

Scientists say life on Mars would be difficult

11th July, 2017



Scientists have discovered new things about the atmosphere and environment on Mars. They found a "toxic cocktail" of chemicals that would easily kill any living organism. The chemicals have been found on the

surface of the Red Planet. The scientists, from Edinburgh University in the UK, say the discovery of the chemicals means the chance of finding life on Mars has fallen. The scientists are astrobiologists – they study the atmosphere and environments in the universe that might support life. The researchers said Mars had no ozone layer, which means there are high levels of ultra-violet (UV) radiation. The mix of UV radiation and the chemicals sterilized the Martian landscape.

The scientists tested what happens when the chemicals found on Mars mix with UV radiation. They found it killed organisms very quickly. The chemicals alone were enough to kill living organisms. However, when the chemicals were mixed with UV rays, the mix killed organisms 11 times faster. The scientists said: "Our observations show that the surface of present-day Mars is highly [harmful] to cells, caused by a toxic cocktail of [chemicals] and UV radiation." They added that their research was further evidence that the surface of Mars is deadly to any form of plant life. They say the chemicals and UV rays make, "much of the surface and near-surface regions uninhabitable".

Sources: independent.co.uk / time.com / ed.ac.uk

Writing

What would change if we found life on Mars? Would it be good or bad?

Chat

Talk about these words from the article.

scientists / atmosphere / environment / toxic / cocktail / organism / ozone / landscape / chemicals / radiation / Mars / observations / plant life / UV rays / uninhabitable

True / False

- Scientists found alcoholic cocktails on Mars. T / F
- Scientists say there is an increased chance of finding life on Mars. T / F
- Astrobiologists study the chances of finding life in the universe. T / F
- The scientists found that Mars had a very thin ozone layer. T / F
- Chemicals and radiation on Mars would kill organisms very quickly. T / F
- The chemicals alone would kill organisms 11 times faster. T / F
- The scientists said their work was more evidence that Mars was deadly. T / F
- The scientists said the surface of Mars was uninhabitable. T / F

Synonym Match

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

- | | |
|----------------------|----------------|
| 1. discovered | a. finding |
| 2. toxic | b. more |
| 3. discovery | c. possibility |
| 4. chance | d. examined |
| 5. landscape | e. terrain |
| 6. tested | f. found |
| 7. enough | g. damaging |
| 8. harmful | h. areas |
| 9. further | i. sufficient |
| 10. regions | j. poisonous |

Discussion – Student A

- What do you think about what you read?
- Do you think it's a good idea for humans to go to Mars?
- Would you like to work as an astrobiologist?
- Would you like to go to Mars one day?
- What would you like to know about Mars?
- What are Martians?
- What will we be doing on Mars in 100 years from now?
- What questions would you like to ask the scientists?

Phrase Match

- | | |
|---|--------------------------|
| 1. Scientists have discovered new things | a. quickly |
| 2. They found a toxic | b. (UV) radiation |
| 3. the chance of finding life on Mars has | c. deadly |
| 4. The researchers said Mars had no ozone | d. with UV radiation |
| 5. high levels of ultra-violet | e. about the atmosphere |
| 6. the chemicals found on Mars mix | f. layer |
| 7. They found it killed organisms very | g. life |
| 8. the mix killed organisms 11 times | h. cocktail of chemicals |
| 9. the surface of Mars is | i. faster |
| 10. any form of plant | j. fallen |

Discussion – Student B

- What do you know about Mars?
- What is a 'toxic cocktail'?
- Do you think there is life on Mars?
- What might an astrobiologist do every day?
- What would we do if we found life on Mars?
- What would you do if you met an alien?
- What would it be like to live on Mars
- Why are space companies trying to get to Mars?

Spelling

- new things about the aoetsmerph
- a "cxoti cocktail" of chemicals
- kill any living mgnirsao
- the svdceiyor of the chemicals
- in the esiervnu
- UV tnoiaard
- The icstsentsi tested what happens
- geunho to kill
- Our oiossetavbrn show
- iyhhgl harmful to cells
- their research was further eidceenv
- much of the surface and near-surface engiros

Answers – Synonym Match

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

Role Play

Role A – The Long Journey

You think the long journey is the most difficult thing about living on Mars. Tell the others three reasons why. Tell them why there things aren't as bad. Also, tell the others which is the least difficult of these (and why): no plant life, aliens or missing Earth.

Role B – No Plant Life

You think no plant life is the most difficult thing about living on Mars. Tell the others three reasons why. Tell them why there things aren't as bad. Also, tell the others which is the least difficult of these (and why): the long journey, aliens or missing Earth.

Role C – Aliens

You think aliens are the most difficult thing about living on Mars. Tell the others three reasons why. Tell them why there things aren't as bad. Also, tell the others which is the least difficult of these (and why): no plant life, the long journey or missing Earth.

Role D – Missing Earth

You think missing Earth is the most difficult thing about living on Mars. Tell the others three reasons why. Tell them why there things aren't as bad. Also, tell the others which is the least difficult of these (and why): no plant life, aliens or the long journey.

Speaking – Living on Mars

Rank these with your partner. Put the most difficult things about living on Mars at the top. Change partners often and share your rankings.

- | | |
|--------------------|-----------------|
| • The long journey | • Missing Earth |
| • The cold | • Aliens |
| • No water | • Oxygen |
| • No plant life | • Radiation |

Answers – True False

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