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## 6 Heart Health Supplements to Avoid Now

### Description

Scientists have made an exciting discovery about planets beyond our solar system, called exoplanets. They have found something special in the atmosphere of an exoplanet named K2-18 b, which is about 120 light-years away from Earth. This planet is interesting to scientists because it is in an area around its star where it isn't too hot or too cold. This means there might be liquid water on it, which is important for life.

Using a powerful telescope in space, the James Webb Space Telescope, scientists looked at K2-18 b closely. They found signs of a gas called dimethyl sulfide (DMS) in the planet's atmosphere. On Earth, DMS is only made by living things, like plankton in the ocean. This finding makes scientists wonder if there could be life on K2-18 b.

The telescope also found other gases, like methane and carbon dioxide, in K2-18 b's atmosphere. These gases suggest that the planet might have oceans. However, scientists are careful and say that more research is needed to be sure about these findings. The study of K2-18 b helps scientists learn more about exoplanets and which ones might have conditions for life.

While this discovery is exciting, it doesn't mean scientists have found life on K2-18 b yet. It does, however, give them hope and direction for future research. They plan to keep observing the planet and maybe find more signs of life. As technology improves, scientists believe they will learn even more about these faraway worlds and the possibilities they hold.

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### Vocabulary List:

1. **Exoplanets** /'ɛk.səʊ.plæn.ɛts/ (noun): Planets that exist outside our solar system.
2. **Atmosphere** /'æt.məs.fɪr/ (noun): The envelope of gases surrounding the Earth or another planet.
3. **Sign** /saɪn/ (noun): An indication of something.
4. **Suggest** /sə'dʒɛst/ (verb): To put forward for consideration.
5. **Discovery** /dɪs'kʌv.ər.i/ (noun): The act of finding or learning something for the first time.
6. **Conditions** /kən'dɪʃ.ənz/ (noun): The circumstances affecting the way in which people live or work.

### Comprehension Questions



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## Multiple Choice

1. How far away from Earth is the exoplanet K2-18 b?  
Option: 50 light-years  
Option: 120 light-years  
Option: 200 light-years  
Option: 300 light-years
2. What type of telescope was used to observe exoplanet K2-18 b?  
Option: Hubble Space Telescope  
Option: James Webb Space Telescope  
Option: Kepler Space Telescope  
Option: Spitzer Space Telescope
3. What gas was found in the atmosphere of K2-18 b that is typically produced by living organisms on Earth?  
Option: Methane  
Option: Carbon Dioxide  
Option: Dimethyl Sulfide (DMS)  
Option: Oxygen
4. Which of the following gases suggests the possibility of oceans on K2-18 b?  
Option: Nitrogen  
Option: Oxygen  
Option: Methane  
Option: Carbon Dioxide
5. What is the main reason why K2-18 b is of interest to scientists?  
Option: Extreme temperatures  
Option: Possibility of liquid water  
Option: High radiation levels  
Option: Lack of atmosphere
6. What does the discovery of DMS in the atmosphere of K2-18 b lead scientists to speculate about?  
Option: Possibility of methane oceans  
Option: Existence of intelligent life  
Option: Potential for plankton-like organisms  
Option: Extreme temperatures



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**True-False**

- 7. K2-18 b is located in a region where it is either too hot or too cold for life to exist.
- 8. The James Webb Space Telescope was used to observe exoplanet K2-18 b.
- 9. The discovery of DMS in the atmosphere of K2-18 b definitively confirms the presence of life on the planet.
- 10. Exoplanet K2-18 b is located within our solar system.
- 11. The study of K2-18 b helps scientists understand more about exoplanets with potential conditions for life.
- 12. The possibility of oceans on K2-18 b is suggested by the presence of methane in its atmosphere.

**Gap-Fill**

- 13. K2-18 b is approximately \_\_\_\_\_ light-years away from Earth.
- 14. The gas dimethyl sulfide (DMS) found in the atmosphere of K2-18 b is typically produced by \_\_\_\_\_ on Earth.
- 15. Scientists hope that future research will provide more concrete evidence about the presence of \_\_\_\_\_ on K2-18 b.
- 16. The James Webb Space Telescope is a powerful tool for observing \_\_\_\_\_ in space.
- 17. The presence of \_\_\_\_\_ in K2-18 b's atmosphere raises the possibility of oceans on the planet.
- 18. K2-18 b is situated in an area where the conditions may support the existence of \_\_\_\_\_.



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## Answer

**Multiple Choice:** 1. 120 light-years 2. James Webb Space Telescope 3. Dimethyl Sulfide (DMS) 4. Carbon Dioxide 5. Possibility of liquid water 6. Potential for plankton-like organisms

**True-False:** 7. False 8. True 9. False 10. False 11. True 12. False

**Gap-Fill:** 13. 120 14. living things 15. life 16. planets 17. carbon dioxide 18. liquid water

## Answer

### CATEGORY

1. Health - LEVEL3

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