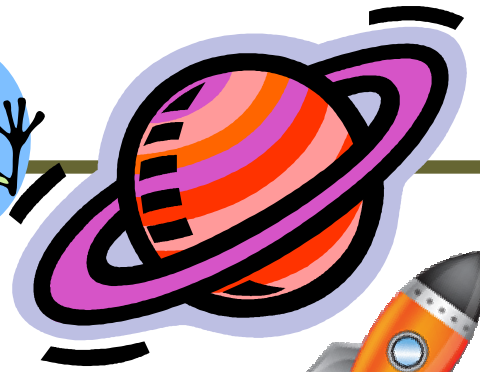


science FRONTIERS



Out of this World! (Exobiology)

Is there life anywhere in the universe beyond planet Earth? Scientists don't have any evidence, but many books and movies describe extraterrestrial life. Exobiology, a.k.a. astrobiology, continues the search for answers to the question "Are we alone?" Is it possible that life forms like we have on earth exist on other planets? Scientists don't think any of the planets in our solar system have the conditions to support life as we know it. If there are other life forms that can exist in those conditions, they don't know what they would be or how to look for them. We know that all life forms on earth produce carbon dioxide. When scientists tested for life on the Moon and Mars, they put soil samples in a jar and tested the carbon dioxide level to see whether it increased. None of the samples tested positive. If other life forms produce something other than carbon dioxide, scientists don't know what it is or how to test for it.

Astronomers have discovered evidence of planets orbiting nearby stars. This suggests that other solar systems exist. Though astronomers can't see the planets directly, they can measure the effect that the planets have on the motion of its star. The evidence is limited and preliminary, but it is sufficient to support the belief that other planets exist.

By calculating the size of the planet and the distance from the star, astronomers can compare the newly-found planets to those in our solar system. At the present time they can only imagine the composition of those planets. However, it is possible that many stars have one or more planets orbiting at the proper distance to maintain temperatures similar to those found on earth. If they also contain similar elements in the atmosphere and on land, they may be able to support life as we know it.

Since scientists don't know anything about those planets, they can't speculate what conditions exist. They don't know whether they support any life form or what the life form may be like. And even if some life form does exist in such planets beyond Earth, the great distances make communication unlikely.

Questions to Talk about and/or Research:

- Is there Biblical evidence about life in outer space? If so, what?
- What are some difficulties faced by astronomers studying exobiology?
- Why are scientists so anxious to find out whether there is water in space?

Research Ideas

Astrobiology, extrasolar planets