

Our Sun will die in 10 billion years from now

17th November, 2022



Scientists have worked out when our Sun will die. It won't be any time soon. It will be in 10 billion years. The scientists are from the University of Manchester in the UK. They predict that in about 5 billion years from now, the Sun will

turn into a "red giant". This is the scientific name given to a star at the end of its life. When our Sun becomes a red giant, its centre will shrink. Its outer layers will expand as far as Mars. This means Earth will be burnt and disappear. After our Sun turns into a red giant, it will become a planetary nebula. This is a bubble of gas and space dust. The scientists say no humans will be on Earth when the Sun dies out. Humans will disappear in around one billion years from now.

The Sun is still quite young in space years. It is just 4.6 billion years old. This means it is only around one third into its lifespan. Professor Albert Zijlstra, a scientist from the University of Manchester, explained what happens at the end of a star's life. He said: "When a star dies, it ejects a mass of gas and dust into space....This reveals the star's core. By this point in the star's life, it is running out of fuel." He said it eventually turns off and dies. Professor Zijlstra was happy that modern science can calculate the age of stars and what will happen to them. He said we can measure the presence of stars in distant galaxies, and "we even have found out what the Sun will do when it dies".

Sources: sciencealert.com / ndtv.com / inverse.com

Writing

We should start worrying about the death of the Sun. Discuss.

Chat

Talk about these words from the article.

scientists / our Sun / soon / 5 billion years from now / giant / Mars / bubble / gas / space / professor / dust / modern science / the age of stars / distant galaxies

True / False

- 1) The article says the Sun will not die soon. T / F
- 2) When the Sun becomes a red giant, it will expand to reach Mars. T / F
- 3) After our Sun turns into a red giant, it will become a comet. T / F
- 4) Humans will not be on Earth in two million years from now. T / F
- 5) The Sun is over 4.5 billion years old. T / F
- 6) The Sun is over half way through its life span. T / F
- 7) A professor is unhappy because he cannot calculate the age of stars. T / F
- 8) The professor said he can measure stars in faraway galaxies. T / F

Synonym Match

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

- | | |
|----------------------|---------------|
| 1. worked out | a. faraway |
| 2. predict | b. die out |
| 3. centre | c. sends out |
| 4. expand | d. core |
| 5. disappear | e. existence |
| 6. quite | f. calculated |
| 7. ejects | g. uncovers |
| 8. reveals | h. fairly |
| 9. presence | i. forecast |
| 10. distant | j. stretch |

Discussion – Student A

- a) What do you know about our Sun?
- b) Do you worry about the Sun dying?
- c) Can you imagine how long 10 billion years is?
- d) How interested are you in space?
- e) How do you feel about the Earth being destroyed by the Sun?
- f) Will humans die out earlier because of climate change?
- g) How can we make sure humans can survive on Earth?
- h) Would you like to go into space?

Phrase Match

- | | |
|--------------------------------------|--------------------------------|
| 1. Scientists have worked out when | a. as far as Mars |
| 2. It won't be any | b. in around one billion years |
| 3. Its outer layers will expand | c. core |
| 4. This is a bubble | d. galaxies |
| 5. Humans will disappear | e. time soon |
| 6. it is only around one third | f. and dust into space |
| 7. it ejects a mass of gas | g. out of fuel |
| 8. This reveals the star's | h. our Sun will die |
| 9. it is running | i. into its lifespan |
| 10. the presence of stars in distant | j. of gas and space dust |

Discussion – Student B

- What do you think about what you read?
- What does the Sun do?
- How can the Sun be dangerous?
- What do you know about stars?
- What do you know about galaxies?
- Do you like the Sun or Moon better?
- Would you like to live in a sunnier country?
- What questions would you like to ask the scientists?

Spelling

- They cderpti that in about 5 billion years
- This is the sienfitcci name
- its centre will nrhsik
- Earth will be burnt and raseipdap
- a beblbu of gas and space dust
- no hsamun will be on Earth
- around one third into its leiafnsp
- This levesra the star's core
- it tyeneavllu turns off
- ccaualtl the age of stars
- semreua the presence of stars
- in sntidta galaxies

Answers – Synonym Match

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

Role Play

Role A – The Sun

You think the Sun is the most interesting thing in space. Tell the others three reasons why. Tell them why their things aren't as interesting. Also, tell the others which is the least interesting of these (and why): the Moon, Mars or distant galaxies.

Role B – The Moon

You think the Moon is the most interesting thing in space. Tell the others three reasons why. Tell them why their things aren't as interesting. Also, tell the others which is the least interesting of these (and why): the Sun, Mars or distant galaxies.

Role C – Mars

You think Mars is the most interesting thing in space. Tell the others three reasons why. Tell them why their things aren't as interesting. Also, tell the others which is the least interesting of these (and why): the Moon, the Sun or distant galaxies.

Role D – Distant Galaxies

You think distant galaxies are the most interesting things in space. Tell the others three reasons why. Tell them why their things aren't as interesting. Also, tell the others which is the least interesting of these (and why): the Moon, Mars or the Sun.

Speaking – Space

Rank these with your partner. Put the most interesting things about space at the top. Change partners often and share your rankings.

- | | |
|---------------|--------------------|
| • The Sun | • Asteroids |
| • The Moon | • Space dust |
| • Mars | • Jupiter |
| • Black holes | • Distant galaxies |

Answers – True False

1 T	2 T	3 F	4 F	5 T	6 F	7 F	8 T
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Answers to Phrase Match and Spelling are in the text.