

Name _____

Cosmic Blueprint of Life

By Andrew Grant, Discover, 11.2010

*When asked to **describe, how or why** please use complete sentences for credit.*

1. **What** are the elements released from a dying star?
2. **What** can form when these atoms bump and crash into each other in frigid space?
3. **Describe** the formation of complex organic molecule formation.
4. **What** hypothesis is no longer comical?
5. **Why** are we sure that organic molecules from space could have landed on Earth?
6. **Describe** the Miller-Urey experiment.
7. **Which two (2)** complex organic molecules do even the simplest life forms use?
8. **What** was one big problem with the Miller-Urey set up?
9. **Who** coined the term Big Bang?
10. **Describe** panspermia.
11. **How** did Snyder propose that molecules could be found in interstellar space? **Why?**
By what?
12. **What** did Nobel Prize laureate, Charles Townes, find that made Snyder and Buhl seem “not so crazy”?
13. **What** was the first organic molecule that they found and **where**?
14. **What** and **where** were the next two organic molecules found?

15. **What** did interstellar clouds prove to be?
16. **What** field developed from these findings?
17. **Describe** the process Greenberg surmised could also be going on involving dust.

18. **What** did the infrared telescopes show also existed in the interstellar dust clouds?
19. **Describe** Allamandolas' apparatus.

20. **What** did Allamandolas' experiment create?
21. By 2000, **what** had radio astronomers found?
22. **What** may be the most important mechanism for synthesizing the precursors of life?
23. **How** might the precursors of life have gotten from space to the surface of the Earth?

24. **What** did the 200-pound meteorite from Australia contain?
25. Organic space: **What** was found in 2007? **Why** is it so important?

26. **What** did Weaver show ultraviolet radiation could do?
27. **What** did Weavers' models predict would happen at -280°F ?
28. **What** might be happening closer to home on Europa or Enceladus?
29. **Why** is Titan important to solving life on Earth questions?

30. **What** did the Miller-Urey style experiment for Titan make?