 seconds had _____ in the final minute of the year. However, not everyone was happy. There were complaints from communication engineers about the time _____. They argue that it is an unnecessary _____ to update and coordinate the world's communication and navigation systems, as the Earth's _____ is too unpredictable.

split
housed
precision
albeit
officially
timepieces
track
fact

hassle
proof
keen
correction
rotation
notice
elapsed
precisely

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LISTENING

Listen and fill in the spaces.

2005 was a second longer than usual

The year 2005 was _____ one second longer than usual years. On December 31st, the world's timekeepers added a leap second to atomic clocks housed in specially _____ vaults at 80 timekeeping laboratories around the world. These special timepieces record seconds, milliseconds and _____ with mind-_____ precision to ensure the world doesn't lose track of time. They are certified and monitored by the International Bureau of Weights and Measures in Paris to make sure our lives run like clockwork and we don't lose even a _____ second. Just before midnight GMT on New Year's Eve, one second was added to this official record, which is called Coordinated Universal Time. It accounts for the fact that the earth's rotation is slowing down, _____ infinitesimally.

So what did the world do with its extra second? Did anyone _____? _____ time watchers amongst us did observe and experience the extra second. Members of the Leap Second Association met in London with their cellphones and a stopwatch. At _____ 11.59 pm according to their cellphones, the group started their stopwatches, which they then stopped when the _____ said it was midnight. As _____ that the leap second existed, their stopwatches showed that 61 seconds had _____ in the final minute of the year. However, not everyone was happy. There were complaints from communication engineers about the time correction. They argue that it is an unnecessary _____ to update and coordinate the world's communication and navigation systems, as the Earth's _____ is too unpredictable.

AFTER READING / LISTENING

1. WORD SEARCH: Look in your dictionaries / computer to find collocates, other meanings, information, synonyms ... for the words 'nano' and 'second'.

- Share your findings with your partners.
- Make questions using the words you found.
- Ask your partner / group your questions.

2. ARTICLE QUESTIONS: Look back at the article and write down some questions you would like to ask the class about the text.

- Share your questions with other classmates / groups.
- Ask your partner / group your questions.

3. GAP FILL: In pairs / groups, compare your answers to this exercise. Check your answers. Talk about the words from the activity. Were they new, interesting, worth learning...?

4. VOCABULARY: Circle any words you do not understand. In groups, pool unknown words and use dictionaries to find their meanings.

5. STUDENT "2005" SURVEY: In pairs / groups, write down questions about the year 2005.

- Ask other classmates your questions and note down their answers.
- Go back to your original partner / group and compare your findings.
- Make mini-presentations to other groups on your findings.

6. TEST EACH OTHER: Look at the words below. With your partner, try to recall exactly how these were used in the text:

- officially
- sealed
- track
- certified
- split
- albeit
- notice
- London
- 11.59 pm
- elapsed
- correction
- hassle

2005 was a second longer than usual – 1 January, 2006

DISCUSSION

STUDENT A's QUESTIONS (Do not show these to student B)

- a. Did the headline make you want to read the article?
- b. Did you celebrate the New Year?
- c. Did you notice the day was a second longer?
- d. Would you like to have used a cellphone and stopwatch to observe the leap second?
- e. What do you think of the fact that 80 different clocks worldwide ensure our lives run like clockwork?
- f. Does one second ever make a difference in your daily life?
- g. Do you ever lose track of time?
- h. What do you think will happen in the future when the earth slows down a lot more and we have 48 hours in one day?
- i. Does your life run like clockwork?
- j. Do you agree with the communication engineers that the earth's rotation is too unpredictable?

STUDENT B's QUESTIONS (Do not show these to student A)

- a. Did you like reading this article?
- b. What do you think about what you read?
- c. How was your 2005?
- d. What are you looking forward to in 2006?
- e. What's the most important thing you can do in one second?
- f. What other aspects of science and technology do you think are mind-boggling?
- g. What do you think the Leap Second Association talk about at their meetings?
- h. Do you think the leap second will cause problems for the world's computer networks?
- i. What are the hassles in your life?
- j. Did you like this discussion?

AFTER DISCUSSION: Join another partner / group and tell them what you talked about.

- a. What was the most interesting thing you heard?
- b. Was there a question you didn't like?
- c. Was there something you totally disagreed with?
- d. What did you like talking about?
- e. Which was the most difficult question?

2005 was a second longer than usual – 1 January, 2006

SPEAKING

2005: In pairs / groups, discuss the best and worst things to happen in 2005:

CATEGORY	BEST	WORST
My English		
Me		
My country		
The world		
Entertainment		
Technology		
Sport		

Change partners and tell your new partner(s) what you discussed with your old partner(s).

Agree on the best and worst things for the last four of five categories.

2005 was a second longer than usual – 1 January, 2006

HOMEWORK

1. VOCABULARY EXTENSION: Choose several of the words from the text. Use a dictionary or Google's search field (or another search engine) to build up more associations / collocations of each word.

2. INTERNET: Search the Internet and find more information on Coordinated Universal Time. Share your findings with your class in the next lesson. Did you all find out similar things?

3. MY 2005: Write an essay about your life in the year 2005. Show what you wrote to your classmates in the next lesson. Who had the most interesting year?

4. 2006: Make six predictions concerning the world in 2006. Show your predictions to your classmates in the next lesson. Did everyone think of similar things?

2005 was a second longer than usual – 1 January, 2006

ANSWERS

TRUE / FALSE:

a. F b. T c. T d. F e. F f. T g. F h. T

SYNONYM MATCH:

a. housed	accommodated
b. mind-boggling	inconceivable
c. certified	authenticated
d. like clockwork	smoothly
e. infinitesimally	imperceptibly
f. keen	avid
g. precisely	accurately
h. elapsed	passed
i. complaints	gripes
j. hassle	inconvenience

PHRASE MATCH:

a. atomic clocks housed	in specially sealed vaults
b. special timepieces record seconds...	with mind-boggling precision
c. to make sure our lives run	like clockwork
d. we don't lose even a split	second
e. the earth's rotation is slowing down,	albeit infinitesimally
f. So what did the world	do with its extra second?
g. observe and experience	the extra second
h. their stopwatches showed that	61 seconds had elapsed
i. it is an unnecessary hassle	to update and coordinate
j. the Earth's rotation	is too unpredictable

GAP FILL:

2005 was a second longer than usual

The year 2005 was **officially** one second longer than usual years. On December 31st, the world's timekeepers added a leap second to atomic clocks **housed** in specially sealed vaults at 80 timekeeping laboratories around the world. These special **timepieces** record seconds, milliseconds and nanoseconds with mind-boggling **precision** to ensure the world doesn't lose **track** of time. They are certified and monitored by the International Bureau of Weights and Measures in Paris to make sure our lives run like clockwork and we don't lose even a **split** second. Just before midnight GMT on New Year's Eve, one second was added to this official record, which is called Coordinated Universal Time. It accounts for the **fact** that the earth's rotation is slowing down, **albeit** infinitesimally.

So what did the world do with its extra second? Did anyone **notice**? **Keen** time watchers amongst us did observe and experience the extra second. Members of the Leap Second Association met in London with their cellphones and a stopwatch. At **precisely** 11.59 pm according to their cellphones, the group started their stopwatches, which they then stopped when the mobiles said it was midnight. As **proof** that the leap second existed, their stopwatches showed that 61 seconds had **elapsed** in the final minute of the year. However, not everyone was happy. There were complaints from communication engineers about the time **correction**. They argue that it is an unnecessary **hassle** to update and coordinate the world's communication and navigation systems, as the Earth's **rotation** is too unpredictable.

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