

CHINA'S ARTIFICIAL SUN

6TH JANUARY, 2022

CHINA'S ARTIFICIAL SUN FIVE TIMES HOTTER THAN REAL SUN



China has set a record for creating the highest heat ever recorded. Scientists created temperatures of up to 70,000,000°C in an "artificial sun". The new record was for keeping the heat at a temperature that is five times hotter than the sun. It did this for more than 17 minutes. The extreme heat was created in a nuclear fusion reactor. The reactor is part of the Experimental Advanced Superconducting Tokamak project (EAST). It reproduces the natural reactions that happen inside our sun and other stars. The scientists want to develop the artificial sun to create a near-endless supply of clean energy. The EAST project has cost China more than \$950 billion. Total costs will run over \$1 trillion this year.

Scientists around the world have been trying for decades to develop nuclear fusion. They say it is the best way to produce clean energy. The nuclear fusion process needs no fossil fuels and leaves behind no dangerous waste. If scientists can make it work, the world will become greener and cleaner. It could also mean lower fuel bills. EAST set the new record in a laboratory. Nuclear fusion technology is still not advanced enough to become a global industry. However, researcher Dr Gong Xianzu, a nuclear fusion expert, says the EAST project is an important step. He said: "The recent operation lays a solid scientific and experimental foundation towards the running of a fusion reactor."

CHAT

LABORATORY	1
CLEAN ENERGY	2
FOSSIL FUELS	3
TEMPERATURE	4
SCIENTIST	5
NUCLEAR	6
EXPERT	7

DISCUSSION

1. What did you think when you read the headline?
2. What images are in your mind when you hear the word 'artificial'?
3. What do you know about the sun?
4. Why is the sun so important?
5. What do you know about nuclear fusion?
6. What do you think of temperatures of 70,000,000°C?
7. What do you think of this new record?
8. Why is clean energy so important?
9. Do you think we will ever have clean energy?
10. What do you think of the cost of this project?

SPECIAL POINTS OF INTEREST:

- Present Perfect
- Present perfect continuous
- Comparative
- Superlative
- Conditionals



RANKING

Rank these with your partner. Put the worst bills at the top. Change partners often and share your rankings.

- Electricity bills
- Repair bills
- Water bills
- Phone bills
- Gas bills
- Tax bills
- Food bills
- Hospital bills

Write your reasons to explain:

- 1- _____
2- _____
3- _____

VOCABULARY (PARAGRAPH 1)

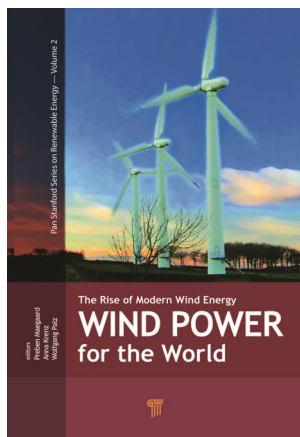
The nuclear fusion process needs no fossil fuels and leaves behind no dangerous waste.

- | | |
|----------------|---|
| 1) Set | A. Created the best of something (a record) for others to try and beat or better. |
| 2) Temperature | B. A special place where a nuclear reaction takes place. |
| 3) Artificial | C. How hot or cold someone or something is. |
| 4) Heat | D. Very great; reaching a high or the highest degree. |
| 5) Extreme | E. Made by people, not nature. |
| 6) Reactor | F. The quality of being hot. |
| 7) supply | G. Make something that is needed or wanted available to someone. |

VOCABULARY (PARAGRAPH 2)

- | | |
|-------------------|---|
| 1) Decade | A. A printed or written paper showing the money owed |
| 2) Nuclear fusion | B. The part that is left over and not needed after a process has taken place. |
| 3) Fossil fuel | C. A period of ten years. |
| 4) Waste | D. An area of business activity (e.g. tourism, health, cars, oil...). |
| 5) Bill | E. A reaction in which atoms react to release energy. |
| 6) Industry | F. The basic thing needed to build on or develop from. |
| 7) Foundation | G. Coal, oil and gas. |





WRITE YOUR OWN QUESTIONS!

STUDENT'S QUESTIONS

- (a) _____
- (b) _____
- (c) _____
- (d) _____
- (e) _____

ROLE PLAY

The scientists
want to develop
the artificial sun
to create a near-
endless supply
of clean energy.

You think **electricity** is
the most important
issue governments
should pay attention
to. Tell the others
three reasons why.

- 1 _____
- 2 _____
- 3 _____

You think **wind energy**
is the most important
issue governments
should pay attention
to. Tell the others
three reasons why.

- 1 _____
- 2 _____
- 3 _____

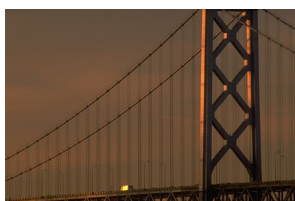
You think **nuclear power**
is the most im-
portant issue govern-
ments should pay at-
tention to. Tell the oth-
ers three reasons why.

- 1 _____
- 2 _____
- 3 _____



Track 01

WRITE WHAT YOU HEAR!



Look in your dictionary / computer to find collocates, other meanings, information, synonyms ... for the words.

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Artificial

ESHRAGH INSTITUTE

“It’s not about perfect. It’s about effort.”

- Jillian Michaels

Sun



ESH RAGH I N S T I T U T E O F F O R E I G N L A N G U A G E S
Y O U R D O O R W A Y T O T H E W O R L D

WRITING

Write about **artificial sun** for 10 minutes.

ESH RAGH I N S T I T U T E
WWW.ESH RAGH - I N S . C O M

