

Hotter weather lowers exam results

1st June, 2018

	1st Year	2nd Year	
Winter	66%	60%	
Winter	79%	66%	
Winter	82%	64%	
Winter	77%	75%	
Winter	64%	57%	
Winter	57%	47%	66%
Summer	60%	63%	
Summer	79%	66%	
Summer	60%	53%	
Summer	47%	53%	
Creative Commons 2.0 via Sean MacEntee on flickr.com			57%

Hotter weather leads to lower exam results, according to a new study from Harvard University, the University of California and Georgia State University. What's more, hot weather may reduce learning in both the short term and long term.

Researchers reported that hot weather on test days and higher than average temperatures throughout the school year resulted in poorer grades. The study is the first major research into the effect of heat on students in the USA. Researchers analyzed how test scores from 10 million American students were impacted by the weather. Their findings showed that an average temperature increase of just 0.55°C over one year resulted in a one per cent decrease in learning.

The research is in a paper called "Heat and Learning" and was published last month by the USA's National Bureau of Economic Research. One of the more concerning conclusions contained in the study is that global warming may affect learning and the income-earning potential of students around the world. The researchers predicted that if global temperatures continued to rise, the average American student could lose \$25,000 in income over their lifetime because of lower exam results. Using air conditioning in classrooms could circumvent this. The researchers also found that hotter weather was, "particularly damaging...for low income and minority students" across the USA.

Sources: thenational.ae / bbc.com / nber.org

Writing

Students must learn how to study in hot temperatures. Discuss.

Chat

Talk about these words from the article.

hotter weather / exam results / long term / average / temperatures / students / heat / research / global warming / income / potential / lifetime / air conditioning / minority

True / False

- Three US universities took part in the new study into exam results. T / F
- Hot weather can affect studying in the short and long term. T / F
- Hot weather on test days had no impact on test scores. T / F
- Researchers looked at the test results of ten million students in the US. T / F
- The research paper was called "Heat and Exam Success". T / F
- Global warming may affect students' later income when working. T / F
- The use of air conditioning would not help students do better in exams. T / F
- Hotter weather was particularly damaging for rich and poor students. T / F

Synonym Match

(The words in **bold** are from the news article.)

- | | |
|-------------------------|---------------------|
| 1. leads to | a. for the whole of |
| 2. What's more | b. avoid |
| 3. throughout | c. reduction |
| 4. major | d. worrying |
| 5. decrease | e. big |
| 6. concerning | f. prospects |
| 7. predicted | g. results in |
| 8. potential | h. especially |
| 9. circumvent | i. forecast |
| 10. particularly | j. In addition |

Discussion – Student A

- What do you think about what you read?
- How might global warming affect your income potential?
- Should all schools have air conditioning?
- Do people in cooler countries do better at exams?
- What advice do you have for getting good marks in exams?
- What exam results made you happiest?
- Why would the heat be more damaging for low-income students?
- What questions would you like to ask the researchers?

BreakingNewsEnglish - The Mini Lesson

Phrase Match

- Hotter weather leads to lower exam results,
- higher than average
- the first major research into the effect
- American students were impacted
- an average temperature increase of just
- published last
- One of the more concerning conclusions
- affect learning and the income-earning
- lose \$25,000 in income over
- particularly damaging for low income
- of heat on students
- and minority students
- 0.55°C over one year
- contained in the study
- temperatures
- potential of students
- according to a new study
- their lifetime
- by the weather
- month

Discussion – Student B

- What do you think of exams?
- How good are you at taking exams?
- Are exams the best way to find someone's ability?
- What's the worst exam you've ever taken?
- How does the heat affect your studying
- What does hot weather make it more difficult for you to do?
- What advice do you have for studying in hot weather?
- Do you prefer the heat of the cold?

Spelling

- ccoiagdnr to a new study
- hot weather may rdeuce learning
- higher than aeevarg temperatures
- hugotrothu the school year
- the efctef of heat on students
- Researchers adylaezn how test scores...
- inucsoonscl contained in the study
- the income-earning tpaetnloi
- The researchers rdeetpcdi that
- could ucntirvmce this
- calurritlpya damaging
- irmynoit students

Answers – Synonym Match

1. g	2. j	3. a	4. e	5. c
6. d	7. i	8. f	9. b	10. h

Role Play

Role A – Air Conditioning

You think air conditioning is the best thing to help with exam results. Tell the others three reasons why. Tell them what is wrong with their things. Also, tell the others which is the least effective of these (and why): a good teacher, sleep or a lucky charm.

Role B – Good Teacher

You think a good teacher is the best thing to help with exam results. Tell the others three reasons why. Tell them what is wrong with their things. Also, tell the others which is the least effective of these (and why): air conditioning, sleep or a lucky charm.

Role C – Sleep

You think sleep is the best thing to help with exam results. Tell the others three reasons why. Tell them what is wrong with their things. Also, tell the others which is the least effective of these (and why): a good teacher, air conditioning or a lucky charm.

Role D – Lucky Charm

You think a lucky charm is the best thing to help with exam results. Tell the others three reasons why. Tell them what is wrong with their things. Also, tell the others which is the least effective of these (and why): a good teacher, sleep or air conditioning.

Speaking – Exam Results

Rank these with your partner. Put the things that help exam results most at the top. Change partners often and share your rankings.

- sleep
- preparation
- exercise
- lucky charms
- practice-test papers
- air conditioning
- good teacher
- hard work

Answers – True False

a	T	b	T	c	F	d	T	e	F	f	T	g	F	h	F
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Answers to Phrase Match and Spelling are in the text.