

## Scientists say there is water on the Moon

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Scientists have announced the breathtaking news that there is water on the Moon. They said the Moon may hold water in more places and in larger amounts than they previously thought. The scientists are from NASA

in the USA. Based on a detailed analysis of two separate studies, they confirmed the presence of water molecules on the side of the Moon we can see. Ice was thought to exist on the dark side of the Moon, which is permanently blocked from sunlight. However, NASA said it found water on the sunlit parts of the lunar surface. The space agency says it identified a third of a litre of water in one area. This was not enough to form ice as the molecules were trapped in a cubic metre of ice.

NASA's discovery could pave the way for more space exploration. It could be a game-changer in the quest to explore the heavens. It could accelerate the building of permanent bases on the Moon as it opens up the possibility of there being a sustainable source of drinking water. This could be turned into rocket fuel one day. A NASA spokesperson explained the significance of the discovery. He said: "Water is extremely critical for deep space exploration. It's a resource of direct value for our astronauts. Any time we don't need to pack water for our trip, we have an opportunity to take other useful items with us." That means astronauts could transport materials to be used to carry out bigger scientific experiments.

Sources: [voanews.com](http://voanews.com) / [npr.org](http://npr.org) / [sciencenews.org](http://sciencenews.org)

### Writing

It would be great to live on the Moon one day. Discuss.

### Chat

Talk about these words from the article.

scientists / breathtaking / water / the Moon / molecules / sunlight / surface / rock / discovery / quest / the heavens / permanent / exploration / astronauts / experiments

### True / False

- a) Scientists say moon water means people must take lots of breaths. T / F
- b) There is more water on the Moon than scientists thought. T / F
- c) NASA scientists analysed 12 studies in their research. T / F
- d) Scientists say the water on the Moon formed into lots of rock ice. T / F
- e) The moon water could lead to more exploration in space. T / F
- f) NASA announced it will build permanent moon bases. T / F
- g) Moon water could be used to make rocket fuel in the future. T / F
- h) Moon water could enable astronauts to conduct bigger experiments. T / F

### Synonym Match

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

- |                            |               |
|----------------------------|---------------|
| 1. <b>announced</b>        | a. create     |
| 2. <b>amounts</b>          | b. finding    |
| 3. <b>presence</b>         | c. precede    |
| 4. <b>blocked</b>          | d. volumes    |
| 5. <b>form</b>             | e. transfer   |
| 6. <b>pave the way for</b> | f. obstructed |
| 7. <b>accelerate</b>       | g. usefulness |
| 8. <b>discovery</b>        | h. reported   |
| 9. <b>value</b>            | i. speed up   |
| 10. <b>transport</b>       | j. existence  |

### Discussion – Student A

- a) What do you think about what you read?
- b) What was the last thing to take your breath away?
- c) How important is space exploration?
- d) Why might permanent moon bases be important?
- e) What do you think being an astronaut is like?
- f) What do you think of people living on the Moon one day?
- g) What experiments might take place on the Moon?
- h) What questions would you like to ask the scientists?

## Phrase Match

- |                                      |                                  |
|--------------------------------------|----------------------------------|
| 1. breathtaking                      | a. way for more                  |
| 2. in larger amounts than they       | b. scientific experiments        |
| 3. permanently blocked               | c. metre of rock                 |
| 4. it found water on the sunlit      | d. significance of the discovery |
| 5. molecules were trapped in a cubic | e. from sunlight                 |
| 6. NASA's discovery could pave the   | f. of drinking water             |
| 7. a game-changer in the quest to    | g. news                          |
| 8. a sustainable source              | h. explore the heavens           |
| 9. A NASA spokesperson explained the | i. parts of the lunar surface    |
| 10. carry out bigger                 | j. previously thought            |

## Discussion – Student B

- What do you know about the Moon?
- What was the last piece of breathtaking news you heard?
- What do you think about there being water on the Moon?
- What do you know about water?
- What do you know about the dark side of the Moon?
- What would you like to know about the Moon?
- How important is the Moon in your culture?
- Would you like to go to the Moon?

## Spelling

- ekbhanittgar news
- in larger amounts than they elvoriuspy thought
- Based on a detailed anssaliy
- the presence of water esmuellco
- parts of the rnual surface
- trapped in a ibcuc metre of ice
- pave the way for more space ptlerioxona
- It could ecraecltea the building
- nnrtmeaep bases on the Moon
- a letuiaabsns source of drinking water
- Water is eteeyxlmr critical
- sstrnaauot could transport materials

### Answers – Synonym Match

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

## Role Play

### Role A – Space

You think space is the most important thing to explore. Tell the others three reasons why. Tell them why their things aren't as important to explore. Also, tell the others which is the least important of these of these (and why): the human mind, the meaning of life or the bottom of the ocean.

### Role B – The Human Mind

You think the human mind is the most important thing to explore. Tell the others three reasons why. Tell them why their things aren't as important to explore. Also, tell the others which is the least important of these of these (and why): space, the meaning of life or the bottom of the ocean.

### Role C – The Meaning of Life

You think the meaning of life is the most important thing to explore. Tell the others three reasons why. Tell them why their things aren't as important to explore. Also, tell the others which is the least important of these of these (and why): the human mind, space or the bottom of the ocean.

### Role D – The Bottom of the Ocean

You think the bottom of the ocean is the most important thing to explore. Tell the others three reasons why. Tell them why their things aren't as important to explore. Also, tell the others which is the least important of these of these (and why): the human mind, the meaning of life or space.

## Speaking – Exploration

Rank these with your partner. Put the best places to explore at the top. Change partners often and share your rankings.

- |                             |                      |
|-----------------------------|----------------------|
| • Business opportunities    | • Space              |
| • Life's unsolved mysteries | • The human mind     |
| • Amazon jungles            | • The ocean's bottom |
| • The meaning of life       | • Crimes             |

### Answers – True False

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